

**"THE ZAMBEZI SAWMILLS: A STUDY  
OF FOREST EXPLOITATION IN THE  
WESTERN PROVINCE OF ZAMBIA,  
1910-1968"**

I, Iven Mweetwa Nzila

hereby declare that this dissertation is original  
and has not previously been submitted for any  
degree at this or any other University.

BY

**IVEN MWEETWA NZILA**

**A DISSERTATION SUBMITTED TO THE UNIVERSITY OF ZAMBIA  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF MASTER OF ARTS (HISTORY).**

Date:

20<sup>th</sup> June, 1986

**THE UNIVERSITY OF ZAMBIA**

**LUSAKA**

**1987**

This dissertation of IVEN MWEETWA NZILA is approved as fulfilling part of the requirements for the Award of  
I, Iven Mweetwa Nzila.....

hereby declare that this dissertation is original and has not previously been submitted for any degree at this or any other University.

SIGNATURE OF EXAMINERS

DATE

1. [Signature] ..... 7/10/87  
2. [Signature] ..... 7/10/87  
3. [Signature] ..... 7th Oct 87

4. signed: [Signature] .....  
5. Date: 30<sup>th</sup> June, 1986 ..... 14.4.87

DEDICATION

This work is dedicated to the following persons:-

Kusankapande and Rebecca Mooya my parents who never  
This dissertation of IVEN MWEETWA NZILA is approved as  
Foundation education,  
fulfilling part of the requirements for the Award of  
My brothers and sisters who kept urging me on through  
The Master of Arts Degree in History at the University  
this should be an inspiration to scale heights beyond  
of Zambia. and bring greater pride to the clan.

SIGNATURE OF EXAMINERS

DATE

1.	<i>[Signature]</i>	7/10/87
2.	<i>[Signature]</i>	7/10/87
3.	<i>Balau Nyeko</i>	7th October 1987
4.		
5.	<i>[Signature]</i>	14.4.87.

DEDICATION

This work is dedicated to the following persons:-

Musekapande and Rabecca Mooya my parents who never tired from saving their meagre earnings for my foundation education,

My brothers and sisters who kept urging me on through moral and material support. My children for whom this should be an inspiration to scale heights beyond the azure and bring greater pride to the clan.

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*Iven Mweetwa Nzila*  
IVEN MWEETWA NZILA

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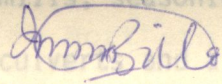
ABSTRACT

The operations of the Zambezi Sawmills (ZSM) were a new phenomenon. They enhanced the transformation of the pre-existing modes of production, particularly in southern Barotseland. The company's initial aim

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To try and attain the above aims the company, in the years 1910-68, built a huge infrastructure comprising sawpits, mills, seasoning kilns, workshops, roads, bridges and a railway line from Livingstone to Katamba.

  
IVEN MWEETWA NZILA

1986  
were transferred from Livingstone to Sesheke forests and centred at Mulobezi. There were several branch lines from Katamba and Mulobezi to as far south as Masese near Sesheke. It was only through such structures that forest exploitation could be carried out. This infrastructure necessitated the siphoning of cheap labour from the indigenous social formations, thereby alienating hundreds of would-be peasant producers from the land and turning them into

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develop into a proletariat.

The operations of the Zambezi Sawmills (ZSM) were a new phenomenon in Barotseland. They enhanced the transformation of the pre-existing modes of production, particularly in southern Barotseland. The company's initial aim was to supply railway sleepers, parquet and furniture to the market of southern Africa. In time the company added mining sleepers, doors and frames, veneer and leather to its range of products.

To try and attain the above aims the company, in the years 1910-68, built a huge infrastructure comprising sawpits, mills, seasoning kilns, workshops, roads, bridges and culverts and a railway line from Livingstone to Kataba via Mulobezi. Towards the end of the 1920s its main operations were transferred from Livingstone to Sesheke forests and centred at Mulobezi. There were several branch lines from Kataba and Mulobezi to as far south as Masese near Sesheke. It was only through such structures that forest exploitation could be carried out. This infrastructure necessitated the siphoning of cheap labour from the indigenous social formations, thereby alienating hundreds of would-be peasant producers from the land and turning them into

'reluctant' wage earners. The working conditions at the mills were such that the labourers could never develop into a proletariat.

It may, of course, be argued in favour of the company that it opened up southern Barotseland to 'civilization' and constructed its own lines of transport starting with oxen and donkeys, via traction engines and wooden railways to standard gauge railways. By the 1950s ZSM had the longest privately owned railroad in the world and had become the second largest employer of labour in the territory in addition to being the oldest manufacturing industry in Northern Rhodesia.

We further argue that the company's chief market was outside Northern Rhodesia. South Africa was actually its chief client whither went the bulk of its sleepers and parquet. The company's funds were mainly from settler families.

We have endeavoured to present our material chronologically and have divided the discussion into three main chapters plus a conclusion.

In Chapter One we try to examine the Barotse pre-colonial economy and the position of the Paramount Chief.

Chapter Two studies the origins and early development of the company in Crown Lands and Native Reserves forests

of the Livingstone District. In Chapter Three we discuss the company's operations in southern Barotse-land. The forests here are referred to as Yeta's Forests or Mushitu-wa-Mulena. Logging here was centred at Mulobezi and started in the early 1930s. In 1948 the company was reorganized as Zambezi Sawmills (1948). Our study goes up to 1968. Chapter Four concludes by outlining the impact of company operations on the local community. The entire study concludes that the company benefitted quite greatly from its operations although we were unable to measure with precision its profits owing to lack of readily available statistics. Since nationalization the company has been known as Zambezi Sawmills (1968).

## PREFACE

The study has four major objectives. First, we want to examine the operations, the terms of contract or forest concessions on which the Company operated, the working conditions of its workers and the general impact of the industry on the local community and its economy. Secondly, the study intends to inquire into the relations or linkages that existed between the ZSM, the Coppermines and the Railways. This is with a view to finding out whether developments in one sector led to corresponding structural developments in the other, and vice-versa. Thirdly, we want to try to find out why international capital was not as interested in investing in the ZSM as it was in mining and Railroad transport. Finally, the study examines the relationship between state and company policies vis-a-vis the forests with a view to determining whether there was any conflict between the company's desire to maximize profits and the state's concern for conservation and regeneration of the forests.

