

**FINANCIAL CO-OPERATION BETWEEN
GERMANY AND TANZANIA**

**FINANCIAL SUPPORT TO THE ESTABLISHMENT
OF THE SELOUS-NIASSA ECOLOGICAL
CORRIDOR**

Kreditanstalt für Wiederaufbau

Feasibility Assessment

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Abbreviations:

AA	Authorised Association (for WMA management)
CBC	Community Based Conservation (a process)
CBCTC	Community Based Conservation Training Centre, Likuyu, Namtumbo
CBO	Community Based Organisation (an institution)
CIM	Centre for International Migration
CWMP	Community Wildlife Management Project/GTZ
DGO	District Game Officer
DNRO	District Natural Resources Officer
EIA	Environmental Impact Assessment
GEF	Global Environmental Facility
GIS	Geographical Information System
GPS	Global Positioning System
GR	Game Reserve
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
KfW	Kreditanstalt für Wiederaufbau
LUP	Land Use Plan
MNRT	Ministry of Natural Resources and Tourism
MtDC	Mtwara Development Corridor
NFP-ISP	National Forest Programme Implementation Support Project
NGR	Niassa Game Reserve
PA	Protected Area
PAU	Project Administration Unit
PRSP	Poverty Reduction Strategy
RRA	Rapid Rural Assessment
SADC	Southern African Development Community
SCP	Selous (Game Reserve) Conservation Programme
SGR	Selous Game Reserve
SNWC	Selous Niassa Wildlife Corridor
TCB	Trans-boundary Coordination Board
TFCA	Trans Frontier Conservation Area
UNDP	United Nations Development Programme
WMA	Wildlife Management Area
WPT	Wildlife Policy Tanzania

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Exchange Rates (8th of May, 2005):

1 EUR = 1.419 Tanzanian Shilling (TzS)

1 EUR = 1.282 US Dollar (USD)

Executive Summary

1 Introduction

This project intends to support the establishment and management of the proposed Selous-Niassa Wildlife Corridor in Tanzania, linking two of the largest conservation areas in Tanzania (Selous Game Reserve) and Mozambique (Niassa Game Reserve) as part of the bilateral financial cooperation agreement between KfW and Tanzania. Within this agreement the German Financial Cooperation through KfW will provide €5 Million specifically for the sustainable development and conservation management of one of the most significant and widely recognized wildlife corridors in the SADC Region.

KfW commissioned Dr. Goetz Schuerholz and Ms. Birgitt Bossen to implement the project feasibility study between 10 April and May 20, 2005. In accordance with the terms of reference the assignment consisted of a general assessment of the framework conditions for the planned project, the identification and definition of the target area, a general problem analysis related to the target area and the specification of the project objectives, the design and definition of proposed project interventions and project implementation, an assessment of the overall expected project impacts including macro- and micro-economic-, ecological- and socio-cultural impacts, as well as a risk analysis.

2 Approach

The feasibility assessment commenced with briefings at the Wildlife Division and structured discussions with key international and national stakeholders related to the target area and the subject matter in Dar es Salaam. This was complemented through a “brainstorming” workshop in Dar es Salaam with key stakeholders on a national level. The workshop served to define the target area and potential threats to the success of the proposed project. The subsequent field trip focused on a reconnaissance flight covering all of the corridor area, a visit to the Likuyu Community Based Training Center (CBCTC), regional stakeholder meetings in Songea, Namtumbo -the new District capital- and Tunduru. This was complemented through a rapid rural assessment and structured village meetings covering 15 of the 33 villages that are part of the designated western corridor area. The field trip was implemented jointly with Mr. D. Shayo (Senior Game Officer, Wildlife Division Dar es Salaam), Mr. C. Mahundi (Principal of the Likuyu Training Center) and Mr. N. Madatta (District Game Officer of the Namtumbo District).

The feasibility study concluded with a participatory multi-stakeholder workshop in Dar es Salaam providing the consultants the opportunity to present and discuss their findings and recommendations and to incorporate valuable suggestions and observations resulting from the workshop that will form part of the final project document expected to be finalized by the end of May. At the end of the mission the consultants briefed the Director of the Wildlife Division and the Permanent Secretary of the Ministry of natural Resources and tourism (MNRT) on this mission. The results are summarized as follows.

3 Results

Based on the discussions with key stakeholders, a comprehensive literature review, the field reconnaissance, the meetings at the three District Offices related to the target area, the structured village surveys and the two workshops in Dar es Salaam, the Study Team could verify the threats to the ecological integrity of the proposed corridor area that is increasingly exposed to agricultural encroachment as a direct result from a fast growing human population that has tripled in size within one decade in some of the villages visited for the project. From the field survey it became apparent that unsustainable land use practices and resource over-utilization will increasingly result in adverse impacts on the ecological integrity of the targeted aquatic and terrestrial ecosystem in absence of sound land use plans, effective control and law enforcement and a determined family planning process.

The team, jointly with the workshop participants in Dar es Salaam reached a consensus agreement on the priority importance of the so called “Western Selous Niassa Corridor” to be chosen as target area for the proposed KfW sponsored project. This was fully supported by the local representatives of the UNDP Office and GTZ who jointly had been instrumental in the original conceptualization and design of the corridor and who jointly elaborated a project brief leading to the approval of a 1 million USD GEF grant currently kick-starting a 4 years project implemented by UNDP. There was consensus agreement by UNDP and the study team that (a) the UNDP/GEF project will serve as basis for the proposed KfW interventions, (b) close coordination of both projects is essential and (c) that both projects are complementary to each other. A Letter of Agreement specifying the cooperation between the two agencies has been prepared accordingly (Annex 1).

The findings of the feasibility assessment substantiate the significant ecological importance of the proposed Selous-Niassa Ecological Corridor, and the favourable framework conditions for an efficient, effective and sustainable protection of its ecological integrity, pending the successful implementation of the combined UNDP/KfW projects. However, key to the success of the project and the sustainability of the corridor as an ecologically viable entity is the sound cooperation with the local people who communally own the corridor land. It is evident that sound cooperation, support and local ownership in the corridor concept may only be achieved through direct economic benefits for the 33 target villages as a direct and verifiable result from the corridor establishment. Against this background the proposed KfW interventions have been designed. The consultants conclude that the proposed KfW project is feasible in principle if the assumptions specified in the Ayuda Memoria¹ (Annex 2) can be met and if the cooperation by local people can be sustained.

The findings also show that there is a great potential and an even greater need for transboundary cooperation with Mozambique in order to validate the corridor concept hence providing the essential ecological linkage between the Selous and Niassa protected areas. There is wide consensus that this likewise would greatly strengthen and enhance the ecological viability of both protected areas.

¹ The Ayuda was not signed by the Director of the Wildlife Division due to a disagreement regarding the assumptions specified in the Ayuda which the Director wanted to see removed from the Document

4 Recommendations

The Consultants recommend that KfW formalizes an official cooperation agreement with the UNDP Office Dar es Salaam that specifies complementary interventions and the steps needed to safeguard a synchronized implementation of both projects. The following key interventions to be supported by KfW in securing the future of an ecologically viable corridor complementary to the UNDP project are proposed:

- Elaboration of a corridor overview cover map in a scale of 1:250 000 based on Landsat imagery and corresponding ground truthing.
- Production of land use maps and corresponding land use management plans in an operational scale of 1:20 000 for the 15 villages to be involved in the establishment of the southern corridor section (= two to three new WMAs).
- Installation of a wireless radio communication system to cover the entire corridor with base stations to be established in Namtumbo and Tunduru District Offices as part of the District Game offices, sub-stations at Likuyu, proposed Ruvuma Ranger station and proposed Division ranger station Magazini, mobile units in each of the 33 scout stations of the 33 corridor villages to serve both scouts in their duties and villages as means of communication in emergencies.
- Strengthening of the existing Zonal Anti-Poaching Unit at Songea and establishment of a Zonal Anti-Poaching Sub-station at Tunduru under the authority of the Songea Zonal Anti-Poaching Officer to be responsible for the entire corridor area.
- Support to and strengthening of the two District Game Offices in Namtumbo and Tunduru.
- Support to the two District Land Offices in Tunduru and Namtumbo in anticipation of the village land use management plans to be developed in a participatory manner.
- Construction of buildings for the Village Natural Resources Councils and the Community Based organizations (CBOs) including an armoury and small abattoir in each of the 15 villages within the southern section of the corridor to form part of the new WMAs.
- Establishment of a ranger station at the Ruvumu River to facilitate patrol and law enforcement along the river in close cooperation with the Mozambican counterparts reporting to the District Game Officer in cooperation with the Zonal Commander of the Anti-Poaching Unit in Songea.
- Establishment of a District Wildlife Ranger Outpost at Magazini to serve the entire southern section of the corridor reporting to the District Game Officers as a joint responsibility.
- Upgrading and equipping the Likuyu training center in order to meet the standards of a high quality 60 bed training facility to serve the corridor training needs and to cater to the country at large.
- Implementation of a feasibility study to investigate the validity of the eastward corridor extension within a 15 km wide belt along the River Ruvuma linking up with the Mwambesi Forest Reserve in cooperation with the forest authority.

- Formalising transboundary coordination jointly with Mozambique and provision of funds for regular meetings and the production of joint trans-frontier wildlife/land use policies and management guidelines and facilitation of joint law enforcement along the River Ruvuma.
- Establishment of the administrative structure for the KfW project.

An agreement has been reached with UNDP that focus of the GEF funded corridor project will be on creating favourable framework conditions for the establishment of the new WMAs in the southern section of the corridor (environmental awareness campaign, community leadership information, conflict resolution regarding village boundary disputes etc.). In particular, that UNDP will address all training needs regarding village scouts and community executives including all the 15 villages of the southern corridor and the essential re-training of scouts and community executives of the northern villages. The training component will also cover the newly to be employed rangers reporting to the Wildlife Division. The equipment for the scouts, rangers and buildings for the village executives will be financed by the KfW project as well as all operational costs resulting from the KfW interventions for the duration of the proposed 6 year KfW project time line.

5 Assumptions²

- The Wildlife Division of Tanzania as part of the Ministry of Natural Resources and Tourism agrees to a sound and just equity sharing schedule that sufficiently benefits communities participating in the proposed sustainable management of the WMAs.
- The Wildlife Division agrees to cover financial shortfalls of operational costs for the Likuyu training center in years when internally generated revenues will be insufficient to cover the running expenses.
- The Wildlife Division agrees to assist in utilizing the Likuyu training facility to its to-be expanded capacity.
- The Government of Tanzania agrees to grant tax exemption to all project related procurements.
- The decentralization process continues to be implemented by the Wildlife Division.
- The Wildlife Division supports the KfW project administration on the District level.
- The Wildlife Division will expediently advance the establishment of the proposed WMAs.

² The Wildlife Division disagreed with the assumptions made as part of the Ayuda Memoria

6 Conclusions

The Consultants have come to the conclusion that the project is feasible in principle pending the commitment and cooperation by the Wildlife Division in its efforts to decentralize, support district level administrative structures and most importantly seriously pursue a fair equity sharing with the WMA communities of revenues generated from allocated hunting quotas. This will be key to the sustainable support by WMA communities to the WMA concept.

1 INTRODUCTION

This project intends to support the establishment and management of the proposed Selous-Niassa Wildlife Corridor in Tanzania, linking two of the largest conservation areas in Tanzania (Selous Game Reserve) and Mozambique (Niassa Game Reserve) as part of the bilateral financial cooperation agreement between KfW and Tanzania. Within this agreement the German Financial Cooperation through KfW will provide €5 Million specifically for the sustainable development and conservation management of the most significant and widely recognized wildlife corridor in the SADC Region.

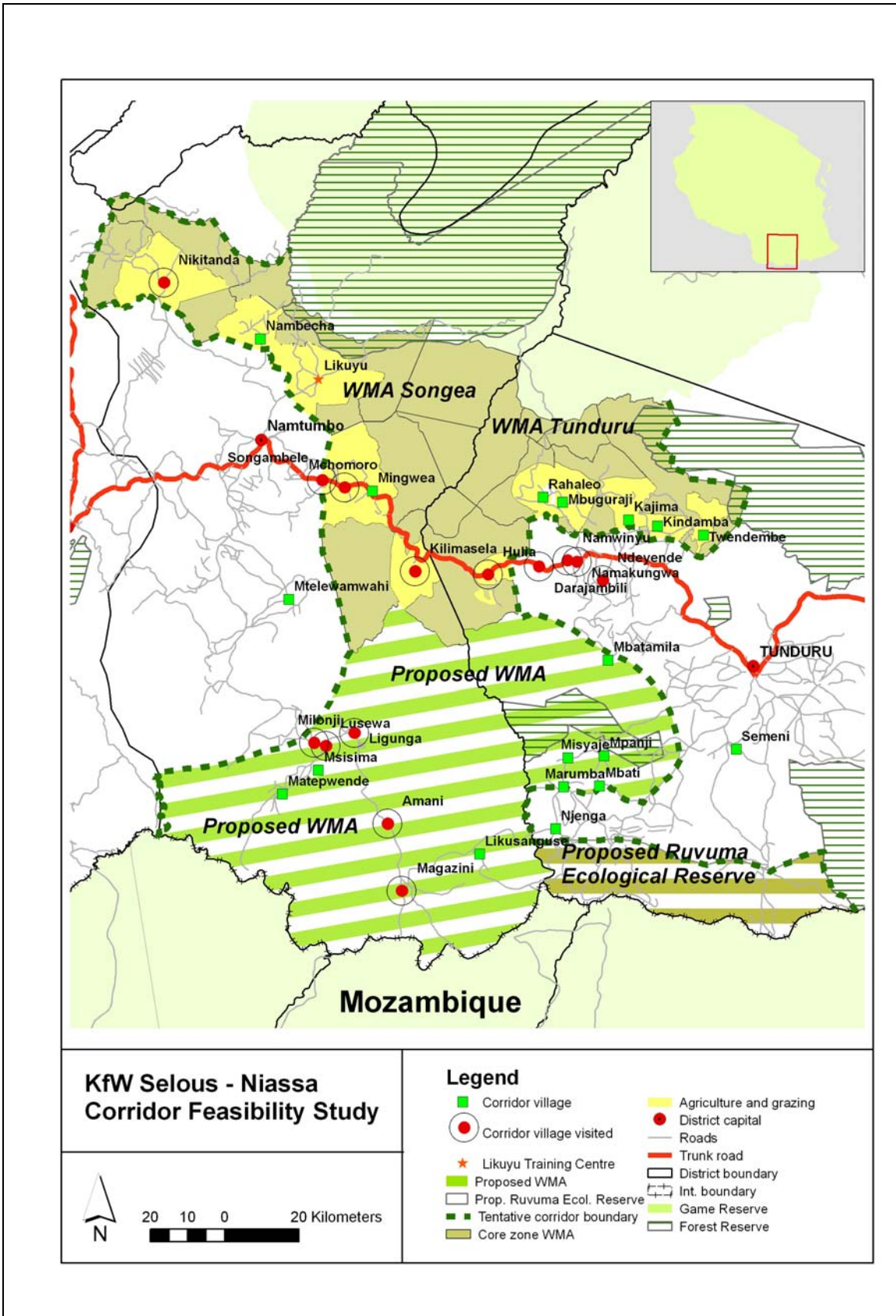
With an area of 154,000 sq km the Selous – Niassa *miombo* woodland ecosystem of southern Tanzania and northern Mozambique forms part of one of the largest trans-boundary eco-regions in Africa. To the North it is bordered by the 47,000 sq km Selous Conservation area and to the South by the 42,400 sq km Niassa Game Reserve. The northern boundary of the Niassa Game Reserve coincides with the Ruvuma River forming the international boundary between Tanzania and Mozambique. The two protected areas are linked by a corridor of approximately 120 km in length and about 50 km in width (Map 1).

Approximately 110,000 sq km of this globally significant eco-region is currently under some form of protection. The corridor project aims at the enhancement of the conservation efforts for this eco-region making use of its widely acknowledged economic potential as one of Africa's key wildlife areas to be used for eco-tourism and sustainable natural resources management including wildlife utilization.

Administratively the proposed corridor includes the two Districts of Namtumbo and Tunduru. The proposed corridor project builds on work performed by the German Technical Assistance (GTZ), which has been involved since 1989 in the development of village Wildlife Management Areas (WMA) bordering the Selous Game Reserve. Subsequently, two WMAs encompassing more than 4,000 sq km have been established as integral part of the proposed corridor in its northern section bordering Selous.

In 2005, a grant of 1 Mio US\$ has been approved by GEF in favour of the proposed corridor development. The project will be implemented by UNDP and executed by the District Office Namtumbo with technical assistance of a CIM expert (Centre for International Migration). To date no other funding is available for the corridor development.

In preparation of the corridor development project, GTZ financed baseline studies on biodiversity and wildlife and a Pre-feasibility Study with focus on the legal and institutional environment associated with natural resource management and biodiversity conservation in the country.



Map 1: The Proposed Selous-Niassa Ecological Corridor (Western)

2. THE APPROACH

The feasibility assessment commenced with briefings at the Wildlife Division and structured discussions with key international and national stakeholders related to the target area and the subject matter in Dar es Salaam. This was complemented through a “brainstorming” workshop in Dar es Salaam with key stakeholders on a national level. The workshop served to define the target area and potential threats to the success of the proposed project. The subsequent field trip focused on a reconnaissance flight covering all of the corridor area, a visit to the Likuyu Community Based Training Center, regional stakeholder meetings in Songea, Namtumbo -the new District capital- and Tunduru. This was complemented through a rapid rural assessment and structured village meetings covering 14 of the 33 villages that are part of the designated western corridor area (Table 1). The villages were selected randomly. Nine villages visited are already members of the two pilot WMAs and the others villages visited will form part of the two proposed WMAs. The field trip was implemented jointly with Mr. D. Shayo (Senior Game Officer, Wildlife Division Dar Es Salaam), Mr. C. Mahundi (Principal of the Likuyu Training Center) and Mr. N. Madatta (District Game Officer of the Namtumbo District).

5 The feasibility study concluded with a participatory multi-stakeholder workshop in Dar es Salaam providing the consultants the opportunity to present and discuss their findings and recommendations and to incorporate valuable suggestions and observations resulting from the workshop that will form part of the final project document expected to be available by the end of May. At the end of the mission the consultants briefed the Director of the Wildlife Division Tanzania and the Permanent Secretary of the Ministry of Natural Resources and Tourism on this mission. The results are described as follows. The list of persons contacted for this assignment is attached as Annex 3.

Table 1: Villages located within the proposed Western Corridor

	Village	District	WMA	Agree with corridor project	Village founded	Present population	Household increase since founding
1.	Amani*	Namtumbo	Not started	Yes	1985	1096	Data question
2.	Magazin*	Namtumbo	Not started	Yes	1974	8000	Data not available
3.	Lingusenguse	Namtumbo	Not started	Yes			
4.	Semeni	Namtumbo	Not started	Yes			
5.	Likuyuseka	Namtumbo	Pilot	Yes			
6.	Kitanda*	Namtumbo	Pilot	Yes	1974	6936	154 %
7.	Mchomoro*	Namtumbo	Pilot	Yes	1974	6904	580 %
8.	Songambebe*	Namtumbo	Pilot	Yes	1999	883	21 %
9.	Kilimasera*	Namtumbo	Pilot	Yes	1982	964	Data question
10.	Mterawamwahi	Namtumbo	Pilot	Yes			
11.	Nambecha	Namtumbo	Pilot	Not briefed			
12.	Milonje*	Namtumbo	Not started	Yes	1974	6800	140 %
13.	Lusewa*	Namtumbo	Not started	Yes	1974	5661	296 %
14.	Msisima	Namtumbo	Not started	Yes			
15.	Matepwende	Namtumbo	Not started	Yes			
16.	Ligunga*	Namtumbo	Not started	Yes	1974	4348	92 %
17.	Rahaleo	Tunduru	Pilot	Not briefed			
18.	Hulia*	Tunduru	Pilot	Yes	1972	2000	12 %
19.	Daragambili*	Tunduru	Pilot	Yes	1994	774	40 %
20.	Namwinyu*	Tunduru	Pilot	Yes	1974	2920	122%
21.	Namakungwa*	Tunduru	Pilot	Yes	1974	2123	116 %
22.	Ndemyende*	Tunduru	Pilot	Yes	1974	1668	45 %
23.	Mbungulaji	Tunduru	Pilot	Not briefed			
24.	Kajima	Tunduru	Pilot	Not briefed			
25.	Kindamba	Tunduru	Pilot	Not briefed			
26.	Twendembele	Tunduru	Pilot	Not briefed			
27.	Marumba	Tunduru	Not started	Yes			
28.	Misiabi	Tunduru	Not started	Yes			
29.	Molanba	Tunduru	Not started	Yes			
30.	Mjemga	Tunduru	Not started	Not briefed, but applied to form a WMA			
31.	Nbatamila	Tunduru	Not started	Not briefed, but applied to form a WMA			
32.	Mpangi	Tunduru	Not started	Not briefed, but applied to form a WMA			
33.	Mvati	Tunduru	Not started	Not briefed, but applied to form a WMA			

* villages visited

3. SELECTION OF PROJECT AREA

The Selous Niassa ecosystem in southern Tanzania and northern Mozambique covers an area of approximately 154,000 sq km. It is potentially the largest single transboundary ecosystem in Africa and from a biodiversity perspective represents one of the most important ecosystems in Africa. To quote Hall-Martin & Modise (2002):

‘...The range of biodiversity that is protected in the system, and the scale on which ecological and evolutionary processes can occur without the kind of human interference by man that is everywhere else the norm in Africa, is in a class of its own...’

A critical gap of 8,000 sq km exists between the network of protected areas, dominated by the Selous Game Reserve on the Tanzanian side and the Niassa Game Reserve on the Mozambican side. A corridor linking these systems would ensure the continued existence of a genetic bridge between these two protected areas as well as protecting areas of high biodiversity value and pristine wildlife habitat. The Ruvuma River and associated riverine habitats remain largely undescribed to date but are believed to contain a high diversity of fish, avifauna and plant diversity, including a significant number of endemic species. The River has been described as one of southern Africa’s least known and pristine major river systems,³ and is known to support significant populations of large mammals, especially elephants.

The size of the corridor itself (8,000 sq km) is very small compared to the total Selous-Niassa ecosystem (154,000 sq km). Approximately 3,000 sq km of this corridor, the northern part, have already received official protection status through the official designation as Wildlife Management Areas. The corridor projects aims to extend this network of WMAs across the southern part of the corridor to the Ruvuma River forming the international boundary with Mozambique and the Niassa Game Reserve. The WMA approach is based on a system of Land Use Plans formulated by the communities involved, which gives them immediate title deeds to their land and ensures that direct benefits from wildlife are accrued to them. These WMAs are officially gazetted by government and are binding to all parties. The WMA approach ensures that conservation is done in true collaboration with local communities.

Rapid Rural Assessment of approximately 50% of villages within the corridor showed that an exceptionally high level of support and ownership exists among communities for the project. The project could thus serve as a case study for other planned Transboundary Protected Areas in Africa which require the establishment of corridors linking protected areas.

4. DESCRIPTION OF PROJECT AREA AND FRAMEWORK CONDITIONS

4.1. BIOPHYSICAL FRAMEWORK AND PROTECTED AREAS

The Zambezian Biome Both the Selous Game Reserve in Tanzania and Niassa Game Reserve in Mozambique are characterised by a Miombo woodland ecosystem which is dominated by *Brachystegia* spp., *Julbernardia* spp. and *Isoberlinia* spp. It forms part of the Zambezian biome and is the largest biome within the entire Southern African Development Community (SADC) region covering an estimated area of 3.8 million hectare. The biome is typically located on the Great African Plateau which was the original landscape of the region before it was bisected by the development of Rift Valleys

³ Norton, 2005. Niassa Game Reserve Rovuma River Interface Tourism Destination Assessment.

(e.g. Zambezi, Luangwa). Most of this plateau lies at an elevation of between 1,000 to 1,250 m, at its margin rising up to 1,500 m.

