

A project funded by the United Nations Development Programme/Global Environment Facility (UNDP/GEF) and executed by the United Nations Office for Project Services (UNOPS)

SOCIO-ECONOMIC SPECIAL STUDY

Report No. 20

NSUMBU

**Socio-economic study of
Lupiri town & Munshi village,
Kaputa District, Zambia**

*Lusaka
April 2000*

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**Pollution control and other measures to protect biodiversity
in Lake Tanganyika (RAF/92/G32)**

**Lutte contre la pollution et autres mesures visant à protéger
la biodiversité du lac Tanganyika (RAF/92/G32)**

The Lake Tanganyika Biodiversity Project has been formulated to help the four riparian states (Burundi, Congo, Tanzania and Zambia) produce an effective and sustainable system for managing and conserving the biodiversity of Lake Tanganyika into the foreseeable future. It is funded by the Global Environmental Facility through the United Nations Development Programme.

Le Projet sur la Biodiversité du Lac Tanganyika a été formulé pour aider les quatre états riverains (Burundi, Congo, Tanzanie et Zambie) à élaborer un système efficace et durable pour gérer et conserver la diversité biologique du lac Tanganyika dans un avenir prévisible. Il est financé par le FEM (Fonds pour l'Environnement Mondial) par le biais du Programme des Nations Unies pour le Développement (PNUD)

Burundi: L'Institut National pour l'Environnement et la Conservation de la Nature

D R Congo: Le Ministère de l'Environnement et de la Conservation de la Nature

Tanzania: Vice President's Office, Division of Environment

Zambia: Environment Council of Zambia

Lake Tanganyika Biodiversity Project Socio-Economic Special Study Report Series

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ACKNOWLEDGEMENTS

This survey was undertaken under the auspices of the Lake Tanganyika Biodiversity Project in collaboration with the Environmental Council of Zambia and the Department of Fisheries in Mpulungu.

We are grateful to Clement Mwelwa at the Mpulungu Station for his administrative and logistical support, as well as to Olivier Drieu, and to the members of the survey team¹ for their hard work in the field.

We are especially grateful to the Departments of Education and Community Development in Mpulungu and the National Parks Services and Department of Fisheries in Nsumbu for permitting their officers to participate.

Acknowledgement and appreciation are due to the SESS Co-ordinator, Dr Kate Meadows, and the SESS Facilitator, Karen Zwick, who assisted with training, methodologies, and final report editing and production.

Finally, many thanks are due to the residents of Lupiri and Munshi, who so generously gave their time, despite short notice.

¹ See Appendix A

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I INTRODUCTION

For a general introduction to Lake Tanganyika, the Project, and the Socio-Economic Special Study, the reader is referred to Report No. 19, Chisanza (A).

This report summarises the findings of a socio-economic survey conducted in Lupiri town and Munshi village in the Nsumbu² area of Kaputa District between 12 and 19 December 1999.

The aim was to investigate the social and economic aspects of life in the two communities to provide an understanding of:

- current livelihood strategies and behaviours;
- the impacts of these on the biodiversity of the lake; and
- ways in which these behaviours can change to reduce the impacts on the biodiversity of the lake.

From this, specific proposals for action can be developed for implementation by appropriate local, national, or international institutions and organisations to support improved livelihoods and to allow local people to manage their natural resources sustainably. The data collected will form a baseline against which the impacts of such interventions can be measured.

2 BACKGROUND

Lupiri and Munshi are two of the 12 communities that make up Nsumbu. Lupiri is the larger of the two, with a population of approximately 1,650. It was formerly an important provincial centre, with numerous government offices, although in recent years many have reduced their presence. Munshi is a smaller village with a population of approximately 700 on the border with Congo.

2.1 Location

Lupiri is located on the south-western shores of Lake Tanganyika overlooking Nsumbu Island to the south. It is approximately 128km north-west of Mpulungu, which is reached by water. It is also approximately 120km south-east of Kaputa, the District headquarters, which is reached by road. It is partially surrounded by the Nsumbu National Park (NNP), and there are tourist lodges nearby at Nkamba Bay, Ndole Bay and Kasaba Bay. Munshi is 15km by water north-east of Lupiri, on the border with Congo.