During the years 1910 and the late 1920s the Company was logging in the Crown Lands or Native Reserves and thus paid royalty to the state. In the early 1930s its operations were transferred to Southern Barotseland and, henceforth, all royalties were paid to the Barotse Native Treasury.

This study was prompted by lack of sufficient literature on Zambia's economic history. It is now ten years since Andrew Roberts rightly observed that 'it is astonishing that there is still no detailed economic history of a country that has been of major importance to the

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industrialized world for the past half a century or so'.<sup>1</sup> The views expressed in this dissertation and the conclusion arrived at, while they may reflect those of older scholars R.E. Baldwin, J.A. Hellen and A. Young<sup>2</sup> are among the few scholars who have written on the economic history of Zambia though none of them has studied the ZSM in detail. But what is perhaps still strange is that it is economists rather than historians who have shown greater interest in filling up the gap. But the entire study became possible only through the assistance received from many individuals and institutions. Among the many who assisted in one way or another, we would like to particularly thank the following: The Zambian Government through the Directorate of Manpower Development and Training for affording me financial assistance to cover the expenses throughout the duration of the programme; my supervisor, Professor Martin H.Y. Kaniki has so far undertaken a study of this company and its contribution to national development. The company is classified in colonial reports as NR's oldest industry - older than the mining complex - but it never attained the importance the Mines attained. By the 1940s it had become the second largest employer of labour in the country after the Mines. It is, therefore, hoped that this study will stimulate further research, not only of ZSM, but also of the role of forestry in the Zambian national economy as a whole. I should not forget to mention my mentor and long time colleague Dr A C S Mushingeh of UNZA for his untiring desire to see me through. In numerous

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I thank also members of the History Department at UNZA in 1984-85: Staff at NAZ and UNZA Library. The list is the many who assisted in one way or another, we would like to particularly thank the following: The Zambian Government through the Directorate of Manpower Development and Training for affording me financial assistance to cover the expenses throughout the duration of the

periods of absence. My children Iven and Agatha Mooya never understood why I had to live away from them and for his invaluable academic guidance. The ZSBS Operations "suffer" thus. But even in their ignorance they assisted Manager in Livingstone, Mr Zulu and the ZSM Site Manager in Mulobezi, Mr Sikazwe made my stay in Mulobezi and company forced me to work harder at the expense of my social excellence. Guest House. Mr Kelly Mweemba and his wife of ZSM in

Mulobezi gave me the much needed company in a foreign environment. Mr Joseph Jambo, Deputy Director of NMC

allowed me access to a number of privately held files on ZSM Railways. I should not forget to mention my mentor and long time colleague Dr A C S Mushingeh of UNZA for his untiring desire to see me through. In numerous

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17. SR = Southern Rhodesia (now Zimbabwe)	
18. SSC = Sharpe, Stewart and Company	
19. ZGA = Zambia Geographical Association	
20. ZSM = Zambezi Sawmills	
21. ZSMR = Zambezi Sawmills Railways	

ABBREVIATIONS USED IN THE TEXT

1. BFF = Barotse Forest Fund
2. BNGE = Barotse Native Governmentcies
3. BNT = Barotse Native Treasury
4. BMRR = Beira-Mashonaland-Rhodesia Railway
5. BSAC = British South Africa Company (f).
6. CGR (s./=) = Cape Government Railwayency. After
7. CSAR = Central South African Railways
8. IMR(K) = Imperial Military Railway
9. NER = North Eastern Rhodesia
10. NWR = North Western Rhodesia
11. NR = Northern Rhodesia (now Zambia)
12. NRC = Neilson, Reid and Company
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14. RR = Rhodesia Railways
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19. ZGA = Zambia Geographical Association
20. ZSM = Zambezi Sawmills
21. ZSMR = Zambezi Sawmills Railways

Here is a CONVERSION TABLE

A Note on Currency and Possible Equivalencies

<u>Imperial British Currency</u>	<u>Zambian Equivalency</u>
----------------------------------	----------------------------

Throughout the colonial period and right up to January 1968, Zambia was using the Imperial British Pound (£), shilling (s./-) and pence (d) for her currency. After 1968, the young republic changed to the present Kwacha (K) and Ngwee (N).

In this dissertation we have as much as possible endeavoured to use Kwacha and Ngwee for all wages and prices. The figures so used are mere conversions on the basis of the 1968 valuta of £1 = K2.00 as shown below. In our research we noted that all the figures were quoted in £-s-d, but these are no longer comprehensible to the Zambian reader.

Here is a rough guide.

Imperial British Currency			Zambian Equivalency	
12d = 1 shilling (1/-)				
20/- = £1				
£	s	d	K	N
-	-	1	-	1
-	-	6	-	5
-	1	0	-	10
-	5	0	-	50
-	10	0	1	00
-	15	0	1	50
1	0	0	2	00
2	10	0	5	00
5	0	0	10	00
7	10	6	15	05
10	0	0	20	00

International boundary

Barotseland

District

Zambezi Sawmills Railway

Areas of 1900 Reserve outside Barotseland

1900 Reserve

1909 Extension of Reserve



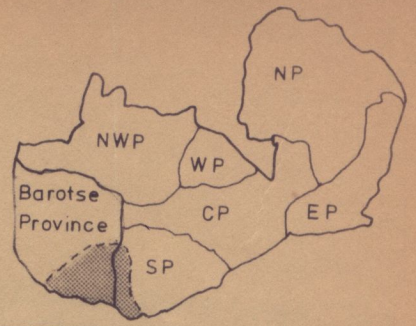
Non-Reserve area within Barotseland



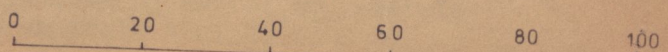
Private Excision 1941

MAP 1

ZAMBIA AND STUDY AREA



- International boundary
- - - Barotseland " "
- - - District " "
- + Zambezi Sawmills Railway
- [Grid pattern] Areas of 1900 Reserve outside Barotseland
- [Vertical lines] 1900 Reserve
- [Horizontal lines] 1909 Extension of Reserve
- [Dotted pattern] Non-Reserve area within Barotseland
- [Dotted pattern] Balovale Excision 1941



## CHAPTER ONE

### INTRODUCTION: A SURVEY OF THE PRE-COLONIAL BAROTSE ECONOMY

Barotseland<sup>1</sup> as shown on Map I was a vast expanse of territory with six lilalo (Districts: singular - silalo) and a host of ethnic groups and/or dialects. The centre of this territory has always been the strip of land along the Zambezi River between Kalabo in the North and Senanga in the South. This belt of land, which forms the lifeline of the Barotse people is locally known as Bulozi.