‘The biome lies on the northern edge of the Kalahari Basin. Much of the region is covered by an almost continuous mantle of Kalahari sand. The whole region lies in a tropical summer rainfall zone and there are three clearly defined seasons. The wet season is from November to April, a cool season from May to August when light frosts can occur and a hot season from September to November. Annual rainfall is between 500 and 1 500 mm per year. The sandy soils and generally flat topography that results in slow drainage, as well as the gentle warping of the plateau surface causing ponding and seasonal flooding of the main rivers has resulted in extensive edaphic grasslands, floodplains, dambos and wetlands in the region. The Zambezian biome has enormous biodiversity across most taxonomic groups.’⁴

The Selous Niassa Ecosystem The Selous Niassa ecosystem in southern Tanzania and northern Mozambique covers an area of approximately 154,000 sq km. It is potentially the largest single transboundary ecosystem in Africa and represents the most important ecosystem of the entire Miombo ecoregion.

On the Tanzanian side the Selous ecosystem is covered by a range of protected areas, the largest of which is the Selous Game Reserve with an area of 48 000 sq km. The Reserve was established in 1905 and proclaimed in 1922. In 1982 Selous was designated as a World Heritage Site by the United Nations. Other protected areas forming part of the Selous ecosystem in the Tanzanian side include the Mikumi National Park, several Game Controlled Areas, two Forest Reserves and two Wildlife Management Areas.

The Selous ecosystem on the Tanzanian side is connected through a narrow strip of land to the Niassa Game Reserve and its bordering Buffer Zone in Mozambique. This strip covers an area of approximately 8000 sq km, it is 30 to 40 km wide and extends approximately 160 km to the Ruvuma River which is the northern boundary of the Niassa Game Reserve. This strip is referred to as the western corridor and is the focus of the Selous-Niassa ecological corridor project. On the Mozambican side the Niassa Game Reserve covers an area of approximately 23,400 sq km. It is surrounded by 4 hunting blocks (Coutadas) on its western, southern and eastern sides, which cover a further 19, 000 sq km. Together these areas constitute a protected area on the Mozambican side of 42, 400 sq km.

‘The Selous Game Reserve lies in a vast flat plain at an altitude of 50 to 1,600 m asl., that slopes gently towards the coast, and that is transacted by a number of large rivers. The greatest of these is the Rufiji that flows from the west to the east and forms a large delta east of the reserve. The main tributaries of the Rufiji are the Great Ruaha and the Kilombero rivers from the west, the Luwegu, Luhombero and Mbaragandu from the southwest and the Lukuiro system that drains the Kichi Hills to the east. The Rufiji drains the catchments of the Udzungwa Mountains and the Mahenge Massif. There are several lakes and large seasonal swamps associated with the Rufiji system in the north and east

⁴ Quoted from Hall-Martin & Modise, 2002, p 14

of the Selous. The vegetation of the Selous is predominantly miombo woodland dominated by *Brachystegia* of which *B. boehmii* and *B. allenii* are dominants with *Julbernardia globiflora*. Associated species are *Pericopsis angolensis*, *Combretum zeyheri*, *Terminalia mollis*, *Pterocarpus angolensis*, *Dalbergia melanoxylon*, *Diplorhynchus condylocarpon* and *Piliostigma thonningii*. The drainage lines are often wide and grassy, and there are also large areas of fairly open *Terminalia* woodland in the north, *Acacia* woodland and riverine woodland and thickets. Extensive stands of *Borassus* palms are a feature of the riverine thickets'.⁵

The miombo ecosystem extends south across the Ruvuma into the Niassa Game Reserve and its buffer zone. The Reserve protects one of the largest miombo forest ecosystems in the world. However, the wide river valley of the Ruvuma and tributary rivers give rise to vegetation more characteristic of coastal lowlands. The vegetation can be classified as 50 % miombo *Brachystegia* woodland, 40 % open savannah, 5 % wetlands, 3 % inselbergs and the remaining 2 % riverine and montane forests.⁶ The landscape of the area is generally flat with inselbergs dominating the landscape. In some areas, especially around the Lugenda-Ruvuma junction these inselbergs give rise to a striking landscape.

The Selous-Niassa Ecosystem has a high level of plant diversity. In Selous alone 2,500 species have been identified with scattered endemics. Including the coastal forest element which extends along the Ruvuma river the number of species is likely to rise considerably, both in terms of total numbers and number of endemics present in the area.

It is estimated that the total elephant population of the Selous-Niassa ecosystem of about 65,000 animals constitutes the largest elephant range in Africa. Genetic exchange between the Niassa and Selous populations is known to take place across the corridor which forms a genetic bridge between the two protected areas. Other significant populations of large mammal species include Roosevelt's sable antelope (17,000) and Nyasa wildebeest (120,000), both subspecies are endemic to the area, Lichtenstein's hartebeest, Cape buffalo, giraffe, Boehms zebra, eland, Greater kudu, Common waterbuck, Bushbuck, Impala, Common Reedbuck as well as Lion, African wild dogs, Leopards and Spotted Hyaenas. Black Rhinos still occur in both Selous and Niassa but their numbers are low, especially in Niassa.

Much less information is available on smaller mammals but it is believed that several endemic species occur in the area. The number of reptilean species is estimated to be well above 1,000, eleven of which are known to be endemic. Amphibian species diversity is at least 500 and includes 4 known endemic species.

The avifauna of the region is high in species number. Selous alone has 437 recorded bird species, including several endemic and endangered species. Much less is known about the avifauna along the Ruvuma River and in the Niassa Game Reserve. However the total number of species occurring in the area is likely to increase substantially once more information becomes available.

⁵, Quoted from Hall-Martin & Modise, 2002, p. 96.

⁶ Hahn, 2003. Connecting the Worlds Largest Elephant Ranges.

The Ruvuma River The Ruvuma River forms the international boundary between Tanzania and Mozambique and constitutes a significant part of the Selous-Niassa ecosystem. The river stretches some 730 km from its source to the Indian Ocean and drains an area of approximately 155,400 sq km. The river together with its tributaries, and associated catchments is a hot spot area for biodiversity conservation. Large wetlands, lowland coastal forests and mangroves are some of the habitats occurring along the river. The species diversity is likely to be high and significant but it still undescribed. The river itself contains a diverse fish fauna and is believed to include a significant number of undescribed species and elements of nearby Lake Malawi/ Niassa/ Nyasa. The vegetation along the river and its many small islands is diverse and forms a multitude of habitats including patches of lowland coastal forest, mangroves and wetlands. These constitute important bird breeding and nesting areas and the riverine forests along the river have been identified as essential year round habitats for many larger mammal species, including elephants. In addition the Nakatuta, Nsunda and Malilima waterfalls found along the upper banks and middle section of the Ruvuma River and Ligoma River tributary in the Tunduru district are likely to contain further undescribed unique micro-ecosystems⁷. Several photos of the Ruvuma and the corridor ecosystem have been included in Annex 4.

The estuarine and coastal biodiversity of the Ruvuma has recently been recognised with the gazettment of the Mnazi Bay – Ruvuma Estuary Marine Park in Tanzania. Similar plans exist for the Mozambican side but have not yet been implemented.

4.2 DEMOGRAPHIC AND SOCIO-ECONOMIC FRAMEWORK

National Scope Tanzania lies within East Africa bordering Mozambique, Malawi and Zambia to the south, the Democratic Republic of Congo, Burundi and Rwanda to the west and Uganda and Kenya to the north. The total area of the country is 945.1 thousand sq km and it is divided into 26 administrative regions and 130 administrative districts. The country has a tropical climate. In the highlands, temperatures range between 10°C-20°C during the cold and hot seasons respectively. In the rest of the countries temperatures rarely fall below 20°C.

Tanzania has a population of 34.6 million people giving an average country wide population density of 31 people/sq km. The average population growth rate is 2.9% per annum and 44% of the population is 14 years or younger. Only approximately 4 % of the population is above 64 years. It is estimated that 50 % of the population fall below the poverty line.

Tanzania's economy is primarily based on agriculture which produces approximately half of the national income and provides employment for 80% of Tanzanians. Agriculture merchandise constitutes three quarters of export goods. The agricultural sector is

⁷ SCP/GTZ and Mtwara DC Secretariat, 2005. Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface: Final Draft Report.

dominated by smallholder farmers. Average farm size of small holder farmers is between 0.9 and 3.0 hectares each. The majority of crops produced are food crops covering 85% of cultivated land annually. Women constitute the main agricultural labour force.

The country is rich in mineral resources such as gold, diamonds, tanzanite and various other gemstones, natural gas, iron ore, coal, spring water, phosphates and soda ash. The mining sector is experiencing significant foreign investment during recent years and the sector is expected to become increasingly important to the national economy. At present exports from minerals are, however, only a tenth of earnings generated through the tourism industry.

Since the mid 1980s Tanzania has implemented far-reaching reforms within its political and economic system. Multi-party democracy was implemented in 1992 with the first multiparty elections held in 1995. The market reforms have slowly converted the economy from a centrally located command-driven structure to a market-driven type economy. The civil service has also been restructured and the number of civil servants significantly reduced.

The Corridor Area The Selous Niassa Corridor falls within the Namtumbo and Tunduru Districts of the Ruvuma Region in southern Tanzania bordering Mozambique. Within the Namtumbo District the corridor area is composed of village land from 16 villages and a further 17 villages in the Tunduru District. Annex 4 shows photos of some of these villages and of the corridor as a whole.

Namtumbo and Tunduru district cover an area of 22,009 sq km and 18,778 sq km respectively. Namtumbo is a new District which has only been established in 2001. Until recently, with the launch of the Mtwara Development Corridor initiative, the area has received little economic attention. Its remoteness in terms of access and infrastructure has left the region isolated, especially the area between Songea and Tunduru where access during the rainy season, from November to March, is severely limited by difficult road conditions.

Songea town is the Regional Administrative Headquarters. Until 2001, when Namtumbo was formed, Songea was also the District Headquarters for the western part of the corridor. The tar road into the region from the inland ends in Songea as does the electric grid. Neither Namtumbo nor Tunduru town are connected to the national electric grid, however Tunduru city runs a generator which supplies the city. In Namtumbo only a few businesses and households own generators, no other electricity is available.

The Namtumbo District Administrative Infrastructure is limited to an office house and Residence used by the District Commissioner (Annex 4). The official District Commissioner's offices are still under construction and all other district office facilities still need to be build. Therefore only the District Commissioner is presently based in the District capital. All other staff with the exception of the District Game Officer, is still based in Songea. Twenty-seven staff members from Songea have been transferred to the Namtumbo District, however the actual date of moving there is uncertain.

The Tunduru District which covers the eastern part of the corridor was founded in 1922. Tunduru town is the District capital. The city is accessible via Mtwara on the Indian Ocean all year around, however, accessibility via Namtumbo during the rainy season is difficult. The population of the District is estimated at 247,055 and average household size at 4.6 people/household. The predominant religion in the District is the Islam.

The population of Namtumbo district is much lower than that for Tunduru with an estimated 175,051 people. The average household size is 5.5. people. Villages south of the Songea – Tunduru trunk road are relatively small with between 1,000 to 3,000 inhabitants⁸ The predominant religion within the Namtumbo District is Christian.

The regional population density is estimated at 18 people/sq km. However, Tunduru is comparatively much more densely populated than Namtumbo. This is also evident in the number of villages located within the corridor. Within the Namtumbo section of the corridor distances between villages are much greater than in Tunduru. Thus, although the greater portion of the corridor falls within the Namtumbo region the number of villages located within both the Namtumbo and Tunduru districts in the corridor is approximately equal. The Rapid Rural Appraisal conducted in 15 of the 33 villages clearly showed that the population increase in the area has been substantial over the last decades (Annex 5). Most villages were officially registered in the mid 1970 with an average number of households of 250. Many villages now have doubled their numbers of household, have split into separate villages or in a few instances have an increase in household numbers exceeding 500% since registering. While immigration has played a significant role in this rapid population increase, internal growth is becoming the major driving force behind the current population increase. The Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface came to a similar conclusion⁹:

‘Population growth is still a major driver in the study area and manifests itself principally in the dispersal of settlements into small villages each seeking access to agricultural land and forestry resources to grow the main cash crop in the district or to grow a staple food crop and to have access to fuel wood. For example, only 8% of villages did not grow a cash crop and 13% only have access to land. However, there appears to be a trend for dispersal to occur along trunk and district roads so it is likely that as roads are improved they will continue to attract more people creating ribbons of development along their route.’

‘This tendency for settlement to disperse will make it increasingly difficult to provide social facilities and basic services to the rural poor, which could deepen problems around sustainable delivery of social facilities and basic services. This could be addressed by encouraging people to settle in small concentrations along major roads, like beads along a string, as this will allow for small enough spatial units to organise Community Based Natural Resource Management initiatives that are directly related to natural resources

⁸ Smith, 2005. Draft PF and Environmental Baseline Study Report Ruvuma. Mtwara Development Corridor and GTZ.

⁹ IBID (P46)

harvesting within a defined ecological footprint, but will also allow for critical mass of scale economies for the sustainable delivery of social facilities, basic services and marketing platform(s) for cash crops and will also ensure a certain permeability within the rural landscape to allow for the movement of wildlife along designated migration paths'¹⁰.

The economy of both Districts is almost completely dependent on agriculture, exceeding the national average by 10 percent. However in Tunduru District mining for gemstones plays an important role in the local economy and Tunduru city has attracted many dealers in gemstones from Malaysia, Sri Lanka and other countries. Within the corridor however, gemstone mining plays an insignificant role. Not one of the villages interviewed reported gemstone mining as an economic activity. Corridor communities are almost completely depending on subsistence agriculture. Only a few households supplement their income through fishing, mat-making, owning a local shop etc. The most important staple crops grown are maize and cassava. Cash crops are predominantly tobacco, sesame seeds, sunflower seeds, rice, groundnuts, beans and occasionally paprika. Livestock in the area consists predominately of goats, sheep and chicken. Cattle are rare due to the presence of Tsetse in the region.

Net school enrolment and literacy rates (5 year and above) are considerably higher in Namtumbo than in Tunduru. The difference in secondary school enrolment between the two districts is less pronounced. Almost all villages have at least 1 primary school. The average number of secondary schools in the southern part of the corridor is one per 8 villages. This is higher than the overall average of 1 secondary school per 13 villages. The situation is less favourable in the Tunduru District south of the Songea-Tunduru Road. There the average is 1 secondary school per 19 villages.

The majority of villages within the corridor reported to have a dispensary within their village or in a relatively close neighbouring village. However there is no hospital within the Namtumbo District, people having to travel to Songea town if they require its services. Within the Tunduru district there is also only one hospital.

Access to clean drinking water is a serious issue in both Districts. Water sources such as traditional shallow wells and rivers were commonly reported during the village surveys, however villages in the southern part of the corridor in Namtumbo all had at least one water pump.

Dependency on natural resources was rated very high by villagers. Natural Resources collected regularly include poles for house and shed construction, grass for thatching, reeds, firewood, wild fruits, mushrooms, traditional medicines and (legally or illegally) fish and bush meat.

“Firewood is the main source of domestic energy for cooking for over 96 percent of all households in the study districts with no affordable energy alternatives in the foreseeable

¹⁰ Smith., 2005. Draft PF and Environmental Baseline Study Report Ruvuma. Mtwara Development Corridor and GTZ. CD Rom GTZ archive, Dar Es Salaam, Tanzania (page 43)

future. Firewood is mainly consumed in the rural areas, using three stone stoves that are reported to have very low energy efficiency. Low-income households also use firewood for lighting. Data on firewood consumption for domestic purposes are not available. Based on field experience from similar ecoregions, it was estimated that the average firewood consumption per capita per annum in the study district was around 1.5 m³ to 2.0 m³. Observations showed that most of the firewood for domestic purposes consumed in the study districts is collected from farmlands or dead wood from bush lands close to residential areas. As such consumption of firewood for domestic purposes is not contributing much to environmental degradation”¹¹.

Further details on corridor villages from the Rapid Rural Appraisal conducted as part of this Feasibility Study are summarised in Annex 5. For further socio-economic data it is referred to Annex 6.

4.3. LAND TENURE

Land tenure in Tanzania is governed by the Land Act, 1999 and the Village Land Act, 1999. In general all land in Tanzania is public and vested in the President who is the trustee of the land for and on Behalf of the citizens of Tanzania. For the purposes of management all public land is divided into 3 general categories under the Land Act. These are: General Land, Village Land and Reserved Land. A definition of each land category is quoted from the Act:

1. General Land: Means all public land, which is not reserved land or village land and includes unoccupied or unused village land;
2. *Village Land: Means the land declared to be village land under and in accordance with section 7 of the Village Land Act 1999 and includes any transfer or land transferred to a village; and,*
3. Reserved Land: Is land reserved, designated or set aside under the provisions of the
 - Forest Act 2003 (before Forest Ordinance);
 - National Parks Ordinance;
 - Ngorongoro Conservation Area Ordinance;
 - Wildlife Conservation Act, 1974;
 - The Marine Parks and Reserves Act, 1994; and,
 - Land declared by order of the Minister, in accordance with the provisions of this Act to be hazardous land¹².

The planned Selous Niassa corridor consists primarily of village land and reserved land. With the exception of those villages who have established a WMA, no village within the corridor has carried out a Land Use Plan and the exact boundaries of many villages

¹¹ IBID (page 65)

¹² Hazardous land, according to the Village Land Act 1999, is land the development of which is likely to pose a danger to life or to lead to the degradation of or environmental destruction and includes for example mangrove swamps and coral reefs, wetlands and offshore islands in the sea and lakes, land within 60 metres of a river bank or the shoreline of an inland lake, land which should not be developed on account of its environmental significance.

remain unmarked. The Tanzanian land use policy requires that the village boundaries are demarcated for villages to obtain their title deeds. However, an insufficient capacity of the Land Planning Offices at District Level has prevented a systematic implementation. As part of the WMA process a development of a land use plan by villages is required and the boundaries are demarcated. Villagers have therefore been eager to participate in the process because it provides them with the title deed to their land. Within villages, the village council is the body with the legal mandate for the allocation, usage and deposition of land.

4.4. WILDLIFE MANAGEMENT AREAS AND COMMUNITY BASED CONSERVATION

Over the last two decades there has been recognition world-wide that the successful conservation of natural resources and wildlife depends on the cooperation of the communities living with or around it. This is the basic driving force behind the Community Based Conservation (CBC) approach promoted in Tanzania and many other African countries. Since the early 1990 Tanzania has seen the initiation of a multitude of CBC initiatives such as the Ruaha Ecosystem Wildlife Management Project, the Cullman Wildlife Project, Ngorongoro Conservation Area Strategy, Serengeti Regional Conservation Strategy, Tanzania National Parks Community Conservation Service, Selous Conservation Project plus numerous other smaller and localised efforts. The experiences gained in the implementation of these initiatives in the wildlife sector have been combined and a national CBC policy adopted largely based on the Wildlife Management Area Approach as pioneered around the Selous Game Reserve. Although the Wildlife Conservation Act of 1974 has not yet been amended to include this new wildlife conservation approach the approach was legalised with the launch of the 'Wildlife Conservation (Wildlife Management Areas) Regulations in 2002.

Sixteen pilot WMA were officially launched and gazetted in the Wildlife Conservation (Wildlife Management Areas) Regulations, 2002. Three of these pilot areas are situated around the Selous Game Reserve of which two fall within the proposed corridor between the Selous and Niassa Protected Areas. These pilot areas will be reviewed for their performance after a test phase of three years. To facilitate the implementation of the new approach a 'Reference Manual for Implementing Guidelines for the Designation and Management of Wildlife Management Areas (WMAs) in Tanzania' was produced in English and Kiswaheli in 2003.

The fundamental underlying principle of WMAs is that of providing immediate and tangible benefits from wildlife to the communities living with it. The programme requires that villagers develop a Land Use Plan for their village land in which they designate areas for specific uses including a Wildlife Management Area. The village then forms a Community Based Organisation, officially registers it and submits an application for Authorised Association Status to the Director of the Wildlife Division. Once the CBO has been granted Authorised Association (AA) status it is allocated user rights to wildlife occurring within the WMA. The user rights include a quota for community hunting. Subject to specific regulations the AA engage in tourist hunting, non-consumptive tourism and live animal capture. Conditional Resource utilisation requiring licenses from

the responsible authorities include forest products, bee resources and fish resources. Activities not permitted are mining, wildlife cropping and wildlife farming and ranching. A schematic overview of the WMA formation process is given in Figure 1.

An AA may also enter into Investment Agreements or Joint Ventures with the Private sector concerning natural resources within the WMA. Investments in WMAs are subject to the following conditions¹³:

- Investment in WMA's will involve development or improvement of infrastructure and services in WMA;
- All investments shall be subjected to an Environmental Impact Assessment (EIA) and shall conform to the General Management Plan or Resource Management Zone Plan;
- The District Natural Resource Advisory Body shall provide to the AA guidance and advice on matters relating to agreements, investments, and development in a WMA;
- Joint Venture and Investment Agreements shall not involve the management of natural resources or allocation of hunting blocks;
- Joint Venture and Investment Agreements shall be operative upon approval by the Director of Wildlife;
- Investment Agreements shall conform to the format prescribed in the Twelfth Schedule to the Regulations;
- An Investment Agreement that will provide for the development of village land for ultimate physical use and occupation of land by the investor shall be supported by a derivative right approved by the respective Village Council under the Village Land Act, 1999;
- The Village Council may grant a customary right of occupancy to the AA for purposes of enabling the AA to create derivative rights in favour of an investor;
- The Village Council shall enable the AA and the investor to acquire a customary certificate of title and derivative title respectively, in order to facilitate financing of activities in a WMA;
- The term of the derivative right to be granted to the investor shall run concurrent with the term provided in the Investment Agreement;
- Joint Venture Agreements shall be governed by the Companies Ordinance, Cap 212; Law of Contract, Cap 443; the Village Land Act, 1999, the Local Government (District Authorities) Act 1982 and other relevant laws;
- There shall be formed a Joint Venture Management Committee which shall be responsible for the management of joint venture activities in the WMA. (Refer: Regulation 65); and,
- The Minister will set the minimum payable rate of fees; and,
- The parties to the Investment Agreement (i.e. the AA and the Investor) will be at liberty to negotiate on whether or not the rate of fees for utilisation of wildlife in a WMA as set by the Minister should be increased. (Refer: regulation 47)

¹³ Source: Wildlife Conservation (Wildlife Management Areas) Regulations, 2002.

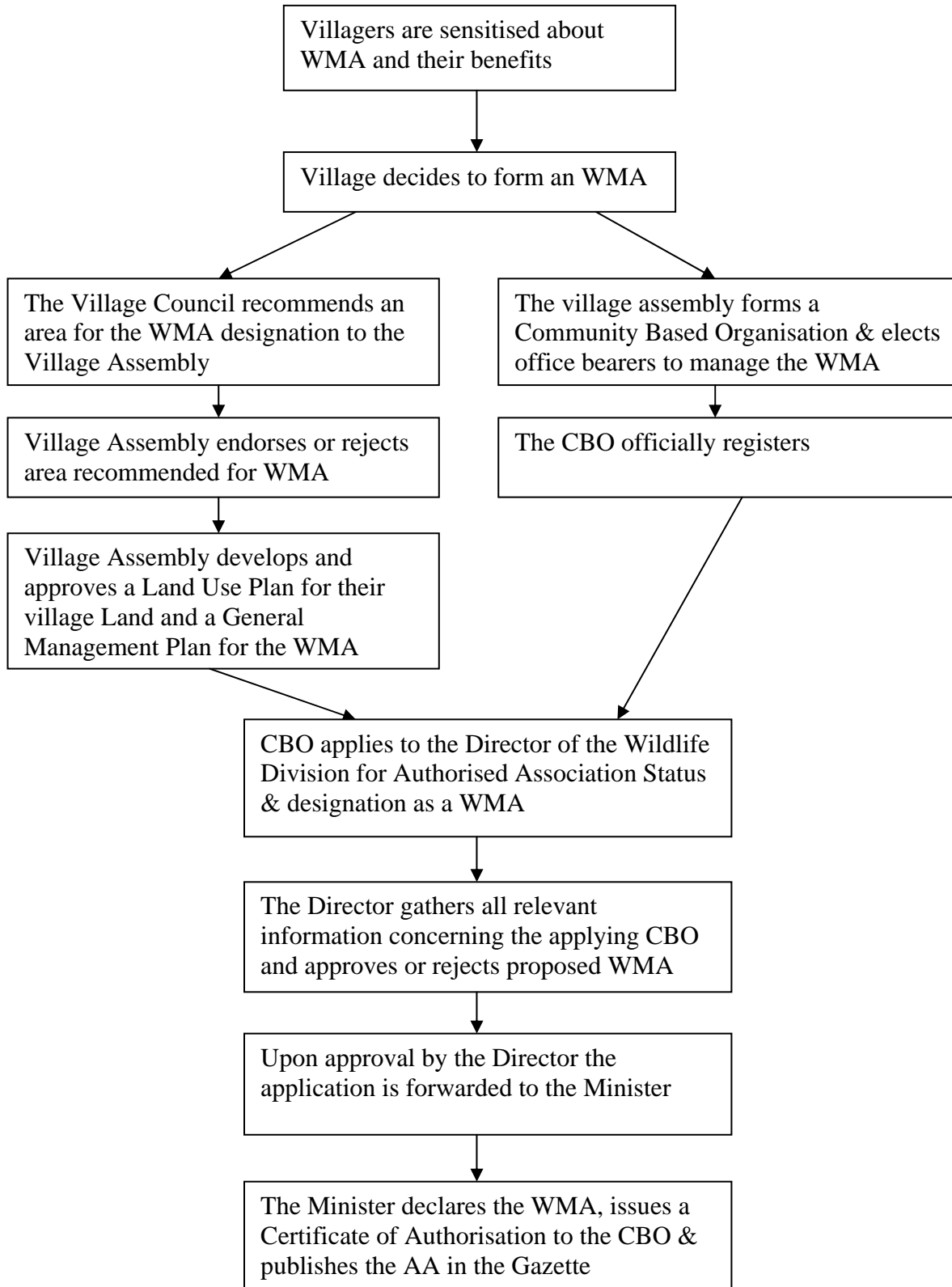


Figure 1: Schematic Overview of the WMA Formation Process

The AA is accountable to the Village Council. It is responsible for the day to day management of the WMA. For specific responsibilities of the Village Council and AA as defined in the Wildlife Conservation (Wildlife Management Areas) Regulations, 2002 refer to Annex 7.