2.2 Climate

Like much of Zambia, there are three distinct seasons: a cool dry season from mid April to mid August; a hot dry season from mid September to mid November; and a warm rainy season from mid November to mid April.

2.3 Population and movement

Both Lupiri and Munshi are traditional Tabwa communities, although Zambian Tabwa dominate Lupiri while Congolese Tabwa dominate Munshi. Of late, there has been immigration of Lungu, Bemba and others from the Copperbelt who come as traders, although a number of them have taken up residence, and the population of Nsumbu as a whole has grown by 67% in the past eight years.

² Also spelt *Sumbu*.

2.4 Local economy

The economic mainstay of both communities is trade. In Lupiri, a provincial centre, almost every household is involved in trade of some sort, in part because of its above average road access, in part because farming is limited. Trade and shopkeeping flourish in Munshi as a result of its position on the border with Congo, as many Congolese come to purchase goods, usually without interacting with the Zambian immigration authorities based at Lupiri. As well as fish, commodities traded include groceries and clothing.

Fishing is also important, and *kapenta* (sardines) are caught throughout the year. However, in these trade oriented communities, more households are involved with processing and trading fish than fishing itself.

2.5 Previous Project activities

Through the Environmental Education component of the Project meetings have been held in communities all along the lakeshore, including Lupiri and Munshi, to create awareness of issues related to the sustainable use of the lake and its resources. As a result, Village Conservation & Development Committees comprising of elected members were formed in many communities to support the efforts of government in sustainably managing the lake.

3 METHODS

3.1 Participatory approaches

Introductory community meetings were held to introduce the project generally and the survey team³ specifically to the community, and covered general issues such as community histories and mapping. These then broke into smaller themed focus groups, which refined trends and timelines, or made more detailed maps within a topic, as well as including other tools such as transect walks, seasonal calendars, wealth group definition, etc. where possible/appropriate. Key informants were identified for specific individual or small group interviews, and on the last day, a final meeting was held to present and verify preliminary findings, and to rank issues and discuss possible solutions.

3.2 Household interviews

Informal semi-structured interviews were conducted with a systematically selected sample of households⁴. In Lupiri the town was divided into four approximately equal sections, each of which was covered by one pair of interviewers, while in Munshi the village and survey team were split into three. Within each sector, the teams selected every fourth house, giving an approximate sampling intensity of 25%. Care was taken to ensure coverage of centrally and peripherally located homes in each sector. However, the data collected have not yet been analysed, and the results presented below reflect the findings from the group meetings and key informants only.

³ For a list of the team members, see Appendix A.

⁴ For household interview guidelines, see Report No. 19.

4 RESULTS: LUPIRI

Despite poor weather, approximately 400 people attended the community meeting, in which the Survey Co-ordinator introduced the team and explained the purpose of the visit, and the National Social Economics Co-ordinator gave a brief description of the Project. The Survey Co-ordinator then facilitated a lively discussion on the history of the community. Themed focus group meetings were held with elders and leaders on general issues, fishing, farming, business, and women's and family issues.

4.1 History

Lupiri was established as a British Overseas Military Administration (BOMA) before 1938 when the entire area was called Nsumbu after Nsumbu Island about 400m to the south. However, the area became infested with tsetse flies, and people moved away to Kamindwa and Kalale. After the tsetse flies were controlled a Greek trader settled on the site of the current Department of Fisheries offices and started supplying local fishermen with modern gear. He was soon joined by a Fipa fisherman from Tanzania (then Tanganyika) called Kanyenjele, who owned a beach seine and gillnets. Kanyenjele became headman, sometime after 1956, when the Fisheries Department offices were established. On his death he was succeeded by his son, Arbed. During the reign of Arbed the village was divided in two sections (A and B). After the death of Arbed the headmanship became elective, and Mr. Siame and Mr. Sinkonde became the heads of sections A and B respectively.