The Kaoma and Sesheke lilalo formed part of the zone called mushitu (= Forest) while the Bulozi belt was also known as libala (= Plain). Generally speaking, the lilalo boundaries

remained fluid for a long time. This also goes to explain why the present study area of Mulobezi had at various times belonged to Livingstone and Sesheke districts. But since the early 1970s it has been part of Sesheke.

Barotseland is not a highly watered area in terms of rainfall. It normally receives rainfall in the range of 110cm in the north and 70cm in the semi-arid Southern districts. Mulobezi normally receives between 75-90cm annual rainfall. Here in

(Ndonggo), maize (mbonyi), and 'kaffir' corn\* (makonga) in

---

\* Kaffir corn is now better known as sorghum. 'Kaffir' was the word commonly used by whites to refer to Africans especially in South Africa.

scattered village gardens. In addition to these crops, the Mulobezi, 163km northwest of Livingstone, grow the Mutemwa forests, a dry deciduous bush reminiscent of the Kalahari sands. The most dominant species of the Mutemwa forests are the Mukusi, Mukwa, or Mulombe and Mwangula trees. This Mukusi Forest Region as it is generally known, borders the Machili-Sesheke Plains and stretches right up to the western banks of the Zambezi below Sioma. These forests are found on fertile scarps and ridges of sand characterised by a large population of people living close to them. It is these forests which have since the second decade of this century continued to supply the bulk of the timber to the Province's sawmilling industry. These forests have some of the world's best timber trees growing naturally.

But apart from the Mukusi Region, and the already mentioned Barotse Plain, Barotseland has three other ecosystems. In

summary form these are the Central Loose Sands, the Western Plains Region, and the Upland Sand Region.<sup>2</sup>

Mulobezi is inhabited by the Toka and Leya to the east, the Subiya to the south-east, the Totela to the north-west and Mashasha/Nkoya to the north under chief Momba. These surrounding peoples grow a variety of crops including groundnuts

(Ndongo), maize (mbonyi), and 'kaffir' corn\* (makonga) in

\* Kaffir corn is now better known as sorghum. 'Kaffir' was the word commonly used by whites to refer to Africans especially in South Africa.

scattered village gardens. In addition to these crops, the Totela and Subiya also grow bulrush millet (mauza) and they would then grow maize in the same garden in the fourth year of tilling that plot. The plot would then be left to fallow for three to four years. Millet (lukesha) was, however, the staple food in the Mukusi Forests. The people here practised rotational cultivation. To this diet was added a variety of cucurbits such as cucumbers (lungwatanga), water melons (mahapu), edible gourds (malaka), mottled pumpkins (namundalangwe) and the common pumpkins (mapusi). Game meat was plentiful, so were wild fruits which provide a valuable addition to the monotonous starch diet of most Barotse people and an essential food to the poor and old who cannot have large gardens.<sup>3</sup>

#### FORESTS IN THE LOCAL ECONOMY

Since most of the Mulobezi people depended for their livelihood on 'bush cultivation', there was great need to understand and maintain the fertility of the woodland sands. This fertility depended on a short period of cultivation, followed by a long phase of fallow to allow the woody undergrowths to spring up and regenerate the soils. This necessarily called for a great

Some Luvale, Luchazi and Lunda craftsmen who had come into need to maintain a proper equilibrium with nature. contact with and possession of such European tools as planes and chisels started carpentry businesses. They made better chairs and tables for sale. As we show later, these timbers were not indiscriminately cut. There were checks. When known the value of their timber resources. They made numerous "native crafts" or curios which made good merchandise were made to pay royalty to the Paramount Chief on each tree in local trade between the mushitu and the libala people as well as tribute to the Litunga. The Kwangwa, Totela and Nkoya made and sold Mukwa and Mukusi canoes to the Lozi fishermen in the libala. Depending on size and quality, the prices of these "banana boats" ranged from 50 Ngwee to K2.00.<sup>4</sup> These craftsmen also made paddles, hafts of hoes and axes and stamping poles and sold them for 5 Ngwee. Further, the indigenous people used these timbers in the construction of huts and houses. It is not quite clear to us what system was used in this trade before the modern money system came in. Most probably, however, they used barter whereby different commodities from libala were exchanged for those from mushitu. It seems as soon as whites came, money replaced the barter system. <sup>6</sup> It urged the Barotse Native Government to place further restrictions on the cutting of the more

Some Luvale, Luchazi and Lunda craftsmen who had come into contact with and possession of such European tools as planes and chisels started carpentry businesses. They made better chairs and tables for sale. As we show later, these timbers were not indiscriminately cut. There were checks. When Europeans came and sought permission to use the timber, they were made to pay royalty to the Paramount Chief on each tree cut. Individual whites who cut Mukwa or Mukusi had to pay K1.50N per tree, although the Zambezi Sawmills (ZSM) paid lump sums either as a fixed percentage of net sales or K1,500 per annum. For a very long time only missionaries were allowed to obtain timber free so long they got it for a community service. In the 1940s this arrangement became an issue of great controversy and had to be revoked.<sup>5</sup>

These trees were not only important as sources of income to the local people. They were also valuable as sources of medicine. The people discovered that the tannin and an amino acid called baikiaian from Mukusi, if properly mixed as a decoction, made a very potent medicine for the treatment of venereal diseases such as syphillis (manansa); it could also be made into a fortifying tonic.<sup>6</sup>

MUSHITU-WA-MULENA OR YETA'S FORESTS

The importance which the Barotse attached to their forests is evidenced by their declaration of important forests as "the chief's forests." Severe restrictions were placed on the cutting and/or unwarranted use of the valuable trees. The trees so protected were timber and fruit trees as given in Appendix A.