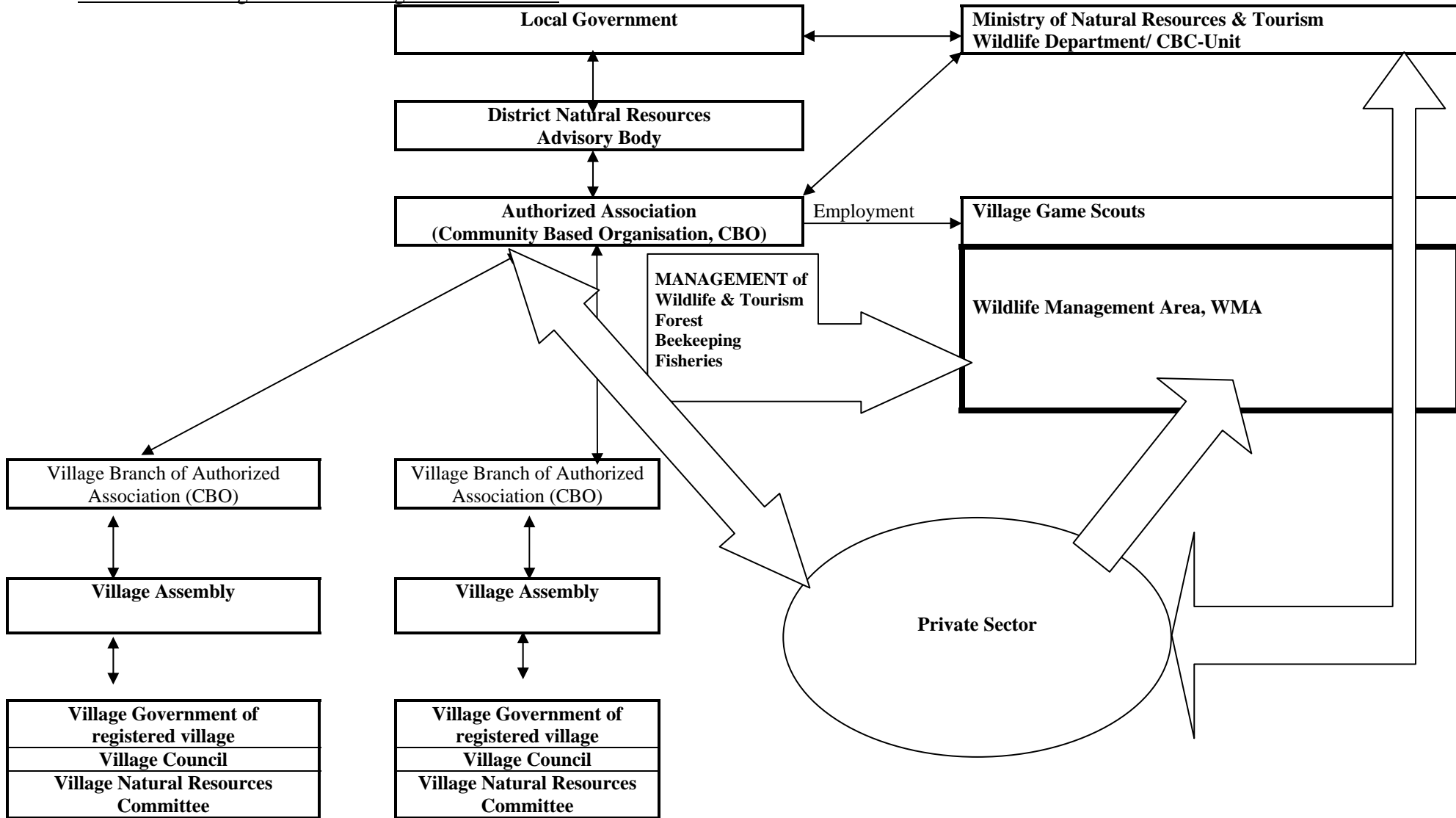
Numerous institutions and organisation are involved in the establishment and management of WMAs. The WMAs in Tanzania are a widely recognized working model, well described in the literature and relate to on-going donor projects as described in chapter 4.9. Donors and INGOS working with this model in Tanzania include *inter alia* USAID, EU, DANIDA, WWF, and Conservation International.

Once the village land use plans are in place, villages can apply directly for WMA membership. According to the District inter-disciplinary planning groups the average time requirement for a participatory village spatial land use plan is 2-3 months. Apparently, village boundary conflicts are extremely rare and are generally resolved rapidly (one or two meetings using a seasoned mediator according to District officials in Songea and Tunduru).

The application process for village membership is relatively straightforward and fast (on the average less than one year from first application to approval), although profit sharing schemes and wildlife allocations appear to be less transparent and take longer to negotiate.

The most important institutions for the day to day management of WMAs are the AA, the Wildlife Division via the District Game Officer and the District Natural Resource Advisory Body. The linkages between these organisation are illustrated in Figure 2.

Institutional Linkages For The Management Of WMA's



4.5. THE LAND USE PLANNING PROCESS

The establishment of a Wildlife Management Area requires participating villages to develop a Land Use Plan for their Village Land. In the event that land from more than one village is covered by a single WMA a Joint Village Land Use Plan (LUP) is developed. Demarcation of individual village boundaries as part of the Land Use Planning Process is required under the Tanzanian Village Land Policy. The land use plan represents the most critical tool in preventing further habitat fragmentation within village lands and allows Village Councils to prevent squatting and illegal settlements on land specifically designated for residential and agricultural purposes. As such the land use planning process is the most important first step within the development of the ecological corridor between the Selous and Niassa Game Reserves.

The actual land use planning process is conducted by the Village Assemblies of the concerned villages with assistance from a multisectoral team from the District Offices. This team comprises at least one of each of the following sections:

1. District Land & Development Office (Team Leader)
2. Survey Office
3. District Game Office
4. District Forest Office
5. District Agricultural Office
6. District Planning Office
7. Community Development Office

The entire land use process is estimated to take about 6 weeks/village. Currently topographic maps of a 1:50 000 scale are used as a basis for mapping the LUP. At present all plotting is done by hand as Regional and District Land Offices are not equipped for the use of GIS technology. To begin with the boundaries of the villages concerned are demarcated. This requires meetings between neighbouring villages to agree on the exact location of boundaries between villages and to resolve potential conflicts over existing boundaries. Once all village boundaries have been mutually agreed upon by all concerned parties, these boundaries are demarcated. Demarcation usually follows prominent landscape features such as streams or rivers, in the event that no such features exist beacons are established in strategic locations.

In the actual land planning process villagers designate and quantify areas for the:

- Wildlife Management Area
- Village Forest Area
- Agricultural & Livestock Area
- Residential Growth Area
- Afforestation Area
- Any other area the concerned village wishes to designate.

Land Use Plans typically cover a period of up to 15 years and average annual population increases are taken into account when designating land use categories.

4.6. FORESTRY

Tanzania has an estimated 33.5 million hectares of forests and woodlands. The majority, about two thirds occurs on public land and is not subject to proper management. Approximately 13 million hectares of the total forest area is gazetted as forests reserves, of which 80 000 hectares is under plantation forestry. The forests are coming under increasing pressure from clearing activities for agriculture, overgrazing, wildfires, charcoal burning and over-exploitation of wood resources. Most of this deforestation occurs on unreserved forest land. The dependency on wood and forest products within rural areas in Tanzania is high, especially for poles for house construction and firewood.¹⁴

In the area within and around the corridor firewood is the main source of domestic energy for cooking for over 95 % of the population. The cooking stoves used are reported to have a very low energy efficiency. Estimated consumption rates per capita per year is around 1.5m³ to 2.0m³. However, it appears that most firewood for domestic purposes used in the corridor area is collected from farmlands of dead wood from bush areas close to residential areas. Thus firewood collection does not at the local level contribute much to the degradation of woodlands.¹⁵ Clear cutting along roads for agricultural land and deforestation for charcoal production on the other hand are serious threats, especially along roads.

Charcoal is produced in simple earth kilns having a low recovery rate. The demand for charcoal mainly concentrates around the cities and larger settlements. For Songea it was reported that on average a household will use approximately 2 to 3 bags of charcoals of 30 kg each per month. Miombo woodland are the main source for charcoal production.

To effectively combat deforestation the Forestry Department has embarked on a participatory forest management policy promoting the establishment of village forest reserves, community Forest Reserves and joint forest management agreements with communities at the village level. The policy uses a similar approach as the WMA programme. The programme will not only focus on wood and wood products, but also on other forest resources such as mushrooms, traditional medicines, bee-keeping, nuts, roots and other edible plants. The following types of forest reserves are recognised on demarcated and surveyed village land:

- Village land forest reserves;
- Community forest reserves created from village forests;
- Non-reserved Forests; and,
- Private forests, either under customary right of occupancy or a granted right of occupancy or lease.

¹⁴ National Forest Policy (1998)

¹⁵ Smith, 2005. Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface: Final Draft Report.

Within the corridor area this programme has not been implemented to date due to a lack of clear guidelines for the implementation and funding. However, the WMA process cooperates closely with other natural resources district offices and a representative from the District Forest Office is among the Land Use Planning Team which works with the villagers. In the course of this process Village Forest land and reserves are officially designated by villagers, and in some villages land suitable for afforestation. The two programmes thus complement each other.

Both the WMAs and Village Forest Land have a high potential for beekeeping which could be further developed. While some villagers engage in beekeeping, the production is for local use only and no real commercial beekeeping product exists. Considering the increased world-wide demand for honey, particularly from pesticide free areas this activity has an enormous economic potential, if the processing and marketing problems could be solved.

The new Beekeeping Act (1998) also promotes community based beekeeping. The act recognises private bee reserves, national bee reserves, local authority bee reserves and village land bee reserve. As for WMAs the Village Council is responsible for the management of the village land bee reserve. No such area has been declared within the corridor area to date. Beekeeping extension activities within the Namtumbo and Tunduru Districts are severely constrained by a shortage of staff and operational funding.

4.7 TOURISM

Wildlife populations within the corridor are currently considered too low to support photo-tourism or sustainable tourism hunting. Whether this applies to the entire area or only to certain species needs to be investigated further.¹⁶ Not one game species was seen during the consultants field trip for the feasibility study into the region, although local people report movement of wildlife through the area. The area most promising in terms of wildlife numbers is along the Ruvuma River. However, ...‘permanent poaching pressure in the past reduced the number of wildlife substantially and made the remaining animals very timid towards people. Nevertheless, experience in establishing WMA’s under similar conditions have shown that the wildlife population need only three to five years of absolute protection to recover from previous unsustainable utilisation. This can only be achieved with the commitment of the local communities towards conservation and consequently their assistance in law enforcement. In order to increase the efficiency in law enforcement regarding the imminent problem of trans-boundary poaching, a high level of cooperation between the Governments of Tanzania and Mozambique is necessary. Also the areas where wildlife crosses regularly the river Ruvuma should be identified together and should receive special attention and protection’¹⁷.

In general the development of a tourism industry within the corridor area and southern Selous is constrained by the lack of major infrastructure and the long distances and poor

¹⁶ Smith, 2005. Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface: Final Draft Report. (page. 72)

¹⁷ IBID (page 72)

access from other major tourism attractions to the region. In the medium term tourism hunting is the most feasible option for tourism development within the corridor area because of its low investment and low infrastructure requirements. It offers good financial returns on investment in the short term and would provide communities with the opportunity to significantly benefit from the wildlife in their area. However, in the longer term hunting and tourism should be seen as complementary. Where good game viewing areas develop these should be reserved for photographic tourism. Photographic tourism will, however require more investment in infrastructure and improved access and have a significant impact on the area.¹⁸

It is unlikely that the Ruvuma River itself, which offers the potential for a variety of soft adventure tourism (bird watching, canoeing, rafting, hiking, climbing) can be developed into an anchor destination of its own. 'There are, however, many sites that will give visitors a true wilderness experience, such as Mtongwe Mountain, but it is not clear whether there will be adequate game-viewing to provide a viable wildlife safari product, and tourism positioning may need to focus more on the wilderness aspects. There is no obvious focus for development, except along the Ruvuma River, where the inselbergs close to the river may give opportunities for look-out points and possibly even lodges, once the broader access infrastructure has been put in place. The river is in places more than 100 km distant from the Songea – Tunduru trunk road. This requires rather expensive investments in roads if vehicle-based tourism is to be developed.'¹⁹ The assessment on the potential of the Niassa Game Reserve Ruvuma River Interface as a Tourism Destination concluded that the best development potential for the entire Mtwara Corridor appears to exist in developing individual game reserves along to the Ruvuma River as destinations of their own right which could then be combined with Beach tourism along the Indian Ocean offering a 'beach-bush' package to international tourists. However, these forest reserves are not located within the corridor.

The attractiveness of an established Selous-Niassa Transfrontier Conservation Area (TFCA) to international tourist cannot be quantified, but could potentially be high. While photographic tourism is seen as the major economic activity and income generator for large parts of the TFCA as a whole, this will take a long-term to develop and will require substantial investments.²⁰

4.8. POLITICAL, LEGAL AND ADMINISTRATIVE FRAMEWORK

The National Conservation Policies and Priorities of Tanzania have been summarised in the UNDP (2003) Project Brief for the GEF/UNDP Selous Niassa Corridor Project:

'Tanzania regards its wildlife as both a unique natural heritage and a resource that is of great importance, both nationally and globally. Its importance lies in the biological diversity of the species and habitats found in the country. This project is firmly based on these national priorities. The National Environmental Action Plan (1994), the National

¹⁸ Norton, 2005. Niassa Game Reserve Rovuma River Interface Tourism Destination Assessment.

¹⁹ IBID (page 34)

²⁰ Norton, 2005. Niassa Game Reserve Rovuma River Interface Tourism Destination Assessment.

Conservation Strategy (1995), the Environment Policy (1997) and both the Wildlife and Forest Policies (1998) stress the importance of a viable Protected Area Network and the need to maintain transboundary linkages. Tanzania has established a network of protected areas covering some 25 % of the land surface as a basis for conserving its country's biological diversity. The new Wildlife Policy of Tanzania (WPT) (1998) directs Government to focus on the following objectives:

- ❑ Maintaining and developing the wildlife protected areas network by involving all stakeholders in the conservation and management, especially local communities.
- ❑ Facilitating the establishment of a new category of protected area, the WMA, where people have the mandate to manage and benefit from their conservation efforts thus taking care of corridors, migration routes and buffer zones.
- ❑ Cooperating with neighbouring countries in the conservation of migratory species and the transboundary ecosystems.'

'Community participation forms an integral focus of the WPT and hinges on wildlife protection and utilisation. Four WPT objectives support community participation in the protection and utilisation of wildlife resources. These are as follows:

- ❑ To promote the conservation of wildlife and its habitats outside core protected areas by establishing Wildlife Management Areas.
- ❑ To transfer the management of WMAs to local communities thus taking care of corridors, migration routes and buffer zones as well as to ensure that local communities obtain substantial and tangible benefits from wildlife conservation.
- ❑ To ensure that wildlife is appropriately valued in order to reduce illegal off-take and to encourage sustainable use by rural communities.
- ❑ To create an enabling environment which will ensure that legal and sustainable wildlife schemes directly benefit local communities.

In January 2003 the Ministry of Natural Resources and Tourism manifested the intention of the WPT regarding community-based conservation with the endorsement of the Wildlife Management Area Regulations and the Guidelines for the Designation and Management of WMAs.' These regulation specify the legal rights and responsibilities of the communities via the Authorised Association, the Wildlife Division, District Authorities and all other involved institution and parties.

Legal Provisions for the utilisation of Natural Resources are specified in Part VII of the Wildlife Conservation (Wildlife Management Areas) Regulations 2002. The act specifies the right of AAs for quota allocation and hunting block application provided that wildlife populations are sufficient and that the AA fulfil specified application procedures. The Regulations also foresee the participation of AAs in the Hunting Block Allocation process via the election of two representatives from a consortium of AAs. These two representatives would then be full members on the Block Allocation Advisory Committee. However, to date no Consortium of AAs has been formed, delaying the participation of AAs in the allocation of block hunting. Relevant excerpts from the

Wildlife Conservation (Wildlife Management Area) Regulations, 2002 the allocation of game quotas and their utilisation are given in Annex 8.

The Ministry of Natural Resources and Tourism further includes the Forestry, Beekeeping and Fisheries Divisions. All three divisions have established policies aimed at the participation of communities in the management of the respective resources concerned. Table 2 gives details of the relevant legislation covering each sector within the Ministry of Natural Resources and Tourism²¹:

Natural Resource	Legislation	Comments
Wildlife	Wildlife Conservation Act No 12 of 1974, Subsidiary Legislation and Regulation	Wildlife Act presently under review
Forestry	Forest Act, Act 2002; Subsidiary Legislation and Regulations	
Bee-keeping	Beekeeping Act 2002	Regulations presently under review
Fisheries	Fisheries Act No 22 of 2003	Regulations presently under review
National Parks	National Parks Ordinance Cap. 412	
Ngorongoro Conservation Area	Ngorongoro Conservation Ordinance Cap. 413	

‘The National Forest Policy of 1998 emphasises the role of forestry in rural development and conservation through the sustainable supply of forest products, increased employment and income earnings and ecosystem stability, forest biodiversity, water catchment and soil fertility. It also recognises the role of community involvement in natural resources management and particularly addresses the issue of community forests. It introduces the concept of Village Forest Reserves managed by village governments or other designated entities by village governments based on sustainable management objectives.’

‘Both the Wildlife and Forest Policies provide for conservation and sustainable management of natural resources on village land aiming to provide for a win-win situation between conservation and sustainable development/livelihoods. This is in line with the countries development strategies in particular the second phase of the Poverty reduction Strategy (PRSP) that includes sustainable resource use as a means to alleviate and eliminate poverty as a major determinant.’

²¹ Hahn, R. 2005. Environmental Baseline Study for the Ruvuma Interface: Prefeasibility Study Into Sustainable Development and Conservation. GTZ, Dar es Salaam. (page 13)

The Ministry of Natural Resources is the national body for policy formulation and the management of national reserves and parks. In line with the decentralisation policy the Regional, District and Local Authorities have Technical Advisors for each of the natural resource sectors. These are administratively responsible to the Local Authorities they are working for and in technical issues to their respective divisions. Table 3 gives an overview of the governmental focal points within the natural resources management sector.

National Government	Ministry of Natural Resources and Tourism	<ul style="list-style-type: none"> ▪ Department of Wildlife ▪ Department of Forestry & Beekeeping ▪ Department of Fisheries ▪ Department of Tourism
	Ministry of Natural Resources and Tourism	Government Agencies <ul style="list-style-type: none"> ▪ Tanzania National Parks (TANAPA) ▪ Ngorongoro Conservation Area Authority (NCAA)
Regional Administration	Cluster: Economic Development and Services	Technical Advisors in: <ul style="list-style-type: none"> ▪ Natural resources ▪ Agriculture & Livestock ▪ Cooperatives ▪ Trade
District/Local Authority	Department of Natural Resources	Sectors: <ul style="list-style-type: none"> ▪ Wildlife ▪ Forestry ▪ Bee-keeping ▪ Fisheries

The management of Reserved Land is mandated to either the National Government or the Local Authority. For Game Reserves in general (including Selous Game Reserve) the mandate lies with the National Government, in this case the Wildlife Division. All areas designated as WMAs also fall under the management authorities of the Wildlife Division. WMAs can only be established on demarcated village land which falls under the authority of the relevant District Council. Within the Selous-Niassa Ecological Corridor this includes the Namtumbo and Tunduru Districts, which play a key role in the facilitation and implementation of the corridor project on the ground. The District Game Officers in charge of promoting WMAs within the districts report administratively to their respective district authorities.

4.8. THREATS TO BIODIVERSITY IN THE TARGET AREA

The main two threats to the biodiversity within the Selous-Niassa Corridor are uncontrolled and unplanned conversion of land for agricultural and ribbon strip development and uncontrolled and illegal resource utilisation. There appear to be numerous interrelated root causes for these threats:

- (a) A lack of enforcement of regulations;
- (b) No adequate institutional system in place for land management;
- (c) Knowledge and skills for WMA and Community Managed Forest Reserve implementation are not readily available;
- (d) There is a lack of economic alternatives and awareness of the potential benefits of wildlife as a form of land use;
- (e) Awareness of the global value of the corridor is low among land planners and developers; and
- (f) The corridor as a whole presently does not have any protection status. Only the northern part is covered by WMAs as part of the Selous Buffer Zone.

These threats as well as the underlying root causes have been described in detail in the UNDP/GEF Selous-Niassa Wildlife Corridor Brief²²:

‘The high human population growth rate in the corridor area is predicted to lead to agricultural expansion for both cash and food crops. This development could convert much of the still biologically intact corridor to cultivation, especially along the major roads and rivers. Unless efforts are made to ensure the integrity of the corridor the natural habitat will be fragmented and destroyed as damaging land-uses increase, as experiences from other parts of the country have shown. The obstruction of the movements of large herbivores such as elephants will result in increased human-wildlife conflict. As elephants and other ‘conflict’ mammals will not be tolerated in agricultural areas, this process will eventually lead to the loss of this valuable tract of land and its wildlife resources.’

‘The major road (Songea-Tunduru-Mtwara) and village roads (mainly Amani-Magazini-Ligusenguse) provide an attraction for settlement and cultivation. Whilst there are still gaps between villages, these are closing as a ribbon of strip development continues along the road. The Songea-Tunduru highway is to be upgraded with the economic development of the “Mtwara Corridor”, an initiative by Malawi, Mozambique and Tanzania to develop the area between Mtwara and Lake Malawi. The road and the Ruvuma River will become magnets for development. The upgrading of the road itself is not seen as a serious threat to corridor linkages, as other examples in Tanzania demonstrate (the tarmac Morogoro–Iringa highway crossing Mikumi National Park for instance, does not block animal movements). However unless the corridor is recognised as being of critical importance and steps are made to restrict ribbon development in the area, a barrier will be formed between the two world’s largest protected miombo ecosystems and elephant habitats.’

‘The *de facto* open access to the resources of the corridor creates poaching opportunities for meat for the local market and poaching for ivory. This provides for an increase in household incomes, either through money earned on the open market or through economizing on food resources normally purchased. The common history of people on

²² UNDP/GEF. 2003. The Development and Management of the Selous-Niassa Wildlife Corridor in Tanzania: Medium-Sized Project Brief. (page 11-13)

both sides of the boundary and the ease of crossing the Ruvuma River means that poaching, especially the 'high value' poaching of ivory has a transboundary component.'

'Within the proposed corridor there are no permanent settlements and agriculture on the Ruvuma River itself, but there are seasonally concentrated fishing activities and snare-lines from poachers along the river and some of its tributaries. These activities disturb and prevent mammals from crossing, drinking and feeding in the riverine forests especially in the dry season, when fishing activities are at their peak and animals are dependent on the river for water and food. Further, uncontrolled fishing and fishing methods (use of fish poison) deplete the fish stocks of the river and disturb the aquatic fauna.'