The NNP was established in 1948 by the British South African Company (BSAC), and the road to Mporokoso constructed in the early 1960s.

4.2 Fishing

The old name for Lupiri is Kanyenjele, after the Fipa fisherman. Historically there were few fishermen, and they caught a lot of fish using lines, gillnets and *lusenga* nets. Fish species caught included *kapenta*, *pamba*, *inkupi*, *inshinga*, *mpande*, *imbili*, *malembela*, and *imonde*.

Fishing with pressure lamps and beach seines started in the 1970s, and until 1980 catches increased, particularly of *kapenta*, *mutununu* and *pamba*. During this period, the *kapenta* caught were typically large (> 6cm).

Catches and the size of the individual fish caught began to decline in 1981, reaching their lowest in 1999. Fishermen attribute this decline to:

- increased numbers of fishermen and gears;
- reduced fishing grounds as a result of the expansion of the NNP to include a 1.6 km aquatic zone; and
- the introduction of commercial fishing enterprises which use more powerful lamps able to attract fish from greater depths, and are thus more effective.

The main season for *kapenta* is during the dry season starting in July, but different fishing activities take place throughout the year, as shown in the calendar below:

Fish species caught	Gears used	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<i>kapenta, pamba</i>	beach seines, pulse seines												
<i>pamba, inkupi, insolola, inkungula</i>	beach seines												
<i>mpande, small pamba</i>	gillnets												
<i>inkupi, mpande, malembela</i>	lines												

The NNP maintains a 1.6km aquatic zone in which fishing is forbidden except with a permit. Permits for sport fishing are issued to tourists visiting the lodges for a fee, and historically the park authorities allowed a fishing camp at Chisanse near rich traditional fishing grounds. However, recently they have begun to impose a closed season from January to May, and to require all those entering the park to have a permit. There are also rumours and concerns that all fishing may be banned there in the future. The aquatic zone is not marked, and there are occasional conflicts between park authorities and fishermen, some of whom enter the park waters deliberately in search of fish, others of whom enter unknowingly, or are driven in by bad weather. Fishing is also constrained by lack of access to credit.

Kapenta is processed by drying it in the sun on specially prepared slabs, or on the nets themselves. In good weather this takes six to seven hours. Most is sold in 20 litre containers to traders. Other larger fish not consumed fresh are split open, dried in the sun for a few hours, and then smoked. Processing fish is not allowed in Chisanse, which poses a problem to small-scale fisherman with paddled boats who are unable to reach Nsumbu before the fish spoils, and thus must sell at low prices to traders with outboard engines.

Trading is hampered by unfair levy systems which require traders who take fish to Mpulungu to pay levies in both Kaputa and Mpulungu Districts, as well as high landing fees at the market in Mpulungu. There are also occasional problems with fish from north of Lupiri which Customs officials believe to have been caught in Congolese waters, and which are then subject to duty.

4.3 Farming

Lupiri is surrounded by the NNP, privately owned land, and the lake, and thus there is a serious shortage of land for farming, or even for building new houses, or burying the dead. The nearest farming land is about 15km away, and thus farming is severely constrained, and it is not possible to survive on farming alone. Nonetheless, many households have small gardens near the homes in the town. Historically farming was based on maize and rice, but today also includes cassava, bananas, sweet potatoes, and vegetables and tomatoes. There are no cattle, but a small number of goats, chickens and doves.

4.4 Business

Business in the area is seasonal as the overall economy is heavily dependant on fishing. However, it is also affected by farmers coming to sell their crops and spending their proceeds on shop bought goods. A major constraint is poor transport links as roads become impassable during the wet season and lake transport is slow and risky. This reduces the prices paid for fish, and increases the costs of goods brought in from other parts of the country.