The 1900 Agreement between Litunga and BSAC clearly showed that although the former was willing to "sell away" part of his land in the Livingstone and Kalomo Districts, he, nevertheless, wished to retain control of vast expanses of the Mukusi Forests including those trees suitable for canoes. Pursuant to this view, and desiring to put it into effect, he banned the cutting and felling of all fruit trees in 1912 and expressed the desire to create forest reserves for a specific purpose in all the territory's districts.

In 1924, just before the BSAC surrendered Northern Rhodesia to the Colonial Office, it urged the Barotse Native Government to place further restrictions on the cutting of the more

Although the sizes of these reserves are not known, the numbers are, at least quite impressive. They indicate, as Pim points out, that the Lozi had on their own initiative produced an excellent schedule protecting precious trees, having realized the dangers of deforestation in all parts of the territory. Since the idea of conservation of forests was not new in Barotseland, all that the colonial government did was to improve upon the already existing practice: the Lozi scheme was inefficient and its execution quite defective. The Assistant Conservator of Forests was thus:

Kalabo	29
Lealui-Mongu	32
Senanga	23
Sesheke-Mulobezi	50

Under this new development, it became a very serious offence for any one to fell, cut, work or remove one of the protected trees from Mushitu wa Mulena without mulena's (= chief's) permission. The fine for this felony was 'K4.00 or two beasts/cows.<sup>8</sup> In more remote areas, however, even indunas could grant this permission to applicants.

A more serious phase of deforestation, however, followed the arrival of the Mawiko people from the west in the 1920s. These people made large bush gardens thereby destroying vast tracts of forests.

THE LITUNGA AND HIS INCOME Since there is no published  
Although the sizes of these reserves are not known, the numbers  
The Litunga was generally regarded by his subjects as an  
are, at least quite impressive. They indicate, as Pim  
'omnipotent' figure; a custodian of the land and all that it  
points out, that the Lozi had on their own initiative produced  
contained. According to Hermitte, the Paramount Chief  
an excellent schedule protecting precious trees, having  
shrewdly used his position as owner of Barotseland's natural  
realized the dangers of deforestation in all parts of the  
resources and political power ... to become personally  
territory.<sup>9</sup> Since the idea of conservation of forests was  
wealthy to an extent unimaginable before 1940. He was able  
not new in Barotseland, all that the colonial govern-  
to acquire this amount of wealth because he had a monopoly  
ment did was to improve upon the already existing practice:  
in cattle sales, fish sales from his numerous ponds all over  
the Lozi scheme was inefficient and its execution quite  
Bulozi, possession of slaves and entitlement to tribute in cash  
defective. The Assistant Conservator of Forests was  
or kind. This tribute was either food, crafts, and/or labour.  
emphasizing the same point in 1941 when he observed that  
He also had an annual income of K1,600 from the 1900 Agreement.  
the weakness of the old system [Lozi  
Later in the 1930s he became entitled  
method of conservation] lay not in  
to temporarily administer the kingdom. To  
as it was left to the discretion  
of everybody...[checks and punish-  
ments were inadequate].<sup>10</sup>  
all this from ZSM as retainer and K1.50  
from each tree felled by other European concessionaires such

Many people took advantage of the weaknesses of this well-  
intended scheme so that at any one stage there was a fair  
degree of deforestation going on. The Litunga tried to  
encourage people to plant trees to cushion the impact of  
the annual floods which caused great devastation and famines.  
This was more so in the Lealui-Mongu silalo. A more serious  
phase of deforestation, however, followed the arrival of the  
Mawiko people from the west in the 1920s. These people made  
large bush gardens thereby destroying vast tracts of forests.

The data on which this study is based have been gathered

THE LITUNGA AND HIS INCOME

The Litunga was generally regarded by his subjects as an 'omnipotent' figure; a custodian of the land and all that it contained. According to Hermitte, the Paramount Chief shrewdly used his position as owner of Barotseland's natural resources and political power '... to become personally wealthy to an extent unimaginable before 1940.'<sup>11</sup> He was able to acquire this amount of wealth because he had a monopoly in cattle sales, fish sales from his numerous ponds all over Bulozi, possession of slaves and entitlement to tribute in cash or kind. This tribute was either food, crafts, and/or labour. He also had an annual income of K1,600 from the 1900 Agreement. Later in 1906 when slavery was abolished, he became entitled to ten percent of all tax collected in the kingdom. To all this add the K1,500 he got from ZSM as retainer and K1.50 from each tree felled by other European concessionaires such as Arthur Harrington and Hale in Senanga.

The Litunga is further said to have run a chain of "hotels" selling fish along labour routes to Mulobezi and beyond. He also exported dry fish to Livingstone. Unfortunately, these "hotels" did not last long owing to high operational costs; the venture was consequently abandoned.

The data on which this study is based have been gathered from a number of places. Since there is no published material on the topic, archival sources were the chief source of the data. Numerous files were consulted in the National Archives of Zambia (NAZ) on the history of the company, its development, operations and relationship with the Northern Rhodesia Government (NRG) and the Lozi Paramount Chief. Apart from the primary documents, field-work was undertaken in Mulobezi, Sesheke and Livingstone in November and December, 1985. During that period we talked to a number of both active and retired employees for inside knowledge of the company, particularly personal experiences of workers. Whilst in Mulobezi, we were able to look at the company's Employment Cards, a few samples of which we intend depositing with the NAZ for use by other researchers. We have also appended photocopies of the same in this dissertation.

The ZSM management in Livingstone strongly believes there are more company documents locked away in one of the strong rooms at the former company's premises. At the time of our research, the buildings were being rented by the National Monuments Commission (NMC), but reportedly owned by Redwood.