'Uncontrolled commercial logging for valuable and marketable timber species also takes place, and will increase with the growth of the major towns and the improvement of the road system. If not controlled or prevented it will ultimately lead to a genetic depletion of some valuable species (the same phenomenon was observed in other areas round Selous Game Reserve; in Kilwa and Rufiji District). The Sasawara Forest Reserve (385 km²), located almost in the centre of the corridor, is a core area for the protection of biodiversity and landscape linkages. Satellite images and reports indicate that heavy encroachment and destruction from human activities like farming and settlement take place in the eastern part of the reserve. Furthermore habitat degradation often results from uncontrolled wildfires, caused by the local population seeking easier honey and forest resource harvesting.'

'The root causes of these threats are inter-related, each compounding the other. The corridor falls outside the protection of the Game Reserves, and so the *de facto* open access of the area results in little incentive to protect the natural resources. Communities seek short-term benefits and, with no long-term stake in the resources, the rate of depletion of resources and land will accelerate as the population grows. Enforcement of regulations relating to wildlife hunting is restricted to the Game Reserves and, whilst poaching of wildlife in all areas is illegal, the government has inadequate manpower and resources to control hunting elsewhere. Poaching is a transboundary problem; the still limited coordination between the Tanzanian and Niassa Reserve authorities results in opportunities for illegal hunting being pursued. The capacity of the Forestry Department to adequately enforce regulations in the Sasawara forest area is limited, and communities, who derive no benefits from the reserve, will benefit more from land conversion or logging.'

'The natural resources in the corridor fall under the jurisdiction of the Local and District Authorities. However, insufficient human and financial resources exist for adequate protection or enforcement of regulations. The communities have no management authority over the resources on the land and this exclusion leaves them with little incentive to manage these resources sustainably in the long term.'

'The overall national development policy framework is for greater levels of real decentralisation and empowerment of local community groups. This is promoted through

the concept of Wildlife Management Areas with village control and ownership as key principles. Transfer of such authority necessitates high levels of capacity to allow successful management and utilisation of the WMAs and an equitable distribution of benefits for that utilisation. Until recently there has been no effort or structure capable of managing natural resources within the community, the WMAs offer this opportunity but currently the capacity to implement the WMA policy within the local communities is low, and limited knowledge and skills will compromise the success of the WMA initiative.'

'Integrally linked to limited knowledge and skills, is low levels of awareness of wildlife as a recognised form of land use. Wildlife found in agricultural areas frequently cause crop damage which threatens livelihoods; consequently the perception among local communities is negative. Unless these perceptions can be changed, the opportunities provided by wildlife in the generation of economic benefits will not be realized. Wildlife can be a more economically viable form of land use in areas where keeping livestock yields low returns due to limited grazing opportunities and high numbers of tsetse fly. These conditions are characteristic of the Selous-Niassa corridor.'

'Initial studies have highlighted the importance of the Selous-Niassa corridor in maintaining a corridor between two of the largest game reserves in East Africa for both animal movement and for genetic flow and as an important biodiversity repository in its own right. However awareness of this value and potential economic benefit among land planners and developers is low. With the conservation value of this area unrecognised, short term benefits from rapid development will undermine the integrity of the area in the next 6-7 years and form a barrier between the two game reserves.'

4.9. KEY ACTORS, RELATED PROJECTS AND DONOR ACTIVITY

The key actors for the Selous-Niassa Corridor Project are the Wildlife Division, the District Offices, and Local Authorities within the villages. Their role and function will be described in section 5.5.

There are a number of related projects ongoing or planned within and around the corridor area significant to the planned KfW intervention. These are the GTZ funded Community Wildlife Management (CWMP) Project, the GEF/UNDP Development and Management of the Selous-Niassa Wildlife Corridor in Tanzania, and the participatory Forestry and Bee-keeping initiatives.

The GTZ funded CWMP developed out of the Selous Conservation Programme (SCP) which was initiated in 1987 as a bilateral cooperation agreement between Germany and Tanzania. It is implemented jointly with the Wildlife Division and was instrumental in the development of the WMA concept and pilot implementation and promoting the corridor concept between Selous and Niassa. The focus of the project was on the rehabilitation and management of the Selous Game Reserve and to establish a programme of CBC around the reserve. The objectives of the project were defined as:

- to assist in the rehabilitation and management of the Selous Game Reserve, and
- to establish, in cooperation with local villagers, a programme for sustainable wildlife utilisation in buffer zones adjacent to the Selous Game Reserve.

The SCP came to an end in 2003, however, support for the WMA and CBC continue through the CWMP and the project is presently working with some 50 villages reaching 80,000 people around the reserve.

WMAs were established in the northern part of the corridor as part of the project. In addition to the WMA activities the project also includes a component in support of the Selous-Niassa Wildlife Corridor Project. The project is scheduled to come to an end in 2007.²³

The GEF funded UNDP Project Development and Management of the Selous-Niassa Wildlife Corridor in Tanzania is scheduled to begin in May 2005. The project is executed by the Wildlife Division and implemented by the GTZ international Services. The project seeks to establish the corridor by establishing WMAs in the southern part of the corridor. Specific planned project outputs are:

- Greater awareness and capacities for conservation of biodiversity and natural resources within the corridor among local communities, local and District Authorities;
- Creation of reliable ecological and socio-economic databases for the corridor to serve as decision-making tools for communities and local authorities;
- A network of WMA associations effectively established and managed throughout the corridor;
- Protection of the Sasawara Forest Reserve through community participation; and
- Dissemination of best practice for community managed protected areas.

The project complements the planned KfW interventions and concentrates on technical assistance required for the corridor project. Thus the scope for cooperation between these two projects is good and will be instrumental to the success of both projects. Details on the recommended co-operation are given in section 5.2. GEF funding to the project is just under US \$ 1 Million with projected co-funding of US \$ 1,060,000.²⁴ This funding level is insufficient to successfully implement the project with all the planned components. Especially the WMA establishment process with focus on the LUPs will require a much higher level of funding.

With the adoption of CBC as part of the national policy, both the Forestry and Beekeeping Divisions have given strong emphasis on the community involvement and participation in forest and bee-keeping activities within their policies. These policies

²³ Smith, 2005. Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface: Final Draft Report.

²⁴ UNDP; 2003. Medium-Sized Project Brief: The Development of the Selous-Niassa Wildlife Corridor in Tanzania.

permit the establishment of Village Forest Reserves and Village Bee-keeping Reserves. Support to these initiatives has been given by a variety of donors, especially FINNIDA to advise on the National Forest Programme Implementation Support Programme (NFP-ISP). 'A key component of the overall programme is participatory forestry management, which is being promoted at the village level and is similar to WMAs but covering the forestry sub-sector. Specifically, the sustainable use of forest-based resources, including e.g. timber, honey, beeswax, charcoal, firewood, medicinal plants, edible plants, nuts, roots, and other non-timber forest products.

The sustainable community-based management and use of forest-based resources provides still a larger potential for income generation to the local communities. The management and use of forest resources need to be planned and coordinated with the management and use of wildlife resources. There is a need for increased cooperation and coordination between sectors, which can be explored in more detail in this pilot study of the Niassa Game reserve (NGR)-Ruvuma River Interface Region. An integrated land use planning and land management approach will be used to map the linkages between forest and beekeeping potentials and other land uses and alternative management options explored. The pilot study will also address such issues as (i) strengthening village-level capacity, and (ii) supporting and encouraging socially responsible private sector investments in local level forest and beekeeping industries.'²⁵

Under this project Participatory Forest Management Areas are expected to be implemented around the Sasawara and North Undendeule Forest Reserves, although no specific dates for commencement of these initiatives at the district level were available.

The Mtwara Development Corridor is a joint initiative by the United Republic of Tanzania, the Republic of Mozambique, the Republic of Malawi and the Republic of Zambia. The corridor project seeks to promote development within the corridor region in a manner beneficial to all four participating countries. The Mtwara port in Tanzania plays a critical role in these plans and its improved accessibility to the other participating countries is envisioned to be the major driving force behind a series of anchor projects planned for the region.

To date there are five such anchor project planned along the Mtwara corridor. These are the Integrated Forestry Cluster Anchor Project; the Integrated Coal, Iron Ore, Sponge Iron and Iron/Steel Product Cluster Anchor Project; the Cashew Nut Cluster Anchor Project; the Coastal Gas to Cement/Fertilizer Plants Anchor Project and the Sustainable Utilisation of Wildlife Resources Anchor Project (Selous-Niassa Corridor and Wildlife Management Area).

Geographically the Selous-Niassa Corridor lies in the heart of the Mtwara Corridor. The recognition of the ecological corridor project as an anchor project within the Mtwara development initiative ensures ownership of the project at a regional level and is a first step towards the official establishment of a Transfrontier Conservation Area. Coordinated

²⁵ Smith, 2005. Prefeasibility And Environmental Baseline Study For The Ruvuma River Interface: Final Draft Report. (P.15)

management between Tanzania and Mozambique is vital for the continued viability of the ecological corridor linking the two protected areas. Especially in the area of anti-poaching activities there is a need to strengthen cooperation and increase coordination of the respective units within each country. Along the Ruvuma river, a joint management and law enforcement initiative would be greatly beneficial in safeguarding areas of high biodiversity, areas used by animals to cross the river and the riverine ecosystem as a whole.

Of all proposed anchor projects within the corridor the Selous-Niassa Ecological Corridor Project is presently the only project for which donor support has been secured and implementation is imminent. All other anchor projects are theoretical plans to date and the start of their actual implementation is uncertain. The Selous-Niassa ecological corridor project therefore is highly significant to the Mtwara development corridor initiative. It would provide the participating countries with an achievement to show to their respective constituencies within a relatively short period of time and thus lend credibility to the initiative as a whole.

Figure 3 provides a schematic overview of the planned anchor projects within the Mtwara Corridor and the location of important natural resources in the region. With the exception of the ecological corridor project all other projects require major infrastructure improvements, along the corridor to make the projects feasible. Urgent priorities identified for the Mtwara Development corridor are the construction and extension of the Mtwara-Mbamba Bay Road, a heavy-capacity ferry service linking Malawi with Mbamba Bay and a bridge over the Ruvuma River linking Mozambique to the corridor. The individual anchor projects proposed would further require the development of infrastructure including:

- ❑ a high-quality hardwood processing facility in Mtwara,
- ❑ additional log processing facilities along the corridor and in Malawi,
- ❑ a Sponge Iron and Iron and Steel Plant,
- ❑ an efficient rail infrastructure for the transport of coal and iron and steel products,
- ❑ the construction of cashew nut processing plants,
- ❑ a fertiliser plant, and
- ❑ a cement plant.

The corridor area in the schematic figure includes both the western and eastern corridor between Selous and Niassa. With a focus on the western corridor there will be no conflict of interests between the individual anchor projects. The most serious anticipated impact of the other anchor projects on the ecological corridor are the improvement of the Mtwara-Mbamba Road which transverses the corridor, potential associated ribbon development along the road, and immigration into the area from other regions of the country.

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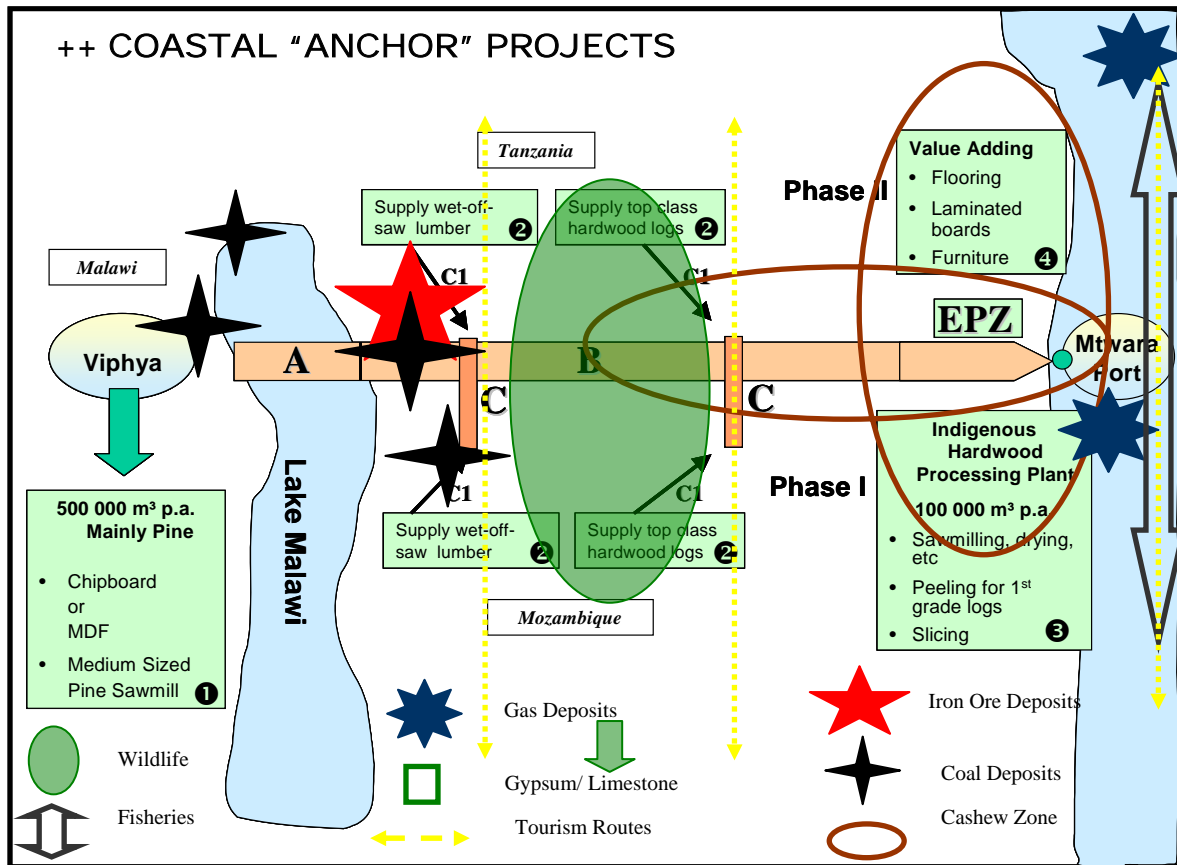


Figure 1: Anchor Projects within the Mtwara Corridor Development Scheme

5. THE PROJECT

5.1. PROJECT DESCRIPTION

The Selous – Niassa wildlife corridor consists of natural miombo woodland covering 8000 km² of a sparsely settled area over a distance of 160 km that provides a significant biological link between the Selous Game Reserve to the Ruvuma River which forms the International Boundary between Tanzania and Mozambique. The Niassa Game Reserve is located on the southern bank of the Ruvuma River.

The northern part of the corridor (3,000 sq km and 60 km in length), extends from the Selous Game Reserve southwards to the Songea-Tunduru trunk road. This corridor section is protected through the “North East Undendeule Forest Reserve” and the new village based provisional Wildlife Management Areas Songea and Tunduru. The Wildlife Department and Selous Conservation Programme implement this project on the basis of Tanzania's Community Based Conservation concept. The southern corridor section (4,000 sq km) falls within Namtumbo and Tunduru Districts of the Ruvuma Region extending southwards for about 70 km from the Songea-Tunduru Trunk Road to the

Ruvuma River. This corridor section has not received any conservation attention in the past but its protection is critical to the continuity of the corridor.

Formalising and conserving this currently unprotected southern part of the still viable western wildlife corridor will allow permanent biological linkage between the two protected area systems in Tanzania and Mozambique. This is a priority issue for a number of reasons; (1) the importance of the corridor *per se* for biodiversity; (2) its importance in linking two major protected areas facilitating both animal movements and gene flow between species of global importance; (3) the potential to benefit the livelihoods of the local communities by demonstrating wildlife as a viable form of land use; and (4) the contribution it will make to developing a national network of community managed WMAs²⁶.

5.2. PROJECT GOALS AND JUSTIFICATION

The UNDP/GEF Selous-Niassa Corridor Development Project and the proposed KfW Selous-Niassa Corridor Conservation Project differ very little in their conceptual approach, overall goals and specific targets. The overall goal of both projects is to protect the currently unprotected corridor of natural woodland that links the Selous to the Niassa Reserve. This is expected to be achieved by promoting the concept of Wildlife Management Areas successfully piloted in the northern area of the corridor.

The overall purpose of the proposed projects is the long-term and sustainable conservation of community, species and genetic biological diversity of the miombo forest ecosystem by developing an effective wildlife corridor. This will be achieved by the formation of village WMAs connecting the Selous and Niassa Game Reserves, managed by the communities and forming a continuous system of protected areas from Tanzania to Mozambique.

Key activities of the UNDP project focus on (a) environmental awareness building and capacity development within the targeted communities of the southern corridor, (b) creation of an ecological socio-economic database, (c) establishment of a network of WMAs for the southern corridor, (d) protection of the Sasawara Forest Reserve, and (e) the dissemination of best practice of community managed protected areas. The timeline of the UNDP project is 4 years starting in May 2005. The timeline of the proposed KfW project is 6 years, expected to begin in early 2006. The combined timeline of 7 years appears sufficient in reaching the common goal: the successful establishment of a viable ecological corridor through the sustainable participatory management of WMAs that will cover the entire corridor area. Both projects are complementary of each other and provide a unique opportunity to synchronize activities hence generating synergies for the benefit of the target corridor villages and the sustainable conservation objectives for the corridor.

²⁶ UNDP 2002. MSP Brief, The development and management of the Selous-Niassa Wildlife Corridor in Tanzania. Project Document submitted to GEF.

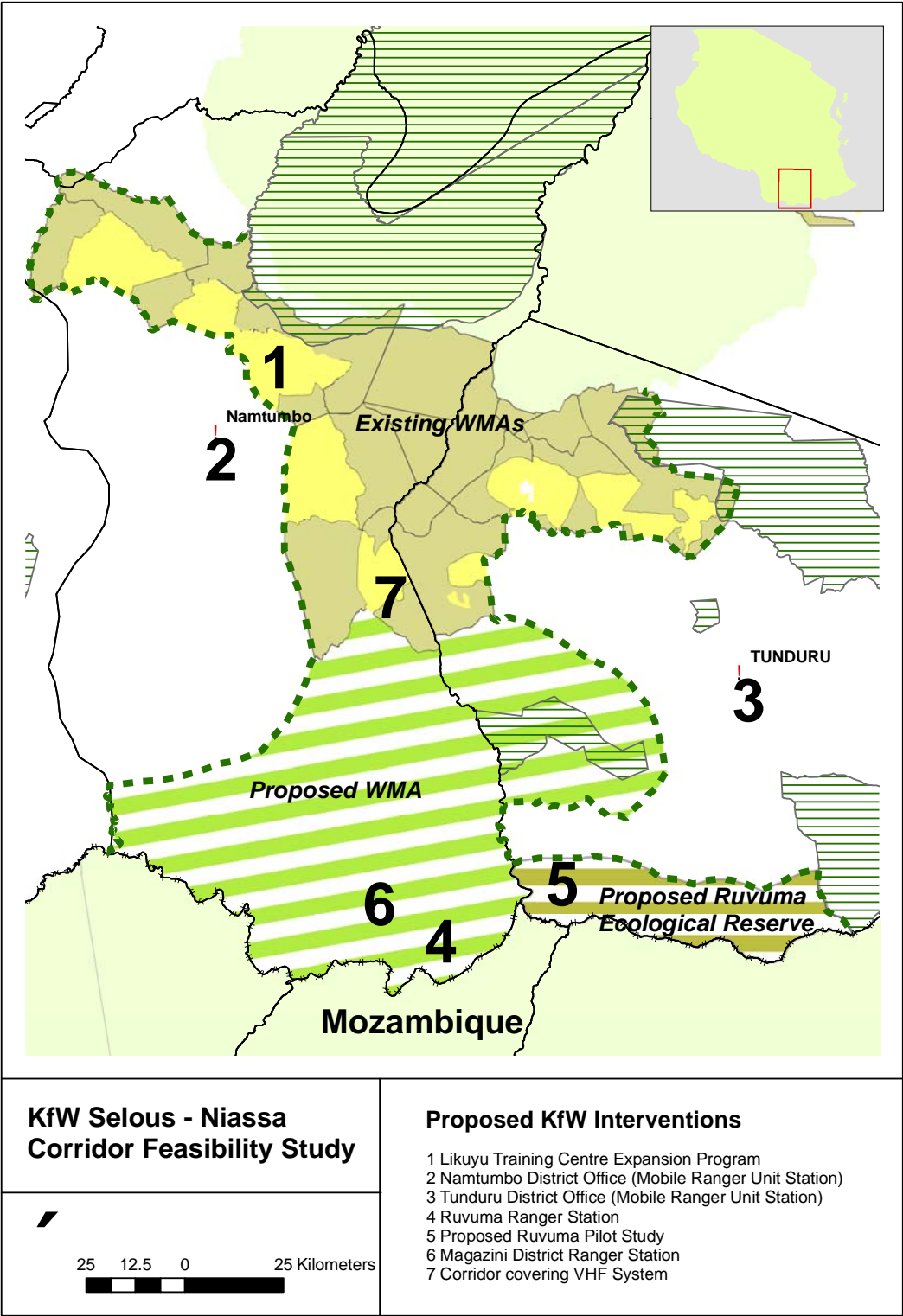
5.3. TARGET GROUPS AND BENEFICIARIES

The direct beneficiary of the proposed project is the Government of Tanzania, via the Wildlife Division, which is supported in the implementation of its Wildlife Policy, the District Authorities and villages located within the proposed corridor.

The principle target group and beneficiaries of the proposed project are the local communities located within the corridor. Local communities will benefit from the proposed interventions in a number of ways. The most important benefit is the production of land use plans together with the villagers in the process of which villages will be granted title deeds over their land and will allow the village governments to more effectively control settlement within their boundaries. The proposed project further benefits communities through the installation of a wireless radio network covering every corridor village. This will allow communities to communicate with the outside world in case of emergencies and will assist the AA in the management of their WMAs. In addition, facilities for the Village Resource Committee, including the AA, will be constructed. These facilities will include a mandatory armoury and an abattoir and will provide villagers with an important meeting place for village gatherings, thereby supporting the Natural Resource Committee and AA in the management of their WMA. Map 2 specifies the proposed interventions by location.

The establishment of WMAs will ensure that villagers directly benefit from the wildlife occurring on their land through the allocation of user rights. While wildlife populations are currently low, increased protection of these populations will allow villagers to receive a game quota in the future. The quota can be used by villagers for themselves or can be sold to hunting companies for a considerable fee. Both approaches generate significant revenue for villages. The meat value of a buffalo, sold locally is estimated at around TzS 150 000 compared to annual village council budgets ranging from TzS 800,000 to TzS 1 Million. The allocation of a small quota of animals thus has a considerable impact at the village level. Selling the quota to tourism hunting companies would substantially increase the benefits realised by communities and could act as a catalyst for micro-development and self-help activities at the community level.

Two Districts, Namtumbo and Tunduru will benefit from the proposed corridor project through support to their District Land and District Game Offices. Both of these offices will be assisted in terms of equipment and the District Game Officers will further receive support in terms of transport to allow them to effectively implement and manage WMAs within the corridor. In addition the Namtumbo District will benefit from assistance with the provision of offices for the District Game Office staff. The Land Use plans for the villages within the corridor supports the Districts in the implementation of the Land Act (1999) and Village Land Act (1999) which require that all villages demarcate their land boundaries and develop integrated Land Use Plans. Therefore, the contiguous corridor Land Use Plan will directly benefit the districts authorities in the application of the Land Act within their district boundaries and will contribute to a more sustainable use of land, forest and water resources within the project area.



Map 2: The Proposed KfW Corridor Interventions by Location

District Authorities generate comparatively significant revenue through the sale of hunting-, timber-, and fishing licences. An increase in wildlife populations within the district, and the increase in revenue within villages thus generate urgently needed income for local government authorities, which under the decentralisation policy have to become increasingly self-sufficient in terms of revenue generation.