4.5 Women's issues

Women were vocal and enthusiastic participants in a themed focus group, which continued over two days. Key issues of concern to women were:

- health and sanitation: there is a general lack of adequate medical facilities including personnel, and drugs. Furthermore, there is only one small clinic building with three rooms and eight beds, resulting in a lack of privacy for women in childbirth. There is also no ambulance service, so people must carry their sick to the clinic for treatment. There are some wells and bore holes, but despite fees being collected, they are not maintained well, and the water is generally not treated. Those who do not live near one, or who are unable to pay drink water from the lake, and diarrhoea and even cholera is common;
- lack of land: the town is surrounded by the NNP, privately owned land, and the lake, resulting not only in insufficient land from farming, but also in difficulties in accessing natural resources such as fuelwood, thatching grass, and poles. Park authorities do allow women into the park under certain conditions, but they are at risk of attack from wild animals⁵;
- poor hammer mill service: there is only one hammer mill to cater for two villages, and the owner takes a high fee⁶. Women requested guidance in forming a recognised group which would be able to obtain credit to procure another hammer mill; and
- inadequate market and business infrastructure: there is no market building despite payment of rates to the council, so all trading is done under the shelter of a large mango tree, and there is only one public latrine at the market. Furthermore, road access is poor, and there is no bus shelter.

As well as providing reproductive labour, women are involved in fish processing and trading, other types of trade, and the brewing of traditional beers. However, it emerged that there is a strong belief in witchcraft which is a major constraint to development; many people do not see any point in working hard as they believe that those who are conspicuously successful will be killed by jealous witches, and thus it is safer to remain poor. Those who are successful are either outsiders who are not believed to be vulnerable to this witchcraft, or are presumed to be witches themselves. During this short visit, women were not able to suggest solutions to this problem.

4.6 Development and constraints

Lupiri is a heterogeneous community made up of self-employed people, such as shopkeepers, owners of fishing gear (nets, boats, lamp boats), and fish and other traders, salaried government workers, hired fishermen and other workers, and fish processors and small scale traders of natural resources such as firewood, or locally produced commodities such as traditional beers.

⁵ Just prior to the survey a woman had been seriously injured by a buffalo in the NNP while collecting fuelwood.

⁶ Specifically, the ground flour is measured in a severely dented tin which holds much less than its nominal capacity.

However, in addition to the various constraints to fishing, farming, and business mentioned above, there are other concerns including:

- health and sanitation: the clinical officer confirmed the opinion of women at the themed focus group that as a result of rapid population growth, the clinic cannot cope with the demands made upon it⁷. Malaria and diarrhoea and cholera are the main problems. Programmes have been undertaken to use drama to create public awareness, to treat stagnant water with oil to control mosquitoes, to promote and sell treated mosquito nets, and to improve access to clean drinking water by sinking four new bore holes. However there were problems with sustainability, as there were insufficient funds to continue activities, and the bore holes were not maintained. The clinical officer also noted that improved methods of pit latrine construction were needed in areas with sandy soils to prevent them from collapsing; and
- misuse of police power: elders and leaders report that some police officers act unjustly and have assumed the role of the courts as well as that of policing.

Key areas for action identified by elders and leaders include:

- maintenance of the main road to Kaputa;
- increased numbers of teachers and the construction of a secondary school;
- improved medical services;
- improved access to clean drinking water; and
- investigation into sharing of revenues from the NNP to offset losses from restrictions on fishing at Chisanse, as well as other ongoing opportunity costs.

5 RESULTS: MUNSHI

The village is situated on high ground and consists of a main street running north-south lined with 16 well-stocked shops and three streets of houses, totalling approximately 200. The shops sell groceries, clothing, and manufactured household items to visitors from Congo and to local people in times of high fish catches. The houses are mostly constructed from unburnt mud bricks, and are neatly thatched, with their own pit latrines. Most are well maintained, except for the homes of widowers or elderly people. The village also has a thatched lower and upper primary school, and six churches of different Christian denominations.

5.1 History

It is not known when Munshi was established, although it is believed that it was in existence during, if not before the rule of Chief Mulilo of what is now Congo before the current national boundaries were demarcated. After the boundaries were defined and the village became part of what is now Zambia, it was ruled by Chief Nsama, a relative of Chief Mulilo.