These are in the University of Zambia Library. Of these, perhaps the most invaluable were

Investments, the last private shareholders in the ZSM. If this be true, the documents, once released to the public, should prove very valuable as an additional source of data. At the present time, NAZ remains the richest source of documented data, very little is available in Mulobezi and nothing in Sesheke. Otherwise, there are no relevant books dealing with the ZSM though it is mentioned in passing in The NMC have, in their custody, a few files on the company in general, but more especially on its locomotive engines. The Commission is actually opening a Railway Museum and its collection of locomotives and wagons includes a sizeable proportion of those once used by ZSM. We must add that these locomotives are among the oldest sets of metals in Africa; today they are sturdy witnesses to the excellence of British workmanship and design. The Commission has additional notes obtained through correspondence with Geoffrey Calvert, formerly a Government Forester at Machili. He studied the Company's railway fleet. Makerere University College even opened a Forest Department. In Nigeria, forestry We also consulted numerous Colonial Reports, Annual Reports of the Departments of Agriculture and Forestry and Blue Books written by appointed Commissions. These are in the University of Zambia Library. Of these, perhaps the most invaluable were

by 1958.<sup>13</sup> In Zambia, this has never been the case yet the country is endowed with valuable timber. Swaziland alone has some 1,205 square kilometres of miombo forests. In the whole country only ZSM, Minna Samills in Botswana and the Copperbelt mills are of significance, but to date no one has studied these at all hence this attempt and related enterprises. Otherwise, there are no relevant books dealing with the ZSM though it is mentioned in passing in the doctoral theses of Carolyn Baylies (1978), Hermitte (1973), and Kanduza (1982).

Finally, we must point out that our interest to study this topic partly stemmed from our sketch survey of forestry policies in other countries. A look at East Africa, Nigeria, India, Canada, USA and Australia to mention, but a few revealed that forestry in these countries forms an important aspect of national economies. In East Africa, for instance, there were by 1960 several hundred enterprises engaged wholly or partly in sawmilling. Makerere University College even opened a Forest Department.<sup>12</sup> In Nigeria, forestry contributed 6.1% to GDP and 12.4% of total national exports

by 1958.<sup>13</sup> In Zambia, this has never been the case yet the country is endowed with valuable timber. Barotseland alone has some 1,295 square kilometres of mutemwa Forests. In the whole country only ZSM, Minga Sawmills in Petauke and the Copperbelt mills are of significance, but to date no one has studied these at all, hence this attempt.

1. J.D. Martin, Report of Forestry in Barotseland, Lusaka: Government Printer, 1941), Paragraphs 11 a-e, pp2-4.
2. J.D. Martin, Report of Forestry, parag.9, p.2.
3. C.G. Trapnell and J.N. Clothier, The Soils, Vegetation and Agricultural Systems of Northwestern Rhodesia, (Lusaka: Government Printer, 1957), Parag.203, pp.51-2.
4. Martin, Report of Forestry, Parags. 91-5, p.15.
5. A.E.G. Storrs, Know Your Trees: Some of the Common Trees Found in Zambia, (Ndola: Forest Department, 1979), p.106.
6. Martin, Report of Forestry, Parag. 24, p.5.
7. Trapnell and Clothier, The Soils, Parag. 206, p.53
8. A.W. Pim (Chairman), Report of the Commission Appointed to Enquire into the Financial And Economic Position of Northern Rhodesia, colonial 145, (London: HMSO, 1938), Parag. 450, p.241. [Hereinafter, Pim Report].
9. Martin, Report of Forestry, Parag. 27, p.6.

NOTES

1. In this dissertation, 'Barotseland' will be used interchangeably with Western Province and Bulobi unless otherwise specified. But for the study area we shall try to add 'Southern' or simply call it Mulobezi. See also E.L. Hermitte, 'An Economic History of Barotseland, 1900-1960' (Ph.D Thesis, Northwestern University, 1973), Chapter One.
2. For an elaborate discussion of these zones, see J.D. Martin, Report of Forestry in Barotseland, Lusaka: Government Printer, 1941), Paragraphs 11 a-e, pp2-4.
3. Martin, Report of Forestry, parag.9, p.2.
4. C.G. Trapnell and J.N. Clothier, The Soils, Vegetation and Agricultural Systems of Northwestern Rhodesia, (Lusaka: Government Printer, 1957), Parag.203, pp.51-2.
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6. A.E.G. Storrs, Know Your Trees: Some of the Common Trees Found in Zambia, (Ndola: Forest Department, 1979), p.106.
7. Martin, Report of Forestry, Parag. 24, p.5.
8. Trapnell and Clothier, The Soils, Parag. 206, p.53
9. A.W. Pim (Chairman), Report of the Commission Appointed to Enquire into the Financial And Economic Position of Northern Rhodesia, colonial 145, (London: HMSO, 1938), Parag. 450, p.241. [Hereinafter, Pim Report].
10. Martin, Report of Forestry, Parag. 27, p.6.

NOTES (cont'd)

11. Hermitte, 'An Economic History', p.336.
12. United Nations Organization, Economic and Social Council, Economic Commission for Africa, Africa Timber Trends and Prospects. Preliminary Report on Western Africa and Equatorial East Africa (prepared in Collaboration with FAO, 14 January, 1964, p. 169.
13. S Kolaide Adeyaju, Forestry and The Nigerian Economy (Ibadab: Ibadab University, 1975), pp. 7-10; see also "The Economic Importance of Nigerian Wood-based Industries", in The Nigerian Journal of Economic and Social Studies, 11, 3, (November, 1969) pp.309-26. I have been unable so far to get data showing forestries' contribution to GDP in the Zambian Economy!

to start a sawmilling venture using resources that had already been located west of Livingstone.