The Wildlife Division is the direct recipient of the grant. The proposed corridor will be instrumental in the application of the Wildlife Policy of Tanzania which envisions the establishment of corridors between important protected areas via the creation of WMA to directly benefit communities. The proposed project is therefore fully supportive of the Wildlife Policy for which the Wildlife Division is the implementing authority. WMA are an important approach to wildlife conservation outside protected areas in Tanzania. Specific measures in support of the Wildlife Division are:

- Facilitation of WMA establishment within the proposed corridor (contiguous Land Use Plan),
- Establishment of two mobile anti-poaching units and a sub-station in Tunduru in support of the Songea Zonal Anti-Poaching Unit,
- Support to the planned District Ranger Outpost Station at Magazini,
- Establishment of a Ruvuma River Ranger station to control poaching activities along this ecologically important area,
- Support for the transboundary conservation process which seeks to address the cross-border issues in the protection and management of the Selous and Niassa protected areas.

5.4. PROPOSED INTERVENTIONS AND PROJECT COMPONENTS

5.4.1. Elaboration of Land Use Maps for the Corridor Area

Introduction: It is widely acknowledged that large scale (operational) spatial land use maps are a critical prerequisite for wise land use planning. Ideally, land use planning procedures should start with the elaboration of a general spatial land use overview map in a scale ranging from 1:100 000 to 1: 500 000, depicting large land use categories on a landscape level.

On the other hand it is apparent that broad land use categories demarcated on such small scale overview maps do not provide sufficient detail for village level land use planning. The overview map has therefore to be complemented through large scale maps in a scale ranging from 1: 10,000 to 1: 50,000. Such large scale spatial land use maps permit wise land use decisions on a local level.

Spatial land use planning and in particular decisions on optimum land use categories have to be based on sound knowledge of the biophysical and socio-economic/cultural framework conditions of the target area. The planning process therefore has to be highly participatory involving an inter-disciplinary and multi-stakeholder task force in order for users to develop ownership in the plan and its implementation. Likewise it is of critical importance to elaborate detailed policies, management guidelines and rules to apply to

each land use category chosen in order to implement the operational plan and to facilitate its control and enforcement.

As mentioned earlier, in Tanzania, one of the key legal stipulations for a village to register for a WMA is a village boundary survey, subsequent boundary demarcation that has to be accepted by neighbouring villages and the elaboration of a spatial land use plan that defines wildlife conservation areas, production and protection forests, agricultural and pastoral lands and areas set aside for village expansion. For the production of the village maps readily available topographic maps in a scale of 1:50 000 are used.

Justification: The spatial land use planning and village boundary definition/demarcation is required for the WMA application process. Since it serves a dual purpose, this process is of paramount importance for a village in order to be able to defend its legal rights over the communal lands against other interests and to manage its own lands according to the village land use plan.

Current Situation: All villages (16) which are part of the northern corridor WMAs Songea and Tunduru have demarcated village boundaries and land use plans that have been elaborated by the villages jointly with the interdisciplinary group of resource specialists provided by the respective District offices Songea and Tunduru.

The 16 villages located in the southern section of the corridor -the proposed project target area- still lack the village boundary survey and spatial land use maps. As substantiated by the village surveys (Annex 5) implemented for this feasibility study all villages contacted unanimously requested the process of boundary demarcation and spatial land use planning to start as soon as possible, in full recognition of the advantages of demarcated boundaries and a spatial land use plan. However, neither the villages nor the District Offices have the funds needed to complete this procedure. The plans for the northern villages were elaborated with financial assistance of Dutch Bilateral Aid and GTZ, supported by the District Offices Tunduru and Songea.

The proposed production of the village plans for the candidate villages of the two proposed southern WMAs of the corridor will be spearheaded and coordinated by the interdisciplinary specialist group to be provided by the corresponding District Office (see Chapter 4.4. on process) and spearheaded by the respective District Land Office jointly with a mapping specialist (it is proposed to outsource this expertise and the production of the overview and spatial village level land use maps).

Recommendation: It is recommended to produce an overview spatial actual land use/cover map in a scale of 1: 250 000 to be based on Landsat imagery and corresponding groundtruthing for the entire corridor area (approximately 8,000 sq km). This overview map will serve as a basis to define broad land use categories on a landscape level and to serve as a basis for environmental monitoring (changes in vegetation cover over time).

It further is recommended to conduct village boundary surveys with subsequent boundary demarcation involving all 16 target villages of the southern corridor section and to elaborate spatial land use plans for each of the villages in a scale of 1: 20 000 to be based on Ikonos satellite imagery (very high resolution of 1 m).

Since the production of LUPs is also part of the UNDP/GEF project it was agreed with the UNDP office Dar es Salaam that KfW funds would cover both, the mapping and boundary demarcation components and that in return UNDP would assume full responsibility for all the combined project training needs of village scouts, rangers and village executives (Annex 1).

The estimated total investment costs for the production of the overview map and 15 village maps in an operational scale of 1:20 000 would amount to EUR 420,000. This also would include all expenses related to the participating resource officers from the Tunduru and Namtumbo District Offices and expenses of participating villagers.

Total Counterpart Contribution:	Corridor Villages:	EUR 34,000
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5.4.2. Installation of a wireless Radio Communication System

Introduction: The importance of telephone and/or wireless radio communication in absence of a telephone grid for villages and/or law enforcement personnel in the corridor is apparent. This applies especially to isolated communities and scout stations where radios are the only means for requesting outside assistance when in need. The proposed installation of a corridor-wide wireless radio system would therefore not only be of cardinal importance to the target villages for practical purposes but also would be perceived by the villagers as a direct benefit resulting from the corridor project. This is expected to dramatically assist in the development of ownership by villagers in the corridor project.

Current Situation: None of the villages contacted for this study had telephone and/or radio communication except for 4 villages with access to a wireless VHF radio at a local missionary. Apart from direct access to medical services, the need for radio communication ranked highest within all villages questioned on social infrastructure priorities within the RRA conducted for this study.

Recommendation: It is recommended to install a wireless radio network to serve the entire corridor. This requires a survey for the identification of the high sites needed for full coverage, the subsequent installation of the high sites and the installation of base stations at strategic locations Furthermore to supply a radio to each of the 33 village scout stations of the corridor to be supplemented by mobile units.

The estimated total investment costs for this project component with direct benefits to the key target group of the project amounts to EUR 323,000.

Total Counterpart Contribution:	Wildlife Division total:	EUR 4,000
	Corridor villages:	EUR 35,000

5.4.3. Strengthening the Songea Anti-poaching Unit

Introduction: The rationale for the proposed strengthening of the existing Songea Anti-poaching Unit and the establishment of a mobile ranger Sub-unit in Tunduru is to have a centralized, well trained and well equipped ranger unit with wildlife enforcement responsibility for the entire corridor. The advantage of centralized ranger units would facilitate rapid deployment and effective control and enforcement by a highly skilled anti-poaching team, mostly to be used to combat commercial poaching operations in the corridor. The Units would be operating under the Wildlife Division directed by the Zonal Commander in close cooperation with the District Game Officers, other enforcement agencies and the village scouts. The mobile units would also be linked to the police intelligence network.

Each unit would be composed of approximately 15 elite rangers, preferably selected from the village scouts of the respective WMA, and operate as two separate self-contained groups under the leadership of the Zonal Commander in Songea.

At present the Songea Anti-poaching Unit is severely limited in its operations due to the lack of funds, equipment and mode of transport. Their responsibility is multi-regional. The advantages of mobile units are self-explaining. The need arises from lessons learned from other WMAs where synchronized law enforcement and anti-poaching is not possible in absence of means of communication and transport.

Recommendation: It is recommended to strengthen the existing Anti-poaching Unit in Songea and to establish a Sub-unit in Tunduru to be operated by two independent highly trained and well equipped mobile ranger units with enforcement responsibility for the corridor.

As per agreement with UNDP, the UNDP/GEF project will finance the special training of the 30 rangers, and KfW will cover the infrastructure and equipment needs of the two units (Annex1).

The total investment costs for this project component will be approximately EUR 287,000 which would directly benefit the Wildlife Division and the WMAs as two key target groups of the KfW project. The investment includes the establishment of two buildings each in Namtumbo and Tunduru, 4 vehicles, 15 special ranger kits and other equipment.

Total Counterpart Contribution:	Wildlife Division:	EUR 26,000
	UNDP:	EUR 30,000

5.4.4. Support to the Namtumbo and Tunduru District Game Offices

Introduction: At current the facilities of the District Game Office in Namtumbo are confined to a very small sub-standard rental place with the rent being paid by GTZ. The office has practically no equipment. The District Game Officer has one vehicle and a VHF station working on the Selous frequency. The office does not have a fixed budget to cover operational cost. It is not expected that new office space to be provided by the District Executive Commissioner will be available in the near future since the construction of the new district office complex has not been started yet and no funds have been allocated to the construction project at this point.

The Tunduru District Game Office is part of the office complex of the District Authority. The total personnel are composed of 4 technicians working in Tunduru and 8 who are located in District villages with focus on law enforcement and the control of nuisance animals. The Tunduru Game Office owns an eight year old Landover, one GPS unit and is linked via VHF to the Selous frequency of the Wildlife Division. The vehicle and equipment had been provided by GTZ. Although Tunduru receives power from the city generator, the game office does not have any electronic equipment that would require power.

The current working conditions at both District Offices are not conducive to motivate the staff which has to work practically without equipment and on a shoestring budget, operating from a sub-standard base. In spite of the poor working conditions work implemented by both offices is noteworthy and the work morale by both District Game Officers is remarkably high given the adverse circumstances.

Recommendation: It is recommended to either purchase an existing suitable office building for the Namtumbo District Game Office or to construct a new building jointly with the facilities to be constructed for the Mobile Scout Unit for the new WMA to be created within the District. The office should be properly furnished and equipped in order to facilitate efficient work performance. The Namtumbo office needs a new 4x4 vehicle, some basic computer equipment and one GPS unit. The Tunduru District Game Office needs a new 4x4 vehicle and basic computer equipment.

The estimated total investment costs for upgrading the Tunduru Office and the establishment of a new office in Namtumbo amounts to EUR 292,000 which would directly benefit the District Offices, the Wildlife Division and the corridor villages by supervising the WMA central mobile scout units that are administratively attached to the two District Offices.

Total Counterpart Contribution:	District Authority:	EUR 6,000
	WMAs:	EUR 3,000

5.4.5. Support to District Land Offices

Introduction: There is no District Land Office in Namtumbo yet and no personnel for this office have been identified at this point. It is expected however that with the new budget in July 2005 some personnel will be appointed. In absence of any suitable facilities in Namtumbo the Land Office will continue to operate from the Songea District Office until adequate office space becomes available in Namtumbo.

The newly appointed District Executive Commissioner will be located in Namtumbo occupying rental space until the buildings under construction are finalized. There may be an opportunity for the Land Office to obtain some space within the same Government compound currently rented by the Executive District Commissioner.

The Songea District Land Office was responsible for the elaboration of the existing village plans in a scale of 1:50 000 covering all villages that are part of the Songea WMA pilot area. All related expenses were financed by a Dutch bilateral aid project in support of the country-wide decentralization process, specifically to strengthen the Songea District Authority. Since the termination of Dutch aid funding no more funds have been made available to the Land Office to carry out fieldwork. At current the Land Office in Songea operates on a zero budget. The Office is poorly equipped with little opportunity to expand or meet its responsibilities in assisting villages in land planning.

The Tunduru Land Office employs 7 Persons (one town planer, 4 surveyors and support staff). It has no vehicle and/or equipment. The village plans completed for the Tunduru WMA (a total of 10) were sponsored by GTZ in 1996. The technical team of the Land Office is currently not operational due to the lack of funds and equipment. There is a need in both the Namtumbo and Tunduru Offices for a cartographer, a vehicle, and a GPS unit and field equipment.

As indicated earlier, spatial land use plans on a village level are a critical prerequisite for a village to apply for WMA membership. There will be 15 villages participating in the proposed two new WMAs to be established for the southern corridor section. Since the production of spatial land use plans on a village level are the joint responsibility of the District Offices under the leadership of the District Land Office it is prudent to provide project support to the two Land Offices Tunduru and Namtumbo (Songea) which do not have the means to carry out this task without outside support.

Under the leadership of the Land Offices, and jointly with other key stakeholders, the Land Officers are expected to assemble the land-use planning teams, implement the planning exercise and further the process of village application for WMA membership as has been done in the past for the member villages of the two northern corridor WMAs with financial assistance by GTZ. The support to the District Land Use Offices has to be seen in context with the proposed KfW intervention “Map Production” (chapter 5.4.1.).

Recommendation: The recommended support to be provided to the Namtumbo and Tunduru Land offices should be in form of basic computer equipment and selected field gear, including GPS units. At this point it is not recommended to provide office space which should remain a firm District Government responsibility.

The total cost for this project component is EUR 56,000.

Total Counterpart Contribution:	District Offices:	EUR 4,000
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5.4.6. Construction of Village Resource Council facilities and Scout Support

Introduction: Each WMA village applying for a WMA membership forms a Authorized Association which is responsible for all matters related to resource use in the village and all matters related to the village lands designated as wildlife area in the village land use plan. The Association’s responsibility also covers the village scout unit which reports to it.

At current none of the 16 target villages in the southern section of the corridor has formed an Authorized Association yet but all have requested to be part of the WMAs to be established in the corridor. Village boundary surveys and the production of the village land use plan will be the first step in pursuing WMA partnership. Once this process has been completed the WMA Authorized Association will be formed to be composed of representatives of the WMA villages. Each village will then be required to select scout candidates to be formally trained. It will be of great importance to the villages to have a small office building for the Association Representatives and the Scout Unit, to accommodate a mandatory gun vault and a small abattoir to be used to process the game meat resulting from the annual game allocation provided by the Wildlife Division in Dar es Salaam (the scouts are responsible to hunt the allocated game). The building will have a multi-purpose function since it will also serve as a venue for other important village events in absence of other suitable facilities hence expected to grow into a focal point in village life.

Since none of the corridor villages has a suitable community building it is recommended to provide a building as specified for each of the corridor villages which will have a significant social impact, positively reflecting on the KfW interventions and the corridor project at large. All villages of the two pilot WMAs have the standard number of trained scouts (10-12). Only some of the villages have supplied their scouts with uniforms or hunting rifles. None of the scouts has a personal standard kit. The 15 villages to form the southern two WMAs have not selected any scouts yet. Therefore the need for 33 village buildings and ranger kits for all of the existing and future corridor village scouts.

A ranger kit typically entails a packsack, tent, lantern, folding spade, basic small tools, set rain-gear, etc. The cost estimate for a kit (approximately EUR 900/kit is a generous estimate).

Recommendation: It is recommended that the project supports the construction and furnishings of a small building in each of the target villages, the installation of the mandatory armoury and the attachment of a small abattoir. The building will serve the Authorized Association as a venue for their periodic meetings and for the scouts to permanently occupy space in the building that also hosts the village wireless radio station to be expected to be financed by KfW. It is further recommended that the project pays for all scout uniforms once/a for the duration of the project.

The estimated total investment costs for this project component will be 684,000 EUR, the single highest investment component of the project which will directly benefit the key target population.

Total Counterpart Contribution:	Villages (in-kind):	EUR 27,000
	District Offices:	EUR 6,000

5.4.7. Establishment of the Ranger Station Ruvuma

Introduction: There is great concern regarding the over-fishing of the Ruvuma River and even greater concern about the apparently common use of poison by local fishermen in absence of controls and law enforcement along the river on both sides of the international border. The lack of control also reportedly has led to widespread poaching, in particular commercial poaching of elephants and hippos for ivory. The River Ruvuma has been described as one of the last unknown great rivers in Central Africa supporting vast areas of globally important wetlands interspersed with pristine forests lining both sides of the river. Both river banks within the corridor area are free of human settlements except for mostly seasonally operating fishermen.

There is consensus that proper control of the river system and strict law enforcement is urgently needed to protect the wildlife and habitat of the river and the riparian ecosystems. This control and enforcement ideally should become a joint operation between the two neighbouring countries. At current there is no control and/or law enforcement of any kind along the river, an area most difficult in access except by boat. The advantage of placing the ranger station close to Wenja would be its proximity to a military outpost located along the Wenja road approximately 20 km distant from the river. The military post is permanently manned by two soldiers with access to a VHF radio but no means of transport. The military commander responsible for the military post has shown great interest and support in joint river patrols and synchronized operations. The post has automatic rifles, and standard military equipment.

Activities related to this component would be the training of five rangers (under the UNDP/GEF project), subsequent signing of LoAs by the DGOs with the local military outpost, and the implementation of joint enforcement of the Ruvuma Region according to jointly elaborated workplans.

Recommendation: It is recommended to establish a permanent ranger station at the Ruvuma River, either with access from Magazini or the village Wenja located in the Tunduru District. The facilities to be constructed should include accommodations and a small office block to accommodate 4 rangers. It further is recommended to build a small jetty and a boathouse for the patrol boat to be provided to the station. Equipment needs include outboard motors, a VHF station and hand-held units, four ranger kits and uniforms. The training of the rangers would be the responsibility of the UNDP/GEF project (Annex 1)

The estimated total investment costs for the establishment of the Ruvuma Ranger Station is EUR 183,000 which would directly benefit the Wildlife Division, the District Offices, the Corridor villages as part of the new WMAs and the neighbouring Niassa Game Reserve. The Ruvuma Station would report to the Zonal Commander of the Songea Station who closely cooperates with the District Game Officers in Namtumbo and Tunduru.

Total Counterpart Contribution:	Wildlife Division:	EUR 60,000
	Wenja village:	EUR 15,000
	WMA:	EUR 20,000

5.4.8. Establishment of the District Wildlife Ranger Outpost Magazini

Introduction: The Songea District Office has provided the village with a building to be used by the future District Outpost Ranger but the building was never finished. The Namtumbo District Game Office has requested the establishment of a permanent ranger outpost at this location to provide law enforcement services on a District level for the WMAs to be created by the UNDP/GEF and the KfW project. Undoubtedly, a permanent presence of wildlife rangers under the jurisdiction of the District Game Office Namtumbo would greatly strengthen the law enforcement operations in the southern corridor section, in particular when capitalizing on synergies created through close collaboration with village scouts and the mobile anti-poaching units. If this Ranger Station would be established at the Magazini village as the most logical location, there would be little need for the establishment of the Ruvuma Ranger Station in close proximity as suggested by the Namtumbo District Wildlife Office. The Logical location for the Ruvuma station would then be the village of Wenja located in the Tunduru District.

Related activities subsequent to the physical establishment of a functioning District Ranger Station at Magazini would be the recruitment and training of rangers (UNDP/GEF responsibility) and for the rangers to elaborate work-plans for patrolling the southern corridor section jointly with other enforcement personnel in accordance with written LoUs to be designed in due course by the station head and the respective DGO.

Recommendation: It is recommended to upgrade, furnish and equip the existing District owned structure at the Magazini village to be used as office and armoury of the ranger station. It further is suggested to construct and equip staff quarters for four rangers. Other equipment needs include 2 motorbikes, ranger kits and uniforms as well as a wireless radio station.

The estimated total investment costs for this project component will be EUR 47,200 which would benefit the Wildlife Division, the District Game Office and the corresponding WMA at large. The station would administratively be attached to the Namtumbo District Wildlife Office.

Total Counterpart Contribution:	Wildlife Division:	EUR 40,000
	Village Magazini:	EUR 7,000

5.4.9. Upgrading the Likuyu Training Facility

Introduction: The Likuyu Sekamaganga Community Based Conservation Training Center is a Government Institution reporting to the Wildlife Division of the Ministry of Natural Resources and Tourism. The Center was developed jointly by the Ministry of Natural Resources and Tourism, Selous Game Reserve and the Selous Conservation Programme/GTZ in 1995, and renovated with GTZ funding in 1996. The Center is located in Likuyu, Namtumbo District, occupying the former UNHCR Mozambican refugee settlement. The Center offers training packages for village game scouts and village leaders and executives of Community Based Organizations, enabling the trainees to effectively participate in CB conservation, and sustainable land and

resource use management. Its strategic location in the heart of the Songea District, bordering the Selous Wildlife Reserve, offers ideal framework conditions for scout training in the field and for community executives to learn from the WMA experience of neighbouring villages.

The CBCTC currently concentrates on two basic training packages, (a) a 6 weeks village scout training program with a capacity of 40 participants per event, and (b) a two weeks course for village executives with a maximum of 30 participants. The course costs (6 weeks all inclusive) per scout are TzS 350,000 (about EUR 300) and for the 2 weeks leadership training TzS 140,000 (about EUR 140) per person. Most trainees are either sponsored by donors or by the respective District. The part-time instructors (5 persons) are supplied by the District, the Wildlife Division and the Selous Game Reserve, and the 3 full-time instructors are supported by the Wildlife Division in Dar es Salaam that also covers shortfalls in the operational budget of the Center. Until current, however, the Center has been able to cover all operational costs through course fees. The training facility has been operating at between 60 and 90% of its capacity since its establishment in 1996. Since then it has trained 1508 scouts and community leaders (Annex 8). The Center has four full time staff supplied by the Wildlife Division, 5 part-time instructors and 10 casual labourers. The operational costs of the Center amount to approximately 7-12,000 EUR per year of which approximately half comes from The Wildlife Division and half from revenues generated by the Training Center.

Justification: Although several corridor villages that are already part of the Songea and Tunduru WMA's have benefited from training programmes at the CBCTC in the past, there is a defined need for training additional 350 game scouts and 120 community leaders/CBO executives from the southern corridor section and 200 persons to be re-trained from the pilot WMAs. Community Based Conservation has been integrated into the curricula of the wildlife training institutions of Tanzania (Mweka Wildlife College, Pasiani Wildlife Training Institute and Likuyo Training Center - CBCTC) with the aim of building a cadre of personnel with the ability to implement the WMA approach. The CBCTC caters to country-wide WMAs training needs. A recent country-wide training needs assessment related to existing and planned WMAs and areas earmarked for Community Based Natural Resource Management (including participatory forest management and community forest management under the new National Forest Policy from 1998) commissioned by the MNRT, proved the growing demand for village scout and leadership training which is expected to utilize the training center to its full capacity for years to come, pending the availability of funding to cover tuition fees for the trainees. In order to increase the capacities of the centre according to the expected demand additional infrastructure like dormitories, classrooms and a secure water supply will be necessary.

Current Situation: At present only one hand pump is available to supply all water needs for the Center, causing hardships to staff and students. In absence of proper dormitories one classroom that actually would be needed for teaching has already been converted into a communal bedroom accommodating 15 beds within one single room. All other facilities such as the office complex, classrooms, kitchen and staff quarters are also

sub-standard. Although the Center is linked via VHF to the Selous radio-communication system, the radio is not fully operational due to its unreliable solar power supply that urgently needs rehabilitation and expansion. The Center has no electricity. The only two vehicles owned by the Center were purchased by GTZ in 1992 and urgently need to be replaced. There are no means of transport for scouts to be trained in the field and for community leaders to be taken to neighbouring villages for training.

Recommendation: In light of the growing training needs resulting from the UNDP/GEF and the potential KfW projects it is recommended to expand the Center's capacity from 30 to 60 trainees, to build 6 new staff quarters, a small office complex, 2 dormitories, a social lounge and to upgrade the kitchen facilities. Furthermore, to supply a reliable water system, a generator and new vehicles, including a mini-bus and a 5 ton truck for training purposes.

The estimated total investment costs for upgrading the Likuyu training facility is EUR 560,000 which would directly benefit the corridor villages as key target group of the KfW project and the Wildlife Division.

Total Counterpart Contribution:	Wildlife Division total:	EUR 70,000
	CBCTC:	EUR 90,000

5.4.10. Implementation of the Ruvuma Ecological Reserve Feasibility Study

Introduction: The widely recognized ecological importance of the Ruvuma River and its bordering ecosystems is increasingly threatened by uncontrolled fishing and hunting activities and the inherent danger of squatting in the light of a fast growing corridor population. In absence of an efficient and effective control system the threats are expected to compound over time with adverse impacts on the conservation aspects of the ecological corridor concept.

The rationale for the proposed Ruvuma feasibility study is to investigate the opportunity to place a 10 to 15 km wide belt along the eastern river bank under protection, effectively extending the eastern corridor boundary to the Mwambesi Forest Reserve (15 km width x 68 km length). Although the optimum protection category for this area still has to be defined, it may be prudent to add this area to one of the WMAs to be established for the southern corridor section forming part of its core area.

Recommendation: It is recommended to investigate the feasibility of how to most effectively protect the critical aquatic and terrestrial ecosystems typifying the eastern bank of the River Ruvuma extending from the current eastern corridor boundary to the Mwambesi Forest Reserve.

The total cost for this project component would be EUR 18,000, directly benefiting the Wildlife Division and the corresponding WMA, two of the primary target groups.