In 1962 there were serious floods and many people moved Lupiri. After the flooding Chief Nsama gave permission to Chanshi Kasengele to restart the village, and he became headman from 1968 to 1969. Upon his death he was succeeded by his brother, Chanshi Monta, who was then succeeded by Lighton Chambi, Banda, Martin Mpusa, and Augustin Kapalata in that order. Lighton Chambi then returned as headman for a second time, but was found wanting in the execution of his duties, and Augustin Kapalata was reinstated. He was later replaced by the current headman, Francis Nsama.

⁷ One clinical officer and three support staff serve a catchment of approximately 14,500 people, and treat 900 out patients monthly, as well as 20 inpatients at a time (in eight beds). Concerns about inadequate supply of medicine were also confirmed; the last allocation had been received five months previously.

Important events in the history of the village are:

- 1980 Athan Kabamba establishes grocery shops
- 1985 Construction of the lower primary school by the District Governor, Major Nawa
- 1987 Successful generation of electricity from the Kapisha hot springs⁸

5.2 Fishing

Historically fishing was done during the day using *lusenga* nets, and there was no need for lamps. Fishing was a seasonal activity undertaken between June and November, while farming was undertaken between December and May which allowed the fish time to breed. The senior headman, Tereka, and his sister prayed to ancestral spirits at a shrine called Nundo and at Nsumbu Island.

Kamamanya, the Greek trader who settled in Lupiri, introduced light fishing. **The fishery has declined, which many attribute to the lack of respect for and failure to observe traditional laws.**

Nowadays, the main season for *kapenta* is during the dry season starting in July, but different fishing activities take place throughout the year, as shown in the calendar below:

Fish species caught	Gears used	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
<i>kapenta, pamba</i>	beach seines	█												
<i>pamba, inkupi, insolola, inkungula</i>	beach seines							█						
<i>mpande, small pamba</i>	gillnets										█			
<i>inkupi, malembela, mpande, mukebuka</i>	lines	█												

Kapenta is processed by drying it in the sun on the nets. It is sold in 20 litre containers for 10,000Kw per container. Other larger fish not consumed fresh are smoked.

5.3 Farming

Soils are mostly gravel with sandy beaches along the lake. To the west of the village is a dambo in which cassava, rice and maize are grown, but land is limited by an escarpment, and farming is predominantly for subsistence only.

The main growing season is September to March, but vegetables are grown throughout the dry season too, as shown in the calendar below:

Crop	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
maize, rice							█					
cassava						█						
vegetables, tomatoes, sweet potatoes	█											
sugar cane						█						

⁸ The electricity was to supply local communities and tourist lodges, but the project was abandoned because the government expelled the Italian investors from the country.

5.4 Women's issues

Key issues of concern to women were:

- access to safe drinking water: drinking water is taken from a seasonal stream in the wet season and hand dug shallow wells in the dry season, but the stream is far, and the wells subject to contamination, and thus protected wells or bore holes are needed; and
- access to health care, especially during pregnancy and childbirth: there is not even a Traditional Birthing Attendant in Munshi. The nearest clinic is in Lupiri, but not all women are able to travel by boat, so either walk, or go without medical care.

Furthermore, women were unhappy that there is no central market in the village.

5.5 Development and constraints

Munshi is a heterogeneous community made up of self-employed people, such as shopkeepers and owners of fishing gear (nets, boats, lamp boats), and fish and other traders, hired fishermen, fish processors, and a small number of farmers.

However, in addition to the lack of land, and the problems of access to safe drinking water and healthcare mentioned by women, development is also constrained by:

- poor communications: the road to Lupiri is now impassable as a bridge has been washed away; and
- shortages of teachers: there are too few teachers for the number of pupils, who come from seven other nearby villages.

APPENDIX A: SURVEY TEAM

Mr GM Chitalu	National Socio-Economics Co-ordinator, Environmental Council of Zambia, Lusaka
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Mr Aliani Mulagala	Head Teacher, Mpulungu Basic School, Mpulungu
Mr Thomas Miti	Chief Park Warden, Nsumbu National Park
Mr Muyangwa	Fisheries Officer, Nsumbu
Ms Karen Zwick	SESS Facilitator, LTBP