## CHAPTER TWO

### THE ORIGINS OF THE ZAMBEZI SAWMILLS, 1910-35

A step in this direction had already been taken in 1910. There are no proper records on the ZSM in the years prior to when Messrs Troumbas and Jacobs, Ltd.<sup>3</sup> started a small sawmill west of the Livingstone Railway Station. This mill to establish who actually formed the Company.<sup>1</sup> Its origins was initially designed to turn out just about 100 sleepers however, are to be found in Livingstone, the oldest municipality in Zambia. Historically, Livingstone remains a town each day. This was not big business but somehow the Company trudged on. In 1915 a Southern Rhodesian firm dealing of some commercial and industrial importance. mainly in agricultural implements and building materials bought

some shares in the sawmills venture and subsequently It was here that the first sawmilling industry started. But became a partner. This was Messrs A.F. Philip and Co. prior to this, there had been some small-scale forest exploitation (Bulawayo). Later this company opened a local office in Livingstone.

Enterprising colonists used to obtain permission from the British South African Company (BSAC) to cut timber for sale. It seems this partnership made it possible for the sawmilling. However, more systematic exploitation only assumed notable proportions sometime during World War One. This time several sawmills were started with a view to supply timber for furniture Native Reserve, some 48km west of Livingstone. Because of the distance from town, a new bush mill was erected here in 1916. to residents and sleepers to the mines and railway systems of At this point a man called W.E. Tongue, a businessman in Southern Africa.<sup>2</sup> The war situation had made external Southern Rhodesia, became interested in the sawmill business. supplies unreliable and erratic. It was in response to the He too, bought shares and became one of the directors. As a growing local demand, therefore, that some residents decided

result of these three mergers, the firm's share capital increased to K60,000<sup>4</sup>. The firm then registered in Salisbury (Harare) as Zambesi Sawmills, Ltd (ZSM). Its first

General Manager was Charles Sidney Knight. A step in this direction had already been taken in 1910 when Messrs Troumbas and Jacobs, Ltd.<sup>3</sup> started a small sawmill west of the Livingstone Railway Station. This mill was initially designed to turn out just about 100 sleepers each day. This was not big business but somehow the Company trudged on. In 1915 a Southern Rhodesian firm dealing mainly in agricultural implements and building materials bought some shares in the sawmills venture and subsequently became a partner. This was Messrs A.F. Philip and Co.

(Bulawayo). Later this company opened a local office in Livingstone. Since 1911-12 it continued operating on the basis of ambiguous, but renewable concessions. Very little is known about these concessions except that they had been made in the Southern Rhodesian Native Reserves of Mapanda, because of the distance from town, a new bush mill was erected here in 1916. At this point a man called W.E. Tongue, a businessman in Southern Rhodesia, became interested in the sawmill business. He too, bought shares and became one of the directors. As a

result of these three mergers, the firm's share capital increased to K60,000<sup>4</sup>. The firm then registered in Salisbury (Harare) as Zambezi Sawmills, Ltd (ZSM). Its first General Manager was Charles Sidney Knight. use of oxen and donkeys to haul the logs in relay stages to the Zambezi

EXPANSION: THE PRE-RAILWAY ERA hauled in ten-ton bogie and rail

trucks ("Makukobani").<sup>6</sup> Since the company then did not have its own herd of cattle it had to hire from others. An Afrikaner farmer, Ignatius "Topsy" Rademeyer, who later established a farm in Mulobezi, hired out his oxen to the company. He owned some 2000 oxen and worked with ox-transport and the two Rhodesias<sup>5</sup>.  
in hauling the Mukusi logs from the forests to collection

centres. He managed the spans of 20 oxen that pulled the bogie trucks along the wooden rails to the mill in Livingstone. For a long time the company remained a limited joint stock venture. Since 1911-12 it continued operating on the basis of ambiguous, but renewable concessions. Very little is known about these original concessions except that they had changed spans every ten miles [16km] and the only trouble been granted by the BSAC and covered, at various times, was that lions often came after the oxen.  
seven Crown Land Estates and Native Reserves of Mapanda,

Koma, Kazungula, Katombora, Malanda and Siburu and, later Bombwe. We observe here that the ZSM preceded mining on the Copperbelt by over a decade though it never attained the importance and/or might which the Copperbelt came to assume. inefficient and costly due to heavy losses of logs, the company started using barges to take the timber to regatta sidings for final railing to Livingstone. But this mode was

Shortly after the erection of the Mapanda bushmill in 1916 the company's first problem was the transportation of the logs to the Livingstone mill. Various modes of transport were employed in succession. The first was the use of oxen and donkeys to haul the logs in relay stages to the Zambezi River. The logs were loaded and hauled in ten-ton bogie trucks ("Makukubani").<sup>6</sup> Since the company then did not have its own herd of cattle it had to hire from others. An Afrikaner farmer, Ignatius "Topsy" Rademeyer, who later established a farm in Mulobezi, hired out his oxen to the company. He owned some 2000 oxen and worked with ox-transport in hauling the Mukusi logs from the forests to collection centres. He managed the spans of 20 oxen that pulled the bogie trucks along the wooden rails to the mill in Livingstone. The price of one ox then was between K10 and K12. "Topsy", as he was popularly known, later reminisced: 'We changed spans every ten miles [16km] and the only trouble was that lions often came after the oxen.'<sup>7</sup> Consequently, the company was unable to pay its general manager. He refused payment by truck but his work and to accept shares in the 7th in the water on 10 In this way, C. S. Knight became director of a native to regatta company. More than twenty years later was to become director of a native to regatta sidings for final railing to Livingstone. But this mode was

equally poor. The company noted that 'owing to various rapids  
enroute and portages entailed, this method of transport...  
proved not only costly but also impractical [sic].<sup>8</sup>

After abandoning both Makukubani which had wooden wheels and ran  
on wooden rails, and barges, the company bought traction engines  
to even ascertain the exact performance of the company in the  
whose bogies also ran on wooden rails and the large driving  
wheels outside the tracks.<sup>9</sup> Meanwhile logging camps continued

moving further away from the headquarters in Livingstone.  
As they moved deeper in the forests, a cheaper, better and more  
efficient form of transport became necessary.

Very little is known about men like Troumbas, Jacobs,  
A.F. Philip, W.E. Tongue, the Knights, Foster and Young to  
constant transfers of logging camps further away from the main  
mill taxed the meagre company resources so much that by 1919-20  
the company was on the brink of bankruptcy. Consequently, the  
company was unable to pay its general manager. He refused  
payment by truck but '... was, however, prepared to continue  
his work and to accept shares in the ZSM in lieu of salary.<sup>10</sup>

In this way, C.S. Knight became one of the directors of the  
company. More than twenty years later, his son S.J. Knight  
was to become director of a rationalized ZSM (1948), Ltd.