Available counterpart funding:	Wildlife Division EUR 1,500 for the aerial survey
	Regional Districts EUR 2,000 for logistic support

5.4.11. Ecological Monitoring of the Corridor

Introduction: This project activity will serve to assess the effectiveness of the WMAs and the project interventions by periodically quantifying and qualifying the vegetation cover (tree canopy) of the corridor. The monitoring will be based on Landsat image interpretation to be conducted within five-year intervals. The first forest inventory using Landsat imagery (measuring total forest cover by forest type only) will be done at the onset of the study in order to establish the baseline to be compared to the five-year interval inventories using the same technique (measuring forest cover by forest type). The causes for any changes within the five-year intervals will then be identified on the ground and will influence required changes in the land use management approach to the WMAs.

Recommendation: It is recommended to quantify and qualify the forest cover of the corridor within 5-year intervals using satellite photo interpretation to be compared to the data base established within the first project year.

The total cost of this component will be 66,000 EUR including two sets of satellite images and their interpretation within the 6 years project timeline (first at the onset of the project, the second within the 6 th project year).

Total Counterpart Contribution: none expected

5.4.12. Trans-boundary cooperation

Background: Although initial steps have been taken for trans-boundary cooperation with the neighbouring Niassa Game Reserve and the Mozambican Ministry in charge of protected areas and wildlife the contacts made have not been formalized. Preliminary bi-national meetings allegedly have been perceived as very positive by both sides indicating the interest by both countries in close cooperation to be based on a formalized modus operandi that would mostly address joint anti-poaching policies and anti-poaching controls, but also joint management guidelines for the Ruvuma ecosystems shared by both countries. There is consensus that an effective trans-boundary law enforcement, anti-poaching control and joint land use management guidelines are a critical requisite for the sustainable protection of these trans-frontier fragile ecosystems.

The UNDP/GEF project since its initial concept design has been cognizant of the need to increase cooperation across the international border to the Niassa Game Reserve in Mozambique. Niassa Game Reserve and Mozambique are potential beneficiaries of this project, as the natural resources will be part of a larger “landscape level” protected area system with expected global benefits in ecological viability.

The UNDP/GEF project has developed linkages with Mozambique at several levels. Linkages have been at:

PA Levels. Following the first formal exchange in Songea there have been three follow up meetings; two have been in Niassa Game Reserve. There is now compatible radio contact.

National Levels. The last meeting was at World Parks Congress in Durban (in September 2003); between Director Wildlife Mozambique; Director (Wildlife Conservation) Tanzania; Senior Field Staff and GTZ – Selous Conservation Programme Co-Finance.

Development Level. The Mtwara Corridor has the Selous Niassa Conservation Corridor on its agenda in seeking cooperation and investment into the trans-boundary areas.

Donor Levels. Project development agencies are in touch with co-finances on Mozambique side – e.g. Fauna Flora International (FFI) who will be funding Niassa Game Reserve, also using the title of Niassa – Selous Corridor.

In June 2001, a final stakeholder meeting took place in Songea, the relevant regional capital to discuss the corridor with all relevant stakeholders. Representatives from the Niassa Game Reserve in Mozambique attended.²⁷

Recommendation: It is recommended that the project finances the formal establishment of a Trans-boundary Management Committee to be composed of representatives from the Line Ministries in charge of biodiversity conservation from both countries, representatives from the corresponding District Offices, the corridor WMAs, the Niassa administrators and Niassa leaseholder and other key stakeholders still to-be identified. Furthermore that the project provides the funding for periodic meetings and the production and dissemination of joint policies and management guidelines applying to the trans-boundary area.

The total costs of this component amount to EUR 23,000.

Total Counterpart Contribution: None at the initial stage to be expected.

5.5 ECOLOGICAL THREATS AND PROPOSED KfW INTERVENTIONS

The interrelationships between the threats to the ecological integrity of the corridor area and the proposed KfW interventions are illustrated by Table 4.

The problem analysis as presented in Chapter 4.8 is a synthesis of the very comprehensive problem analysis elaborated for the GEF project document which is based on in-depth research and stakeholder consultation. This problem analysis precisely reflects the actual situation in the corridor.

²⁷ Such attendance underlined the level of cooperation across the border. Permissions were obtained for Mozambique officials to cross the Ruvuma River on foot, where Tanzania officials collected them, and their passports were stamped in Songea town.

The project interventions (5.4.1 – 5.4.12) exactly address the key problems and root causes complementary to the proposed UNDP/GEF project interventions. The combined interventions are expected to mitigate the problems.

Every single proposed intervention contributes directly to the reduction of the current threats to sustainable biodiversity conservation in the proposed corridor area. The single-most important intervention is the successful establishment of the two WMAs to be linked to the two existing WMAs which jointly will form the corridor. All other interventions are designed to support the sustainable conservation management of the successfully established WMAs.

Table 4: Threats, root causes and proposed mitigation opportunities

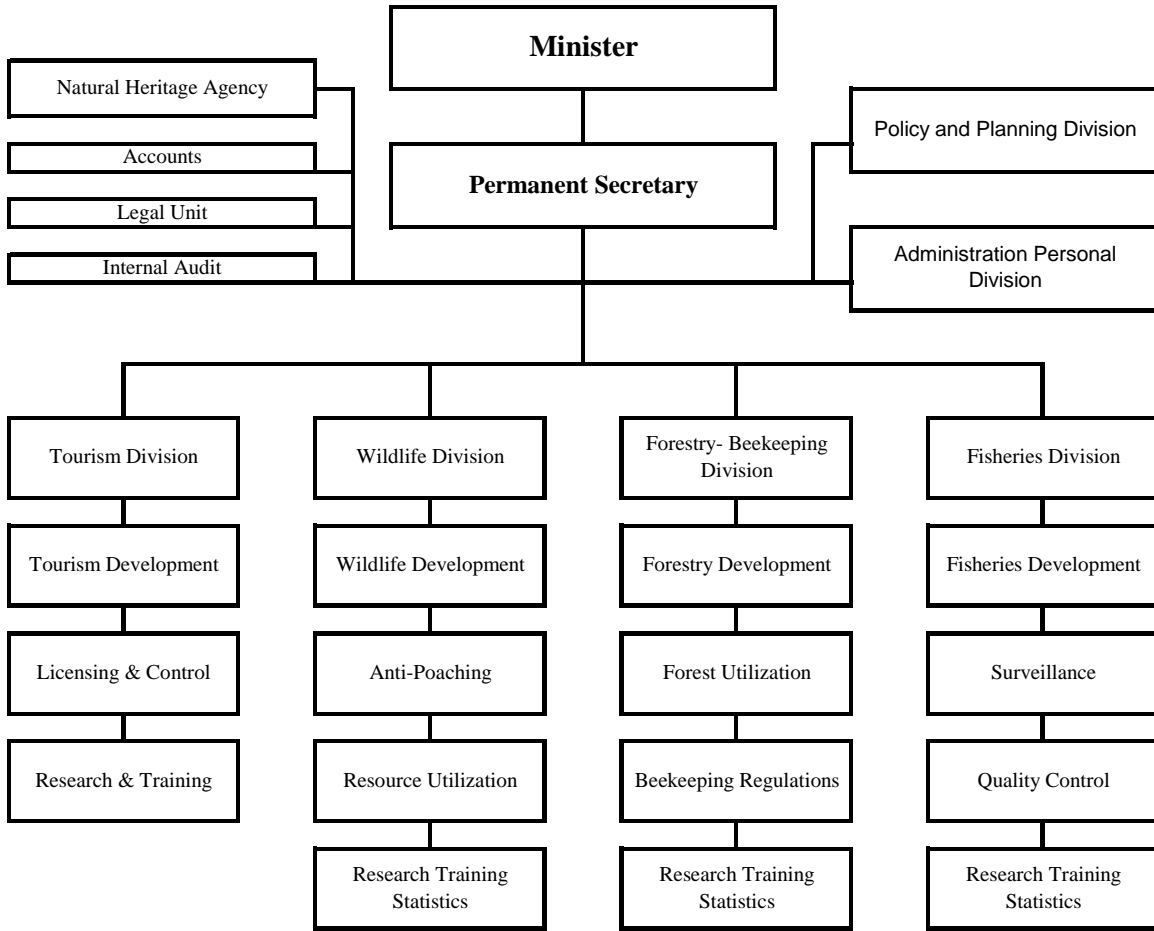
Key Threats to the Ecological Integrity of the Corridor		
1) uncontrolled and unplanned conversion of land for agricultural and ribbon strip development 2) uncontrolled and illegal resource utilisation (including trans-boundary poaching and illegal fishing methods/overfishing of Ruvuma River)		
	Root Causes	KfW Mitigation Proposal (proposed KfW interventions only being complementary to UNDP activities)
	rapid population growth (in-migration)	Spatial land use plans/village boundary demarcation
	lack of law enforcement	Establishing WMAs and related activities; strengthening existing WD enforcement system; establishing mobile ranger units; establishing trans-frontier cooperation; Ruvuma Ranger station; Magazini Station; establishing scout system through WMAs
	inadequate land management system	Elaboration of village spatial land use plans, establishment of AAs, and Village Resource Councils
	lack of economic alternatives;	Creation of WMAs and wildlife utilization areas
	lack of awareness of the potential benefits of wildlife as land use alternative;	Establishment of WMAs and related activities
	low awareness of global value of the corridor;	Donor cooperation (UNDP/KfW) and related publicity
	No special protection status of corridor (only northern part through 2 pilot WMAs);	Establishment of 2 new WMAs

5.6. ORGANIZATION AND IMPLEMENTATION OF THE PROJECT

5.6.1. Grant recipient

The Ministry of Natural Resources and Tourism (MNRT) through its Wildlife Division will be the KfW grant recipient acting on behalf the Government of Tanzania. The Wildlife Division is one of the Ministry's four Divisions (Figure 4). It is composed of four Sections of which only the Anti-Poaching Section is represented in the larger project area. As the key agency in charge of protected areas, biodiversity conservation, wildlife management and community based wildlife management the Wildlife Division appears the logical choice as grant recipient since it would be responsible for the creation of the WMAs, overall supervision and the wildlife allocations attached to the WMAs.

Organizational Chart of the Ministry of Natural Resources and Tourism



Unfortunately, no capability assessment of the Wildlife Division for this feasibility study was possible due to the unwillingness of the Wildlife Division to release information on personnel, personnel structure, annual budgets, revenue generation, existing equipment and infrastructure (and needs thereof), regional representation, mobility, training needs etc.. Neither was any such information available from secondary literature and/or donor documents (GTZ, USAID etc.). Information on the agency's federal level capability and capacity therefore remains largely anecdotal.

Sufficient information was available for the District level government which will be responsible for the implementation of the project. All relevant information for the two participating Districts is provided in the following chapters. This information appears comprehensive and leaves little room for improvement.

The only representative of the Wildlife Division on the District level is the District game Officer who also is responsible for the Zonal anti-poaching Unit in Songea, which is in charge of anti-poaching activities in the southern regions. The proposed corridor falls into its area of enforcement responsibility. It may safely be assumed, however, that this poorly equipped Unit is unable to adequately comply with its key functions of anti-poaching in the Ruvuma Region which harbours the corridor area.

Administratively the District Wildlife (Game) Officer (DGO) reports to the District Authority, on technical matters to the Wildlife Division in Dar Es Salaam..

5.6.2. Implementing Agencies (District Authority)

The responsibility of the project implementation will be assumed by the District Authorities of Namtumbo and Tunduru which administratively share approximately equal parts of the corridor. The Namtumbo District has only been created recently and still lacks all facilities and a budget. The budget is expected to be provided by the Ministry of Finance by July 2005 at which point the construction of the office buildings for all the personnel of the District Executive Commissioner will begin. Only 27 persons have been appointed to the Namtumbo District Office so far but no resource officer yet. The duties of the District Resource Officers will continue to be handled through the Songea District Office until the corresponding personnel has been appointed and posted in Namtumbo. It is unlikely that the Namtumbo District Office will become fully operational within the next few years.

Once the WMAs are established and functioning the role of the District Offices and the DGOs is confined mostly to enforcement on behalf of the Wildlife Department and certain administrative responsibilities by the District Authorities. WMAs are administered by their own Councils, not by the Districts. According to existing WMA policies District Authorities share proceeds from wildlife revenues generated from WMAs (the percentage to be received is unknown pending the still classified document submitted by the Wildlife Director to the Conference of Ministers for approval).

Village Scouts recruited for the sustainable protection of the WMAs have multiple functions. They are supposed to implement harvesting quotas of allocated wildlife, provide bush-meat to villages from the WMA, act as game and tourist guides and perform general environmental enforcement duties. Scouts are paid by the AA which receives funding from the general village budget. It is up to the village how it generates the funds to cover its running costs, including the scouts. It is common practice for villagers to pay into the village household part of their cash crop proceeds (the most common income for village budgets). It is expected, however, that village budgets will directly benefit substantially through the game harvested from the WMAs somewhere in the future.

The Songea-Namtumbo District Offices The District Offices are composed of 7 Departments which report to the District Executive Commissioner. The Natural Resource Department as one of the seven departments is headed by the District Natural Resources Officer (DNRO) with responsibility for four Sections (i.e., Forestry, Beekeeping, Fisheries and Wildlife), each headed by a District Officer. Several of the District Departments and all four section heads participate in the village level spatial land use planning. They jointly identify best land use categories and jointly elaborate policy guidelines for each land use category.

The District Forestry Section Songea employs 15 persons of which 11 are support staff. The Forestry Section has no operational budget, equipment and/or vehicles. There are no means for employees to carry out any field work/ and or field inspections. The Forestry offices issues cutting permits without any possibility of enforcement and/or control of licences and permits issued.

The same applies to the District Fishery Section confined to two employees. Their principle function is to issue fishing permits. The office has no staff, budget, equipment, vehicle or opportunities for fieldwork.

The Beekeeping Section is composed of two persons without budget, equipment, vehicle or any opportunity to assist beekeeping villagers in the field. Neither are there funds to implement mandatory field inspections.

The District Agriculture Department is composed of 15 technicians and 30 extension officers working throughout the Districts of Songea and Namtumbo, sharing 5 motorcycles. All salaries are paid by the Central budget except for support staff employed directly by the District Office. Fieldwork is severely hampered by the lack of funds, equipment and vehicles.

The Wildlife Section employs four enforcement officers reporting to the DGO. The Wildlife Section occupies rental space in Namtumbo paid for by GTZ which also pays the wages of the 4 enforcement personnel. The Office owns one older model 4x4 vehicle one GPS unit, one VHF and one HF radio, all purchased and paid for by GTZ. The

annual budget of the Section amounts to USD 7,000 covered by GTZ. The Section Office does not receive any funding from the District and/or the Division.

As pointed out before, currently, the Songea District and its personnel is still responsible for the Namtumbo District which until recently formed part of the Songea District. It is hoped that the situation will become more transparent, however, on approval of the Namtumbo budget.

The Tunduru District Office The District of Tunduru was founded in 1922. Its total land surface area is 18,778 sq km of which 15,700 sq km are arable lands (only 7 % of which are utilized at current), and 2,665 sq km are covered by forests.

The Forestry Section employs four technicians without any equipment, vehicles or other means of transport that would permit the forestry personnel to look after the four Forest Reserves located in this District (i.e., Muhuwesi, Mwambesi, Sasawara and Namdembo).

The Beekeeping Section has one employee, the Fisheries Section 2 employees without budget, equipment or vehicles.

The Wildlife Section employs 12 persons of whom 8 are stationed in villages charged with law enforcement duties and the control of nuisance animals. All personnel and the equipment of the Wildlife section Tunduru (1 older model Landover, 1 hand-held GPS, 1 VHF) are paid for by GTZ within the framework of the pilot WMA Tunduru established in 2002.

The Department of Lands has seven employees including surveyors and town planners, but does not own any equipment and/or vehicles. Although the Lands Department has a full team capable of producing village level land use plans, it is not operational due to the lack of funds. All village plans for the pilot Tunduru WMA were been elaborated under the leadership of this Department jointly with GTZ, paid for by GTZ.

The Departments of Planning and Community Development of the Tunduru District are not operational due to lack of equipment and funding.

5.6.3. Project Administration

The project requires the establishment of mechanisms for decision-making, evaluation and execution on the national, district and local level. This will be best done through an independent Project Administrative Unit (PAU) located in Songea with ready access to all services. The PAU, subject to negotiations between the MNRT and KfW, will be directly responsible for the execution of the project and report to the Wildlife Division of the MNRT and the District Offices Namtumbo and Tunduru. The PAU would be supported by a part-time external Consultant (“zebra” missions).

Although it is fully recognized how unpopular the common “Project Implementation Units” have become amongst recipient countries and donors alike, experience show how difficult it is to implement large-scale investment projects without the assistance of a proper administrative unit to be fully in charge of procurements, timely delivery of proposed interventions and quality control of work performed. It is strongly suggested that this project would benefit from such Unit, especially in the light of the rather weak District Authorities in terms of manpower, budgets, and equipment. It therefore is recommended to establish the PAU as described.

The participatory and interdisciplinary process will be supervised jointly by the “District Natural Resources Advisory Council” to be established under the UNDP project and with direct involvement by the CIM expert as advisor to the District Executive Commissioner, The DGOs and PAU.

Although there is no distinct provision made yet or a visible role yet for Universities, NGOs and/or private institutions in the project, there may well be an opportunity for one or the other organisation once the project has become operational.

The management of wildlife is currently not fully recognised as a viable land use option. Awareness raising and capacity development among the local communities will therefore be key activities in the process of the UNDP/GEF component of the joint project. Involvement of the local population in the proposed activities will closely depend on how the population is empowered to manage the resources in their village territories. Local communities will play a major role in the project and more precisely in the conduct of conservation activities and the management of the WMAs within the corridor. Without their full commitment land in the corridor will be converted to agriculture and the conservation integrity of the area will be lost. Project success will hinge on demonstrating WMAs as a viable land use option and benefits provided outweigh those generated from agricultural conversion.

The project components are designed allowing a highly participatory approach needed to ensure full stakeholder buy-in and multi-stakeholder partnerships for cost-effective implementation of the activities and their sustainability. It is critical that a holistic approach is taken to land management in the area to avoid a conflict of policies. For this reason agricultural agencies and land use planning commission must be integral players

to the process. Opportunities will be sought to involve private operators, particularly in the hunting areas where the promotion of economic activities can be linked with environmental management (Major activity of the UNDP/GEF component).

The development of a detailed public involvement plan under Output 2 of the UNDP/GEF project component will ensure that all stakeholders are targeted and involved in project activities and avoid situations of conflicting policies in the project area.

Most proposed interventions will be implemented by the villages themselves (construction of buildings etc.). Equipment needs and procurements will be handled directly by PAU. Interventions involving sub-contracts will be outsourced using a common public bidding system to be initiated and supervised by PAU (i.e., GIS based map production, installation of a radio-communication system etc.). Corresponding details will have to be worked out by the PAU once the project becomes operational.

The MNRT will sign a special agreement with KfW on behalf of the Government of Tanzania which permits direct fund transfer from the KfW grant to the PAU for its perusal.

At field level the structure and procedure proposed by the UNDP/GEF project should be adopted for this project whereby the District Natural Resources Officers and Wildlife Officers will assume responsibility for support to villages until Village Associations are created and have capacity for more autonomy. A District level “Technical Committee”, “District Natural Resources Advisory Body”, will assure linkages between wildlife agriculture, forestry, fisheries, and land sectors, under the chairmanship of the District Commissioner or representative.

A Project “Technical Steering Committee” will be established, under the chairmanship of the Permanent Secretary in the Ministry of Natural Resources and Tourism (or his representative). Committee membership will include representatives of the Wildlife Division, Selous Game Reserve, Regional / District Authorities, Forestry, Agriculture and UNDP and GTZ-IS to serve both the UNDP/GEF and the KfW project. Further operational details will be developed during the project document completion.

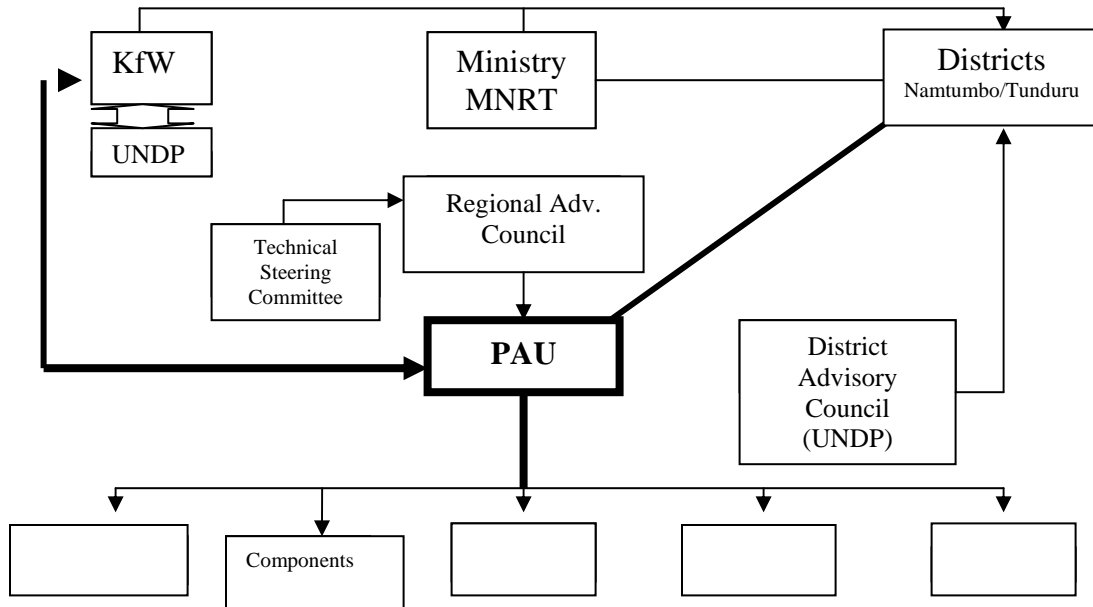
The interrelationships of the project administration are illustrated in Figure 5.

5.6.4. Regional Advisory Council

It is recommended to establish a “Regional Advisory Council” to be composed of stakeholders and community representatives from the corridor, the District Resource Officers of Namtumbo and Tunduru and the District Executive Commissioner of Namtumbo. The key function of the Council would be to evaluate and approve the individual interventions of the KfW project work plans and budgets and to deal with general and contentious issues regarding the corridor and the project at large. Of essential importance will be its mediating role in arriving at a consensus with the local population on resource issues within the proposed WMAs and wildlife allocations to the WMA

villages. The Council should convene twice annually and should be on call to solve issues of urgency. The chairman should be elected by the Council members for a 2 year period.

Figure 5: Project Administration Interrelationships



5.6.5. Trans-boundary Coordination Board (TCB)

The proposed creation of a TCB, consisting of representatives of Tanzania and Mozambique, is an essential part of the project structure and vital in the context of achieving the objectives of the trans-frontier initiative aiming at a closer co-operation between the two countries on wildlife conservation related issues in the border area.

As the proposed project offers excellent opportunities for trans-boundary cooperation in the field of biodiversity conservation and protection of unique ecosystems the PAU should actively support the work of the TCB. The Board, besides its crucial political, administrative and institutional role, would also have a significant role to play in relation to technical issues. The Board's main responsibility will be to guide the course of future measures and activities aimed at meeting the conservation and sustainable development objectives for the Corridor and future Transfrontier Conservation Area. More specifically to:

- maintain and protect the unique ecological values of the border zone area's ecosystems;
- prevent and/or reverse the causes of its habitat degradation;
- explore appropriate management methods for the sustainable use of resources and water.

In this framework, it is proposed that the Board will assume the following responsibilities:

- List all activities and projects being implemented in the target area with a direct or indirect effect on the natural or socio-economic status of the area, with special reference to the corridor and proposed WMAs.
- Monitor and co-ordinate the development and implementation of the development plans for the corridor and the Mtwara Corridor as related to the ecological corridor anchor project.
- Obtain political consensus and support at the national, regional, district and local level for the implementation of identified priority measures.
- Identify possible funding sources at a national and international level for the realisation of the long-term conservation goals for the proposed TFCA.
- Assure that information concerning development plans and other planned activities, policies and programs with a possible effect on the corridor will be made available timely to the two countries.
- In case of unexpected events the Board shall contribute to the mobilisation of resources of the two states, and the international community, as appropriate, to mitigate/avoid any adverse impacts on the environment.