\* To know them would require a separate study.

We do not know the exact position of the company employees at that time in view of the company's financial hardships. But we can only intimate there could have been a lot of redundancies and severe drops in wages. Records are non-existent as pointed out earlier. It is, therefore, difficult to even ascertain the exact performance of the company in the years before 1924.

Owing to the paucity of relevant data it is equally difficult to establish some conclusions about the histories of the men who formed this and other companies in Northern Rhodesia. Very little is known about men like Troumbas, Jacobs, A.F. Philip, W.E. Tongue, the Knights, Foster and Young to mention but a few.\* Their actual citizenship is equally difficult to confirm. What is probably true is that most of them were initially resident in either South Africa or Southern Rhodesia (SA; SR) and so entered Northern Rhodesia from the south. Carolyn Baylies confirms our viewpoint here as she pointed out that

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\* To know them would require a separate study.

Inv... though the nationality of shareholders was over- But  
whelmingly British [particularly after 1948]  
the boa and did represent some inflow of British capital. Iolited  
timber accumulated locally and, in a number of cases,  
expens: British citizenship was acquired ... for  
security. 11

limited reserves. Besides, the nature of the Mukusi tree

does not encourage investments from limited resources. The

The seriousness of the transport factor forced the company to  
replace its wooden tramlines with steel railways. The company  
could no longer ignore this issue in spite of its near  
'bankruptcy'. It was faced with a choice between total

closure and continuity in one way or another. Already the  
inefficiency of the transport system had caused shortages  
of timber, forcing the company in 1920 to draw a lot of its

requirements from SR., under the agency of the Susman

Brothers, Ltd. This temporary shortage of timber in the  
early 1920s had been caused partly by dwindling supplies  
from the no-longer economical Mapanda mill. The mill had  
been experiencing critical water shortages and unjustifiably  
high transport costs. It was these 'nightmares' which forced  
the company to finally dismantle the bushmill and add it to  
the one in Livingstone. This addition led to increased prod-  
uction capacity, thereby necessitating heavier investments.

Investments by all logic had to start with transport. But the board of directors did not know the amount of unexploited timber beyond Siburu. They did not intend building an expensive railway line with a large capital expenditure on limited reserves. Besides, the nature of the Mukusi tree does not encourage investments from limited resources. The tree takes 100-150 years to mature enough for sleepers, while an exploited area would need 60-70 years regeneration period for the tender Mukusi to mature. This means a forest that was extensively exploited in 1920 would not be returned to until about 1980-1990.<sup>12</sup> The company feared that the working life of the enterprise was very limited.

Before embarking on this project the company sought and secured permission to undertake reconnaissance exercises to establish amount of available stands further north. These exercises revealed there was a lot of valuable Mukusi that had hardly been tampered with. This indicated the enterprise still had a long future, hence the need for a proper railway. In 1924-25 work started to lay down a 1.07m gauge railway to Malanda. This highly ambitious traffic made railroads very bulky. This in turn made the railways' steel sleepers inappropriate as they gave in to the weight. The only obvious replacement was wooden sleepers. The best and most durable wooden sleepers are those of Mukusi

and the only supplier of these at the time was ZSM. By project was partly financed by the Rhodesia Railways which advanced a loan of K20,000. Rhodesia Railways (RR) was owned and run by BSAC; through this investment, therefore, the BSAC acquired 33% of ZSM shares.<sup>13</sup>

The first rails the company bought for its new line were products of 19th century technology. The company became the fourth owners of these rails on buying them. They had previously been discarded thrice. They had:

... been laid originally between Cape Town and Wellington between 1859-1861; they had later been taken up and used in Bechuanaland, and, still later, as branch lines in SR. Wherever they had been used, these rails - weighing 99kg a foot - were discarded because increased traffic made heavier metals necessary.<sup>14</sup>

It was a stroke of good foresight on the part of Rhodesia Railways to acquire so many shares in ZSM. In funding part of the company railway they were merely responding to an economic situation. Traffic between SR and Belgian Congo was quickly increasing and there were indications that the same would be the case with the Copperbelt. This increased traffic made railroads very bulky. This in turn made the railways' steel sleepers inappropriate as they gave in to the weight. The only obvious replacement was wooden sleepers. The best and most durable wooden sleepers are those of Mukusi

and the only supplier of these at the time was ZSM. By being a major shareholder in the company, Rhodesia Railways sat on the board of directors. This would go a long way in ensuring preferential treatment in both provision and pricing of sleepers. The company itself was assured of an expanded market as a result of this change of policy by railways from using steel to using wooden sleepers. The other obvious advantage of wooden sleepers is that they do not easily get damaged in case of derailment. So, the company's new market now included RR, BMR, SAR and Mines in the Rhodesias and South Africa.

We argue at this point, in the light of the fore-going developments, that expansion in the mining industries of the region somehow stimulated, albeit temporarily, forward linkages in the operations of ZSM. To start with, the company's railway system extended and reached Siburu in 1928, Bombwe in 1930 and Mulobezi and Machili by 1931. Covering a total distance of 163km from Livingstone, this line became the longest privately owned railway in the world.<sup>15</sup> In Table 1 below we have endeavoured to show how this railway expansion positively affected timber production in the years between 1925 and 1931.

this industry or even to protect the forests. We would like  
out here that forest protection is not just a techni-  
We shall have occasion to say more about the ZSM's "strange"  
railway line at a later stage.

#### YETA'S FORESTS CONCESSION

Forest protection is, therefore, an essential component in  
Northern Rhodesia's colonial history was marked by four main  
economic phases: 1911-29 was a period of two stages of  
growth; 1929-32 was the depression while the period after  
that showed steady recovery, though with minor fluctuations.  
But during these stages colonial state policy remained one  
of laissez-faire, although there seemed to have been some  
constant infusion of international capital into some pillars  
of the economy such as mining, railways and commercial  
agriculture. This type of laissez-faire simply meant that  
capital had to lead the way into new ventures and then the  
state would follow. Of course the bias still remained in  
favour of certain sectors. But perhaps the main role of the  
state was to protect local industries and to provide  
circumstances conducive to investment and expansion.