Details on the creation, statutes, structure of the Board, election of members, frequency of meetings, meeting venues etc. has to be worked out at the onset of the project.

6. PLANNING MATRIX

Table : Project Planning Matrix: Selous-Niassa Wildlife Corridor

Development Goal			
	Support to the Establishment and Management of the Proposed Selous-Niassa Wildlife Corridor in Tanzania		
Indicators for Development Goal		Detailed Specifications of the Indicators	
1	A contiguous network of Wildlife Management Areas (WMA) covering the designated corridor has been established		Authorised Associations (AA) for the created WMAs are legally recognised and operational AA personal and scouts are sufficiently trained, equipped and fully functional
2	A spatial land use plan has been elaborated for each designated WMA		The land use plans have been officially approved by the Wildlife Division and/or the relevant authorities
3	Ownership in the overall conservation objective for the corridor has been developed by the participating communities		An effective system of village scouts safeguards the sustainable utilisation of the resources within the respective WMA
4	An effective incentive system based on an equitable revenue sharing system is in place for the participating communities		Revenues are being generated and retained by the AA through sustainable resource use (trophy hunting, ecotourism, and other land uses compatible with the overall conservation objective)
5	Transboundary cooperation related to the conservation of the proposed corridor with Mozambique has been achieved		A transboundary corridor management committee has been established and meets regularly; an official Memorandum of Understanding detailing the scope and subject of transboundary corridor cooperation has been signed by the respective authorities of Tanzania and Mozambique; common policies and management guidelines in particular with respect to anti-poaching and border patrol issues have been developed and are being implemented
Hypotheses for Achievement of Development Goal		R	B Indicators
1	Willingness by the Federal Government to delegate the decision-making authority for resource utilisation and management of the AAs	4	2 The district offices in close collaboration with the AAs have proven decision-making power regarding the WMAs
2	Willingness by the Federal Government to permit the AA to retain a significant portion of revenues generated by the WMA	3	3 Strict compliance by the government and district authorities with the existing policy paper regulating revenue sharing
3	Willingness by all communities to participate in the establishment of the proposed WMAs	2	2 A sufficient number of villages participate in WMA formation to form a viable ecological corridor
4	Efficient co-operation with key stakeholders, in particular with the GEF project implemented by UNDP.	1	3 Regular stakeholder meetings take place throughout the duration of the project and Memoranda of Understanding are in place at the onset of the project with identified key stakeholders
5	Willingness by the two Governments to design and implement joint transboundary policies and management guidelines in favour of transboundary biodiversity conservation issues	2	2 Memoranda of Understanding in place; transboundary management committee established and functioning; joint border control and anti-poaching activities taking place
Project Purpose			
	Support to the establishment and sustainable management of the proposed Selous-Niassa Wildlife Corridor		<i>The Selous-Niassa ecological corridor is effectively protected through the establishment and sustainable management of a contiguous chain of village wildlife management areas by the local communities with the assistance of local Government and the Wildlife Division. Two WMA pilot areas have been established in the southern corridor section and livelihoods in the villages have been improved through the project interventions</i>
Indicators for Project Purpose		Detailed Specifications of the Indicators	
1	<i>By the end of the project two thirds of the corridor land is set aside for conservation and wildlife utilization purposes through the WMA initiative</i>		each of the corridor villages a s member of the newly to-be created WMAs has allocated a significant portion (1/3 rd) of the village land in its spatial land use plan fo wildlife conservation
2	<i>By the end of the project monitoring confirms insignificant loss of land to agricultural or other intensive land use in the corridor area</i>		the -5 year ecological monitoring cycle is based on the interpretation of Landsat imagery measuring the total vegetation cover compared to the baseline cover at the beginning of the project
3	<i>By the end of the project poaching incidences within the corridor are significantly reduced (decreasing number of reported incidences and convictions)</i>		the network of enforcement agencies through radio communication ansd and sharing intelligence is well established and functioning
4	<i>By the end of the project a well functioning system of anti-poaching control is in place composed of well trained and equipped rangers</i>		The anti-poaching unit in Songea has been strengthened and is full operational, the sub-unit in Tunduru has been established and is fully operational, the Ruvuma Ranger Station is operational and controls the River, the Magazini Ranger Station has been established and is operational and all village scouts (12/village of 16 villages) have been properly trained and equipped
5	By the end of the project villages participating in the WMA are cooperative and supportive of the WMAs		The 16 target villages in the souther corridor have well trained and equiped scouts, radio-communication and a building to accommodate scouts and the village resource committee. The wildlife allocation by the Wildlife Division is accepted by the villages and harvesting the allocated wildlife quota contributes to the village budget and the village scout income
6	Trans-boundary Cooperation with Mozambique has been enabled		see indicators regarding development goal 5

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Hypotheses for Achievement of Project Purpose		R	B	Indicators
1	Community willingness to implement conservation strategies	3	1	Level of annual budget allocations
2	Local and district government willingness to share authority for conservation initiative	2	2	Land/Resource Use conflicts related to WMAs are resolved/mitigated
3	Commitment by the Wildlife Division to decentralize and to fair equity sharing with the communities	3	2	The current equity sharing proposal subject to approval by the cabinet has been approved and is implemented
4	Commitment by the Wildlife Division to cover financial shortfalls of operational costs for the Likuyu training center	2	2	potential budget shortfalls at Likuyo paid for in full by Wildlife Division throughout the project period
5	The Wildlife Division agrees to assist in utilizing the Likuyu training facility to its to-be expanded capacity	1	2	trainees are sent to Likuyu also from outside the corridor communities (annual statistics at the Training Center)
6	The Government of Tanzania agrees to grant tax exemption (VAT) to all project related procurements	1	3	All procurements are tax free from the beginning of the project according to the tax exemption MoU signed by the Government
7	The Wildlife Division supports the project administration on the District level	2	2	There is proven cooperation with District Authorities and the administration unit to be created for the KfW project (MoU)
8	The Wildlife Division expediently advances the the proposed WMAs	2	2	WMAs for the southern corridor are processed as soon as villages apply and prerequisites are met

R = Risk Classes

"1" or "g" = no/low risk
 "2" or "m" = medium risk
 "3" or "h" = high risk
 "4" or "vh" = very high risk

B = Mitigation Capacity

"1" or "g" = no/low mitigation capacity
 "2" or "m" = medium mitigation capacity
 "3" or "h" = high mitigation capacity

Project Results

Result 1:		R	B
Greater awareness and capacities for conservation of biodiversity and natural resources within the corridor among communities and local and district authorities		1	3

Indicators for Result 1:		Detailed Specifications of the Indicators	
1	Over 60 % of households in the local community are targeted in awareness raising activities by the end of year 3	2	3
2	Exchange visits are undertaken by at least 10 community members from each village to WMAs in the northern sector of the corridor by the end of year 3	2	3
3	Annual exchange visits undertaken by local and district authority personnel to WMAs in the northern corridor by the end of year 3	2	3
4	Formal meeting undertaken each year between Wildlife Authorities of Selous/Rovuma of Tanzania and Niassa GR	2	3

Activities for Result 1:		Key Responsibility of the UNDP/GEF project	
1.1	Carry out a stakeholder analysis and develop a public participation plan that targets all land users to ensure they are well informed and can participate in the project activities	1	3
1.2	Design and implement an effective education campaign to inform communities about natural resources conservation and sustainable utilisation and the Government policies and regulation regarding the role of communities in NRM, particularly in implementing WMAs. Specific activities will be developed for target groups such as fishermen on the Ruvuma River	1	3
1.3	Facilitate exchange of experience and site visits by local communities to villages in the northern part of the corridor of the Selous Buffer zone	1	3
1.4	Facilitate the involvement of agricultural agencies at village and district level and others identified in Activity 1.1 in the project activities to ensure that sectoral policies do not conflict the project activities	2	3
1.5	Facilitate meetings between the Government/Wildlife Division of Tanzania and the Niassa Reserve staff Mozambique in order to develop trans-boundary anti-poaching agreements	2	2

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Result 2:		R	B
Creation of reliable ecological and socio-economic databases for the corridor to serve as decision-making tools for communities and local authorities		2	2 Key Responsibility of the UNDP/GEF project

Indicators for Result 2:		Detailed Specifications of the Indicators	
1	Complete GIS database for ecological and socio-economic data for the corridor by the end of year 3	3	4 Data processing in GIS format joint responsibility with KfW
2	Database being actively used to inform management decisions by the end of year 3	3	4

Activities for Result 2:		Key responsibility by UNDP/GEF project	
2.1	Carry out regular participatory wildlife/ land-use surveys in order to monitor animal distribution and human activities within the corridor and WMAs and to feed results in the conservation planning exercises	3	2
2.2	Carry out a study on fishing activities at Ruvuma River and its tributaries; develop and implement proposals for appropriate sustainable management regarding special protection of crossing points for wildlife	3	2
2.3	Carry out regular socio-economic surveys to be repeated at regular intervals to monitor the impact of WMAs activities on the livelihoods of local communities	3	2
2.4	Integrate results from the Selous Niassa Research Project into project activities	2	2

Result 3:		R	B
A network of WMAs effectively established and managed throughout the corridor		1	3 UNDP/GEF and KfW supported shared responsibility

Indicators for Result 3:		Detailed Specifications of the Indicators	
1	Ten members of the community from each of the 15 targeted villages trained to implement WMA after 1 1/2 years	1	3 Support group established and awareness campaign designed and implemented: <u>UNDP/GEF Responsibility</u>
2	Survey and demarcation of boundaries of the 15 villages and WMAs completed with the participation of 15 the target villages by the end of year 3	1	3 Based on the demarcated village boundaries the multi-disciplinary team jointly with the District officers, a GIS cartographer and the villagers will discuss and finalize the spatial village plans in a scale of 1: 20 000: <u>KfW project responsibility</u>
3	WMA management plan developed and under implementation with the participation of all 15 target villages by the end of year 3	2	3 WMA management plans jointly to be developed by the villages and the District resource officers: <u>UNDP/GEF Responsibility</u>
4	Official records and documents of the gazettelement of WMAs and Aas by the end of year 3	3	1 <u>UNDP/GEF responsibility</u>
5	180 village scouts trained and equipped for anti-poaching exercises by the end of year 2	1	3 training <u>UNDP/GEF</u> , equipment under the <u>KfW</u> project
6	At least 2 income generating projects in each village based on sustainable utilisation of natural resources by end of year 3	2	2 <u>UNDP/GEF</u>

Activities for Result 3:			
3.1	Establish the institutional arrangements necessary for the WMAs	2	2, 3, 1 and 3.2 UNDP/GEF 3.3. and 3.4 KfW 3.5 and 3.6 UNDP/GEF
3.2	Undertake training of members of the various WMA institutions and village scouts	1	3
3.3	Facilitate the communities to establish the required infrastructure and associated equipment for the village institutions	2	2
3.4	Integrate results of land surveys and land use planning activities, carried out for the identification of WMAs and undertake mapping and border demarcation of WMA	1	3
3.5	Facilitate the development of Management plans for the WMAs including associated village bye-laws and advise the Aas with the implementation of the Management plan and natural resource utilisation	2	2
3.6	Facilitate the gazettelement of WMA, integration of WMAs into local development plans and declaration of the CBO as an Authorised Authority (AA)	2	2
3.7	Support village, District and Central Government regional game scouts in anti-poaching operations until communities earn sufficient income from their WMAs to take over	1	3 <u>KfW project</u> to strengthen the Songea anti-poaching unit and to establish the Tunduru anti-poaching sub-station; fully equip both units; establish Ruvuma Ranger station and equip rangers; establish and equip the the Magazini ranger station.
3.8	Facilitate legal advice for lease of contracts, concessional agreements and other business activities when necessary	2	3
3.9	Facilitate the involvement of District agricultural and natural resources extension officers to work with local communities in a resource use planning exercise to identify and develop opportunities for income generation through products such as honey, timber, medicinal plants	1	3
3.10	Carry out training for the development of business plans of the CBOs	2	2

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Result 4:		R	B
Protection of the Sasawara Forest Reserve through community participation		2	2
Indicators for Result 4:		Detailed Specifications of the Indicators	
1	Records and official Memorandum of Understanding for joint management of Sasawara Forest Reserve by end of year 3		UNDP
2	Joint Management Plan developed and being implemented by end of year 2		UNDP
Activities for Result 4:		UNDP	
4.1	Working closely with the Forest Department, identify the reserve's boundaries in the field and evaluate the status of protection and encroachment	2	2
4.2	Define and propose options for the improvement of its protection and joint management between adjacent villages and the Forest Department regarding forest utilisation	2	2
4.3	Facilitate a MOU about the joint management and protection between the villages and the Forest Department	2	2
4.4	Facilitate a process of developing and implementing a joint management plan on Saswara Forest	2	3
Result 5: Proposed KfW intervention 1		R	B
Production of a Spatial land use plan scale 1:200 000 and 15 spatial land use plans for the 15 targeted villages in the scale of 1:20 000		1	3
Indicators for Result 5:		Detailed Specifications of the Indicators	
5.1	satellite imagery purchased for both map scales; groundtruthing completed by year 1, maps completed by year 2	1	3
5.2	all 15 target villages have operational land use plan	1	3
5.3	all 15 plans are submitted to the Wildlife Division in fulfillment of requirements for approval of the WMA	1	3
Activities for Result 5:		For the 1:250 000 overview map LANDSATe imagery will be used to be supported by groundtruthing. The subsequent 1:20,000 maps use IKONOS satellite imagery because of their high resolution. The mapping process will be trlu participatory	
5.1	elaborate 1:250,000 overview map for entire corridor	1	3
5.2	identify and demarcate boundaries of all 15 target villages	1	3
5.3	elaborate 15 village spatial land use maps	1	3
5.4	produce village land use plans (jointly with UNDP/GEF project)	2	2
Result 6: Proposed KfW intervention 2		R	B
Installation of wireless radio system for entire corridor area		2	3
Indicators for Result 6:		Detailed Specifications of the Indicators	
6.1	initial survey identifying location of repeater stations completet	1	3
6.2	repeater stations are build with 100% corridor coverage	2	3
6.3	all 32 corridor villages will be connected to the radio system, the two regional offices and the Ruvuma and Magazini Ranger Stations	2	3
Activities for Result 6:		after finalization this project component the corridor will be covered with a functioning network of wireless radios serving vilages and law enforcement alike	
6.1	initial survey for location of repeater stations	1	3
6.2	install repeater stations and power source	2	3
6.3	install base stations and radios in strategic location	2	3
6.4	install mobile radios in all 33 corridor villages and the ranger stations	2	3

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Result 7: Proposed KfW Intervention 3		R	B
Strengthening Mobile anti-poaching at Songea and establish new sub-station at Tunduru			
Indicators for Result 7:		Detailed Specifications of the Indicators	
7.1	the Namtumbo ranger station is build according to standards and fully functional	1	2 the ranger station at Namtumbo operated under the supervision of the Zonal Commander reporting to the Wildlife Division
7.2	the rangers at Songea and Tunduru are recruited and have been trained at the Likuyu training center	2	3 The Tunduru SubUnit reports to the Songea Zonal Commander but cooperates with the District Game Officer Tunduru (UNDP responsibility)
7.3	The rangers are fully equipped and operational and can be deployed successfully	1	2 Synergies are utilized by networking with all enforcement agencies using joint intelligence and by cooperation with the village scouts
Activities for Result 7:			
7.1	Set-up, furnish and equip the Namtumbo Office	1	3
7.2	Upgrade the Tunduru Offices	1	3
7.3	Train 15 Regional mobile rangers in total	2	3 UNDP responsibility
7.4	Equip rangers with uniforms, individual kit and weapons	1	3
7.5	establish workplans and deployment guidelines	2	3
7.6	Monitor and report regularly on deployment progress	2	3
Result 8: Proposed KfW Intervention 4		R	B
strengthening district game office Namtumbo and Tunduru			
Indicators for Result 8:		Detailed Specifications of the Indicators	
8.1	Namtumo District Game Office upgraded according to acceptable standard	1	2 the District office is fully integrated into other district activities cooperating with the Namtumbo District Authorities
8.2	Namtumbo and Tunduru offices are fully equipped and functioning	1	2 District game Office receives funding from Wildlife Division, the District Office and WMA villages
8.3	Office Tunduru and Namtumo oversee the work by village scout and the ranger station Magazini	1	3 All enforcement records are kept within the District offices
Activities for Result 8:			
8.1	Set-up, furnish and equip the Namtumbo Office	1	3
8.2	Prepare and implement Operational Plan	1	3
Result 9: Proposed KfW intervention 5		R	B
support to district land offices			
Indicators for Result 9:		Detailed Specifications of the Indicators	
9.1	equipment and supplies provided to district land offices in Namtumbo and Tunduru	1	3 a list of equipment needs has been prepared by the project in support of the two land offices
9.2	land offices participate in the elaboration of the village plans	2	3 Village plans are approved by District Authorities
9.3	Village Plans are submitted to Wildlife Division in partial requirement for WMA application	2	3 Wildlife Division approves Village Plans and promotes WMAs
Activities for Result 9:			planning team to be composed on resource officers from District Natural Resource Division, GIS cartographer and Cim Consultant
9.1	form land use planning team	1	3
9.2	design logistical plan for village level land use planning	1	3
9.3	prepare 15 village spatial land use plans	1	3
9.4	establish guidelines and policies for land use categories used by the plans	2	3
9.5	Establish guidelines for project administration and accounting	2	3
9.6	Monitor and report regularly on compliance with plans	2	3
Result 10: Proposed KfW interventions 6		R	B
village resource council buildings and scout support			
Indicators for Result 10:		Detailed Specifications of the Indicators	
10.1	1 building each constructed in each of the 16 target villages	1	3 each structure contains an abattoir and armory for the village scouts
10.2	the building is furnished and equipped according to specs	1	3 the scouts use the building as office and venue for village events
10.3	the village house hosts the village radio to be used by the scouts	1	3 the wildlife quota harvested by the scouts is processed in the building's abattoir
Activities for Result 10:			
10.1	each village to form a resource council	1	3
10.2	each village to select 12 scouts for training	1	3 training done under UNDP
10.3	scouts will be fully equipped and receive uniforms	1	3
10.4	scouts to establish workplans and game patrols	1	3
10.5	scouts to maintain detailed logbooks	1	2
10.6	scouts to cooperate with other enforcement agencies	1	2

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Result 11: Proposed KfW interventions 7		R	B
ranger station Ruvuma River			
Indicators for Result 11:		Detailed Specifications of the Indicators	
11.1	establish building, jetty by the river and small boat house	1	3 equipment include 1 vehicel, one patrol boat and 2 outboard engines, one radion station
11.2	furnish and equip ranger station	1	3
11.3	appoint and train 5 rangers	1	3 training under UNDP
11.3	provide vehicles and boat	1	3
Activities for Result 11:			
11.1	formalize cooperation agreement with military outpost	1	3
11.2	prepare and implement patrol plan for the Ruvuma River	2	2
11.3	keep records and supply to Zonal Commander in Songea	2	2
11.4	maintain proper maintenance schedule	2	2
Result 12: Proposed KfW interventions 8		R	B
Total district ranger station at Magazini			
Indicators for Result 12:		Detailed Specifications of the Indicators	
12.1	upgrade existing building	1	3 furnish and equip upgraded building including 2 motorbikes and radio system
12.2	construct living quarters for rangers	1	3 furnish and equip ranger station
12.3	recruit and train 5 rangers	1	3 rangers to ne trained at Likuyu (UNDP) and reporting to District ame Ranger Namumbo
Activities for Result 12:			
12.1	design annual workplan	1	2
12.2	comply with patrol plan	2	2
12.3	network with other enforcement agencies	2	2
Result 13: Proposed KfW interventions 9		R	B
upgrading the Likuyo Training Center			
Indicators for Result 13:		Detailed Specifications of the Indicators	
13.1	all buildings at Likuyo are upgraded and constructed according to the expansion plan	1	3 2 dormitories accommodating 60 students in double rooms are completed and furnished; 6 new staff quarters are constructed; kitchen facilities are upgraded and 1 social lounge
13.2	permament water source established	1	3 sufficient water supply for training center safeguarded
13.3	solar power supplies office with sufficient power to run computer equipment	1	3 electronic office equipment is fully functional
Activities for Result 13:			
13.1	construct new dormitories	1	3
13.2	construct 6 new staff quarters	1	3
13.3	upgrade kitchen facilities	1	3
13.4	construct social lounge	1	3
13.5	purchase equipment according to specified need list	1	3
13.6	purchase vehicles as specified	1	3
Result 14: Proposed KfW interventions 10		R	B
Ruvuma Ecological Reserve feasibility study			
Indicators for Result 14:		Detailed Specifications of the Indicators	
14.1	Contract has been awared	1	3
14.2	Feasibility study report has been produced	1	3
Activities for Result 14:			
14.1	ecologica survey is implemented	1	3
14.2	recommendadion by the survey are implemented	1	3
Result 15: Proposed KfW interventions 11		R	B
15.1	Establishment of Pilot Fish Ponds	1	3
Indicators for Result 15:		Detailed Specifications of the Indicators	
15.1	4 fish ponds are installed at targeted pilot villages	1	3 fish ponds are established on a pioneer basis to taste validity for village protein supply
Result 16: Proposed KfW interventions 12		R	B
16.1	Corridor Monitoring		
Indicators for Result 16:		Detailed Specifications of the Indicators	
16.1	vegetation cover map elaborated in scale of 1:250 000 for entire corridor	1	3 Landsat photos used for image interpretation; Landsat digitalized and forest cover measured by forest typy
16.2	forest cover quantified and quantified	1	3 process to be repeated every five years
16.3	every 5 years Landsat imagery purchased and interpreted (production of vegetation cover map)	2	4

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Result 17: Proposed KfW interventions 13		R	B
17.1	transboundary cooperation		
Indicators for Result 17:			Detailed Specifications of the Indicators
17.1	establish transfrontier contacts regarding the creation of the corridor	2	3 Contacts to be established at ministerial level
17.2	formalize a cooperation agreement	2	3
17.3	establish transfrontier coordination committee	2	3 the committee to meet regularly and produce joint policy and transfrontier management
Result 18: Proposed KfW interventions 14		R	B
18.1	project administration		
Indicators for Result 18:			Detailed Specifications of the Indicators
18.1	recruit project administrator/accountant	1	3 full time for 6 years
18.2	recruit international consultant	1	3 intermittent assignments according to schedule
18.3	establish project office in Songea	1	3
18.4	cooperate with UNDP project	1	3 equip and furnish project office

R = Risk Classes for proposed interventions

- "1" or "g" = no/low risk
- "2" or "m" = medium risk
- "3" or "h" = high risk
- "4" or "vh" = very high risk

B = Mitigation Capacity

- "1" or "g" = no/low mitigation capacity
- "2" or "m" = medium mitigation capacity
- "3" or "h" = high mitigation capacity

Development Goal
Support to the Establishment and Management of the Proposed Selous-Niassa Wildlife Corridor in Tanzania

Indicators for Development Goal

- A contiguous network of Wildlife Management Areas (WMA) covering the designated corridor has been established
- A spatial land use plan has been elaborated for each designated WMA
- Ownership in the overall conservation objective for the corridor has been developed by the participating communities
- Uniqueness of Ecosystems preserved
- An effective incentive system based on an equitable revenue sharing system is in place for the participating communities
- Transboundary cooperation related to the conservation of the proposed corridor with Mozambique has been achieved

Hypotheses for Achievement of Development Goal

- Willingness by the Federal Government to delegate the decision-making authority for resource utilisation and management of the AAs
- Willingness by the Federal Government to permit the AA to retain a significant portion of revenues generated by the WMA
- Willingness by all communities to participate in the establishment of the proposed WMAs
- Efficient co-operation with key stakeholders, in particular with the GEF project implemented by UNDP.
- Willingness by the two Governments to design and implement joint transboundary policies and management guidelines in favour of transboundary biodiversity conservation issues

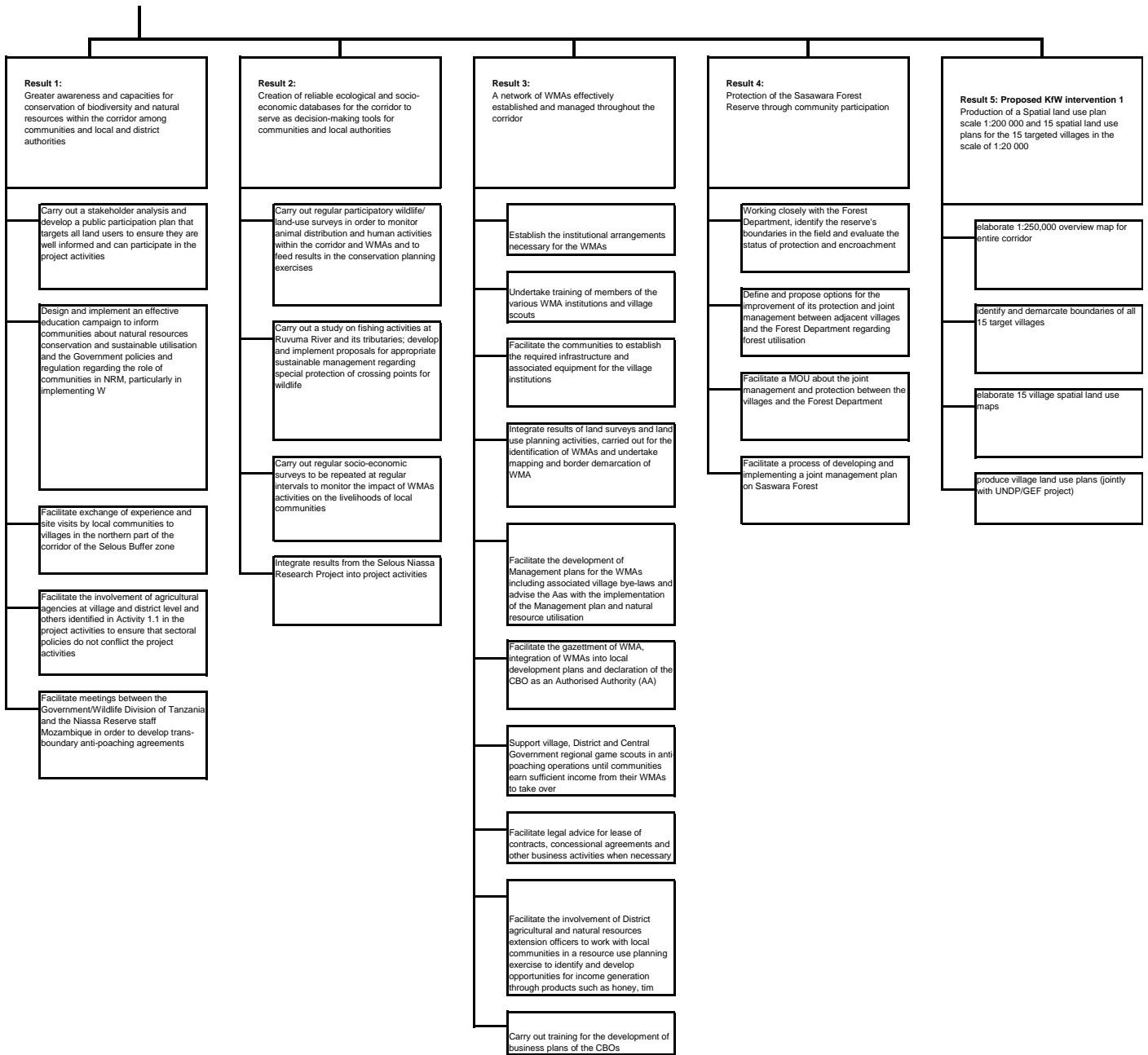
Project Purpose
Support to the establishment and sustainable management of the proposed Selous-Niassa Wildlife Corridor

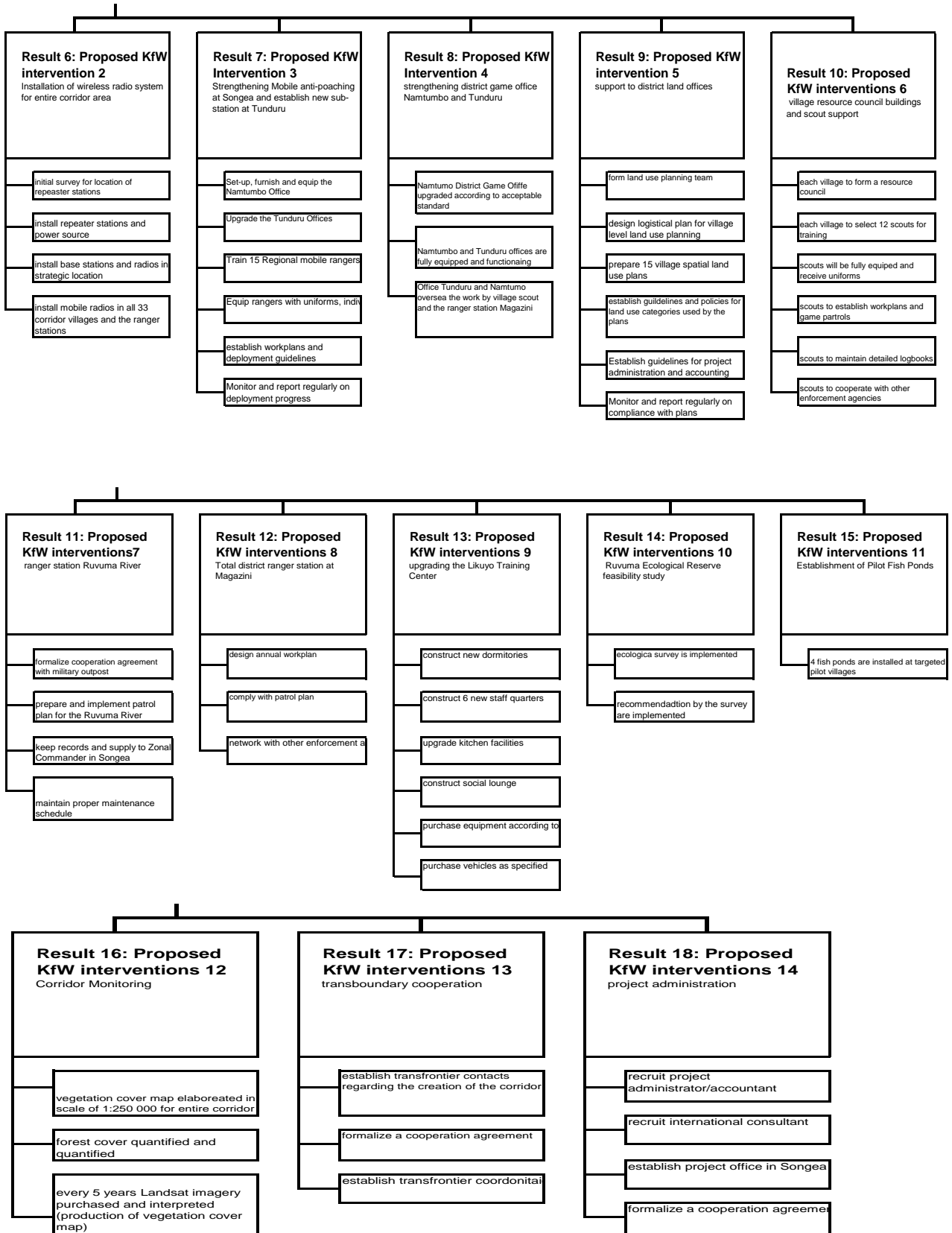
Indicators for Project Purpose

- By the end of the project two thirds of the corridor land is set aside for conservation and wildlife utilization purposes through the WMA initiative
- By the end of the project monitoring confirms insignificant loss of land to agricultural or other intensive land use in the corridor area
- By the end of the project poaching incidences within the corridor are significantly reduced (decreasing number of reported incidences and convictions)
- By the end of the project a well functioning system of anti-poaching control is in place composed of well trained and equipped rangers
- By the end of the project villages participating in the WMA are cooperative and supportive of the WMAs
- Trans-boundary Cooperation with Mozambique has been enabled

Hypotheses for Achievement of Project Purpose

- Community willingness to implement conservation strategies
- Local and district government willingness to share authority for conservation initiative
- Commitment by the Wildlife Division to decentralize and to fair equity sharing with the communities
- Commitment by the Wildlife Division to cover financial shortfalls of operational costs for the Likuyu training center
- The Wildlife Division agrees to assist in utilizing the Likuyu training facility to its to-be expanded capacity
- The Government of Tanzania agrees to grant tax exemption (VAT) to all project related procurements
- The Wildlife Division supports the project administration on the District level
- The Wildlife Division expediently advances the the proposed WMAs





7. PROJECT COSTS

Based on the interventions recommended in support of the corridor establishment and sustainable protection project costs have been calculated for a six year project timeline. Project costs are grouped by component to allow for an individual assessment of each proposed intervention. The key project components and corresponding costs are summarized in Table 5.

Table 5 : Summary table investment and operational project costs

Summary Project Costs in EUR							
Project Component	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total Costs
Total production of spatial land use plans	115,000	155,000	150,000	0	0	0	420,000
Total installation of VHF system for entire corridor	0	5,000	314,300	4,300	0	0	323,600
Total central mobile ranger units	0	60,000	224,000	1,200	1,200	1,200	287,600
Total district game office Namtumbo and Tunduru	0	192,000	0	0	0	100,000	292,000
Total support to district land offices	0	0	56,000	0	0	0	56,000
Total village resource council buildings and scout support	0	0	168,000	249,000	249,000	18,000	684,000
Total ranger station Ruvuma River	0	0	0	138,400	45,000	400	183,800
Total district ranger station at Magazini	0	23,000	16,000	7,400	400	400	47,200
Total upgrading the Likuyo Training Center	60,000	337,480	146,500	17,000	0	0	560,980
Total Ruvuma Ecological Reserve feasibility study	18,000	0	0	0	0	0	18,000
Total fish ponds	5,000	5,000	5,000	5,000	0	0	20,000
Total corridor monitoring	38,000	0	0	0	0	28,000	66,000
Total transboundary committee	3,500	4,300	3,500	4,400	3,500	3,800	23,000
Total project administration	229,100	137,400	137,400	102,400	102,400	27,400	736,100
Total operational costs of project interventions	0	36,000	103,800	108,800	112,800	112,800	474,200
TOTAL BASE COSTS	468,600	955,180	1,324,500	637,900	514,300	292,000	4,192,480
Physical contingencies 5%	23,430	47,759	66,225	31,895	25,715	14,600	209,624
Financial contingencies 2% (inflation in foreign currency)	9,372	19,104	26,490	12,758	10,286	5,840	83,850
TOTAL PROJECT COSTS INCLUDING INFLATION	501,402	1,022,043	1,417,215	682,553	550,301	312,440	4,485,954

Project costs are calculated in EUR. Cost estimates are based on prices and figures provided by local quantity surveyors for this feasibility assessment. Costs of materials and equipment, which would be directly imported by the project, do not include customs duties. The project is expected to be tax-exempt. Exchange Rates are based on rates available on the 8th of May, 2005:

1 EUR = 1.419 Tanzanian Shilling (TzS)

1 EUR = 1.282 US Dollar (USD)

Physical contingencies were added at a rate of 5% to the total budget. As project costs are expressed in foreign currency, an annual inflation rate of 2% has been applied for the 6 years project timeline. Detailed financial spreadsheets are presented in Annex 9. The total Base Costs amount to EUR 4,192,480 and the total project costs including contingencies, inflation and operational costs calculated for the investments to EUR 4,485,954

8. PROJECT FINANCING

8.1. COUNTERPART CONTRIBUTIONS

Counterpart contributions were estimated for each project component by source (Chapters 5.4.1 to 5.4.12.). The total counterpart contributions amount to EUR 480,500, and are mostly in-kind except for wages of Government employees being paid by the

Central- and District Governments respectively and wages of village scouts by the Village Resource Councils. In-kind contributions by villages are customarily in form of local building materials (bricks, thatch, poles and construction timber) and labour. The village surveys revealed that communal labour in most corridor villages ranges from an astounding 40 to 120 days per household per year (Annex 5). In other words, villagers are used to provide free labour and materials to communal projects and projects that benefit villagers.

8.2. FINANCIAL SUSTAINABILITY

Running expenses and operational costs resulting from the proposed project interventions are covered by the budget for the 6-year project timeline. All interventions are designed to be sustainable, in particular interventions that directly benefit the target villages participating in the proposed WMAs. It is expected that at project end the revenues generated through wildlife allocations (trophy hunting and meat sale) will be sufficient to cover recurring costs of most proposed interventions aimed at benefiting the villages. Operational costs for project components such as the wireless radio system and village buildings are expected to be covered by the villages as a matter of self-interest due to the importance of these installations to village life.

Unfortunately, no quantitative figures on expected economic outputs are available at this point although game allocations, market values of trophy animals and bush-meat prices etc. may be known in principle from other WMA areas. Any financial forecast regarding revenues to be generated by the participating WMA villages are highly speculative and subject to significant errors.

Experience from similar projects (“green sector”) show how flawed economic forecasts frequently are, especially forecasts related to the sustainable use of renewable resources and the tourism industry. Inflated economic forecasts are irresponsible, politically damaging and disillusioning to designated beneficiaries. The latter is especially damaging if the targeted beneficiaries (generally economically disadvantaged already) are deceived by promises of economic benefits that may never materialize.

It is for this reason that no economic forecasts will be provided for this report resulting from potential revenues expected to be generated from the proposed CBNRM measures and/or the WMAs beyond the statement made in chapter 5.3 regarding the current value of “bush meat”. However, it may be added that current wildlife allocations for the two existing WMAs in the northern corridor area (bordering Selous) are comprised of five buffalos, four eland and numerous smaller game species. Whether such allocations are currently used and, if not why not, is unknown. Suffice it to say that one international trophy hunt involving one buffalo alone could be worth as much as USD 5000 to 8000 on the international market. These proceeds compare rather favourably to the current typical village budget of approximately USD 1000/year. How potential trophy hunts could be

marketed by the WMA villages and what it involves is part of the training and capacity development program for the Village Resource Council representative, an activity to be covered by the UNDP project. Although concrete data on the demand for trophy hunting are not available, experience from Tanzania and other African states permitting trophy hunting seem to indicate an increasing demand. To attract hunters (and tourists) is mostly a marketing question, assuming that an attractive product can be offered and the framework conditions are favourable. The legal mechanisms for WMA villages to enter into trophy hunting agreements with licenced guide outfitters are in place. How the Department of Wildlife deals with the existing policies is not known and differs from case to case.

It is widely recognized that fair profit-sharing from the WMA resource use is of critical importance to the long-term success of WMAs. However, most WMAs in Tanzania are still in the experimental stage, although the concept of WMAs is fully embraced by the international donor community and leading international NGOs such as WWF, IUCN, Conservation International, etc.

Several profit-sharing schemes related to wildlife allocations for WMAs have been designed in the past. The most recent document is currently awaiting Parliament approval. Unfortunately, this document was not available for this study in spite of repeated inquiries with the Wildlife Department. Neither could the document be obtained through the GTZ advisor to the Wildlife Department who also had no access to the document.

In this context it is reiterated that the value of the ecological corridor and the proposed WMAs to member villages are multi-fold and exceed direct economic benefits such as from game harvested either as trophy animals or for the sale of meat. This is fully recognized by all villages questioned during the RRA which was conducted within the framework of this project (Annex 5). **It is emphasized that the single most important value of a WMA to a village is that the village will receive official recognition of deeded land as a direct result of the spatial land use village plan that is a prerequisite for a village to qualify for the WMA membership.** To attach any **monetary** value to such benefit is simply not feasible although the overall direct and indirect value is well acknowledged by the villagers and any other person knowledgeable about the importance of land titles worldwide.

Other fringe benefits provided to villagers by WMAs are free access to bee-keeping, firewood collection, collection of construction wood for personal use, collection of minor forest products and grazing. This is all part and parcel of the designated WMA land use categories used in village plans.

Income generating opportunities are not the focus of the proposed KfW interventions and/or the UNDP project. Undoubtedly, corridor communities will continue to live a life

based on subsistence agriculture, with or without the UNDP/KfW interventions, but under improved conditions and with improved “existence security” as a result of the joint UNDP/KfW project. The project does not intend to solve the rampant local economic problems.

There is little sense to emphasize the need of “wildlife” as a tourist attraction in the corridor. It is not the key intention of the ecological corridor to attract “photo tourism”. Wildlife-based photo tourism is well established in other world renowned wildlife tourist destinations in the country such as the Serengeti and Ngorongoro. It should be understood that it is unlikely for the corridor to ever become a prime destination for wildlife-based photo tourism. The corridor is a designated “ecological corridor” reflecting a holistic approach in which individual species (flora and fauna) have their own intrinsic value. Wildlife-based tourism in Africa depends on the visibility of popular big game species in larger densities concentrated in smaller areas (ready access). The ecological value of the proposed Selous-Niassa corridor rests in its unique and unspoiled Miombo woodlands that will link the two neighbouring protected areas through the establishment of the WMAs. The potential and unpredictable occurrence of big game species (including those large predators that are so attractive to photo tourists) should be looked at as an additional bonus, a by-product of an ecological corridor that intends to provide sustainable habitat protection rather than population enhancement for specific species. Future population densities of big game, small game or any other population of the thousands of plant and animal species presumed to occur cannot be predicted at any point because of the dynamics of natural ecosystems, in particular in the presence of people.

The proposed interventions are designed to be sustainable on the village level. Because the key interventions are of prime benefit to the villages (this is fully recognized by the villages) village ownership in the interventions is expected to be high. This is key to the sustainability of the interventions (self-interest by the village to maintain structures, installations and personnel).

It should also be pointed out that the funds provided by the BMZ in support of the corridor establishment are funds for biodiversity conservation/nature protection. Nature protection comes at a social cost, a widely accepted fact. It is simply not possible to calculate internal rates of return and/or economic cost-benefits for this type project as commonly done for typical bank investment projects (i.e., roads, bridges, dams, cement plant, housing development).

9. PROJECT IMPACTS

Economic Impacts:

- Revenue generation through improved land use practices and sustainable natural resource use, especially through proper use of allocated wildlife quotas will benefit the target villages of the WMAs, the Districts and the Wildlife Division.

- Job creation through the establishment of the WMAs: 180 village scouts, 50 rangers (mobile units, Ruvuma Station and magazine Rangers), minimum of 50 families involved in fish pond pilot project.
- Economic spin off effects from new employment opportunities.
- Improved livelihood of the rural poor through capacity development, especially in the agricultural and forestry sector (communal forests and participatory forest management and beekeeping improvement).

Socio Cultural Impacts:

- Integration of the rural communities into the national market economy as a result of the corridor anchor project becoming an integral part of the MTWARA Corridor Development.
- Capacity development and village executive leadership training leading to better social integration and village life advancement.
- Deeds for communal village land provided to all villages with land use plans and demarcated communal land boundaries in the corridor.
- Sustainable land and resource use resulting from enforced policies and management guidelines applied to designated land use categories in spatial village plans to be provided by the project.

Environmental Impacts:

- Protection and conservation of unique and representative (trans-boundary) ecosystems.
- Protection of critical wetlands on both sides of River Ruvuma.
- Improved / sustainable use of land and water resources in the corridor.
- Protection and sustainable management of game species in the corridor.
- Facilitating animal movements and genetic interchange between Selous and Niassa trans-frontier conservation areas.
- Raised level of environmental awareness resulting in organised and controlled use of natural resources, and reduced poaching.

10. RISK ANALYSIS AND MITIGATION OPPORTUNITIES

Table 6: Risk Analysis

Risk Assessment	Risk				Mitigation Risk		
	no/low	medium	high	very high	no/low	medium	high
I. Risk and mitigating capacity for the achievement of the results							
(a) caused by deviations from the planned activities related to:							
- concept		X					X
- time frame			X		X		
- costs			X			X	
(b) caused by deviations from the hypotheses:							
Willingness by the Federal Government to delegate the decision-making authority for resource utilisation and management of the AAs				X		X	
Willingness by the Federal Government to permit the AA to retain a significant portion of revenues generated by the WMA			X				X
Willingness by all communities to participate in the establishment of the proposed WMAs		X				X	
Efficient co-operation with key stakeholders, in particular with the GEF project implemented by UNDP.	X						X
Willingness by the two Governments to design and implement joint transboundary policies and management guidelines in favour of transboundary biodiversity conservation issues		X				X	
Total risk and mitigating capacity for the achievement of the results		X				X	
II. Risk and mitigating capacity for the achievement of the project purpose							
(caused by deviations from the hypotheses)							
Community willingness to implement conservation strategies			X		X		
Local and district government willingness to share authority for conservation initiative		X				X	
Commitment by the Wildlife Division to decentralize and to fair equity sharing with the communities			X			X	
Commitment by the Wildlife Division to cover financial shortfalls of operational costs for the Likuyu training center		X				X	
The Wildlife Division agrees to assist in utilizing the Likuyu training facility to its to-be expanded capacity	X					X	
The Government of Tanzania agrees to grant tax exemption (VAT) to all project related procurements	X						X
The Wildlife Division supports the project administration on the District level		X				X	
The Wildlife Division expediently advances the the proposed WMAs		X				X	
Total risk and mitigating capacity for the achievement of the project purpose			X			X	

III. Risk and mitigating capacity for the achievement of the development goal

(caused by deviations from the hypotheses)

Willingness by the Federal Government to delegate the decision-making authority for resource utilisation and management of the AAs				X		X	
Willingness by the Federal Government to permit the AA to retain a significant portion of revenues generated by the WMA			X				X
Willingness by all communities to participate in the establishment of the proposed WMAs		X				X	
Efficient co-operation with key stakeholders, in particular with the GEF project implemented by UNDP.	X						X
Willingness by the two Governments to design and implement joint transboundary policies and management guidelines in favour of transboundary biodiversity conservation issues		X				X	
Total risk and mitigating capacity for the achievement of the development goal		X				X	
IV. Total Risk and Mitigating Capacity		X				X	

Although there is room for an „institutional risk“ this risk will be minimized by involving the assistance of an international consultant who will closely work with his local counterpart (s) and the villages throughout the project duration.

11. MONITORING AND EVALUATION PLAN

It is proposed to closely follow the monitoring and evaluation plan designed for the UNDP/GEF project. The plan proposes to monitor and evaluate activities that measure project progress using quantifiable indicators of project achievements. These indicators will also measure the level of involvement of stakeholders and the performance of the actions undertaken to achieve the project. Activity specific indicators to be used for the KfW project are provided in the project planning matrix (Chapter 6).

The project will be monitored and evaluated in close collaboration with the DGO and the Wildlife Division and will follow the guidelines established by UNDP-GEF.

The objectives of the M&E may be summarized as follows:

- To analyse project progress, impacts and achievements
- To assess the relationship between activities planned in the project document and those implemented in the field, using performance indicators
- To re-orient the project as needed (adaptive management)
- To draw recommendations for future natural resources management transfer of activities to other areas
- To allow inter-project evaluations and systematic exchange (with other GEF and KfW projects)
- To develop long term M & E processes assessing the success and ecological and socio-economic sustainability of the WMAs and the corridor after project closure.

The monitoring and evaluation plan includes monitoring of project progress, ecological monitoring and socio-economic monitoring. The WWF/WB Management Effectiveness Tracking Tool should be used to analyse management effectiveness in the WMA's (details are provided in Annex 12 of the UNDP/GEF project document). The details of the M&E plan should be elaborated by the International Project Administrator jointly with the DGOs counterparts of the Namtumbo and Tunduru Districts and the CIM expert at the start of his assignment.

SUMMARY COMMENT:

The Consultants could not identify any risk that would jeopardize the overall success of a project aimed at the successful establishment and sustainable conservation management of the proposed Selous Niassa Ecological Corridor.

In general, most framework conditions appear highly favourable. Furthermore, the project is fully supported by the District Authorities of Namtumbo and Tunduru and by all villages contacted for this feasibility study.

The generally positive experience by villages from the northern corridor section which have been participating in the two northern pilot WMAs has resulted in the widespread support to the creation of WMAs in the southern corridor section.

The formalized cooperation agreement between the Tanzania UNDP office and KfW regarding the synchronized implementation of the two projects and the willingness by UNDP to focus its project efforts on awareness building, capacity development and the training of all enforcement personnel and village executives in lieu of KfW concentrating on financing village land use plans and boundary demarcation and infrastructure and equipment needs is the most significant asset.

The financial sustainability of the proposed interventions has been rated very high minimizing the overall risk of the project.

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Annexes

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- Annex 2: Ayuda Memoria
- Annex 3: List of Contacts
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- Annex 5: Village Survey (RRA)
- Annex 6: Table of Socio-Economic Data Tanzania, Namtumbo, Tunduru
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