The state was certainly aware of the value of forestry to  
both the indigenous populations and the sectors mentioned  
above, but still it did very little before 1929 to promote

steps taken to either salvage ZSM from its endemic financial hardships or to ensure protection and regeneration of the forests where the company operations were. Consequently the ZSM was "abandoned" to private family capital for funding - with the exception of RR shares until 1948. Otherwise the company remained a neglected colonial child even after the establishment of the Forest Branch under the Ministry of Agriculture in 1929.

this industry or even to protect the forests. We would like to point out here that forest protection is not just a technical problem. It has important social dimensions, considering the number of rural communities who live off these forests and find their principal resources there from: food, energy/fuel, employment and additional sources of revenue. Forest protection is, therefore, an essential component in the pursuit of food security.

However, this marginal concern by the state, towards the operations of the company did not deter the latter from forging ahead in its expansion programme. We pointed out earlier that the company had, since 1912, been operating on loosely-worded concessions, the first of which expired in June, 1917. We have also indicated very little is known

of these original... constitute the raw materials which, under scientific management, can meet almost indefinitely many of the territory's timber requirements. 16

... ceases the company paid a royalty of 3 Ngwee (3N) per sleeper which was equivalent to 1.5N per cubic metre. This royalty was to be shared between the BSAC and the state for all land sales in North-Western Rhodesia (NWR).

In spite of such expressions of genuine concern, the state per se still dragged its feet. There were no immediate

steps taken to either salvage ZSM from its endemic financial hardships or to ensure protection and regeneration of the forests where the company operations were. Consequently the ZSM was "abandoned" to private family capital for funding - with the exception of RR shares until 1948.

Otherwise the company remained a neglected colonial child even after the establishment of the Forest Branch under the Ministry of Agriculture in 1929.

However, this marginal concern by the state, towards the operations of the company did not deter the latter from forging ahead in its expansion programme. We pointed out earlier that the company had, since 1912, been operating on loosely-worded concessions, the first of which expired in June, 1917. We have also indicated very little is known of these original licences as none of them is found in the files.<sup>17</sup> What is, however, known is that under these leases the company paid a royalty of 3 Ngwee (3N) per sleeper which was equivalent to 1.5N per cubic metre. This royalty was to be shared between the BSAC and the state for all land sales in North-Western Rhodesia (NWR).

Under this loose agreement between BSAC and State, the latter was officially responsible for ensuring forest regeneration and protection. But in reality the state remained reluctant and even as late as the end of the 1930s Sir Alan Pim observed that:

There was no agency to ensure that [regeneration] conditions were carried out and, notwithstanding reports of great damage by fire, the government appear to have accepted the contention... by the sawmills in 1922 that their operations had beneficial effect on the forests.<sup>18</sup>

With such a lax government attitude the company operations continued unchecked. Vast tracts of land were robbed of their valuable timber without any replenishment. So extensive and destructive was this extraction that Pim noted in 1937 that Mapanda estate would never at any rate be exploitable again!

Meanwhile, ZSM had already established that there were vast resources of valuable timber further north. But the problem was that these stands 'further north' were outside Crown Lands. They were in a Native Territory and formed part of the

concession because, he said, it had a number of contradictory clauses and legal technicalities. It remained invalid.

Without such permission the ZSM could not legally enter Mushitu wa Mulena or Yeta's Forests. Any logging there needed the Lozi Paramount Chief's fiat. Geographically, of course, these forests were outside the perimeters of Barotseland. But the Litunga held certain historically recognized rights over them. These rights were enshrined in the 1900 Agreement between the Litunga and the BSAC.

Negotiations were entered into between the BSAC, the Litunga and ZSM for a logging concession in the Mushitu wa Mulena. In August 1919 an agreement was reached, allowing the company to cut timber in the material forests for a period of 21 years. It was agreed that the Litunga would receive three-quarters of all royalties and rents and the remainder would go to the Company! It is not easy to understand why the Company accepted such an agreement. Perhaps it was because they were, again, not obliged to meet whatever expenses went to the cost of regeneration and fire protection. Furthermore, it was the Litunga and BNT who were to meet the salaries and allowances of the employees of the Forest Department.<sup>19</sup>

The Chief Secretary, however, refused to sanction this concession because, he said, it had a number of contradictory clauses and legal technicalities. It remained invalid.

Without such permission the ZSM could not legally enter the standard gauge railway using steam locomotives and the Machili-Mulobezi block of forests. Their renewed 1917 standard rolling stock. But the above method of calculating lease was nearing expiry and with the Chief Secretary's royalty led to wasteful exploitation and conversion since refusal to endorse the 1919 concession mentioned above, trees could be felled and rejected without the company:

... and on account of it being ultra vires, if, on the government refused to renew the [1917] lease to issue a further one, but Zambezi raw products Sawmills continued cutting on sufferance until 1926 when a Crown Lands Lease for that all felled 25 years in respect of land extending the width of 15 miles [24km] from Zambezi and 10 miles [16km] from Machili was granted to them. 20

The other weakness of the concession was the absence of ade-

This was Lease Number 27 of 1926. Under this lease the company rejected the proposed royalty of three Ngwee per sleeper on the first 20,324 sleepers and two Ngwee thereafter.

They proposed and were allowed to pay a flat rate of three percent on net sales. In other words, the

company was to pay royalty only on the timber actually cut up and sold. This royalty amounted to 0.72N per cube.

calculating royalty as the most unsatisfactory of all 'since

Lease Number 27 covered lands with valuable timbers and as

a result company output greatly increased. This increase

had been made possible, also partly, by the completion of

the standard gauge railway using steam locomotives and standard rolling stock. But the above method of calculating royalty led to wasteful exploitation and conversion since trees could be felled and rejected without the company incurring any liability to pay for such rejects. If, on the other hand, the company was made to pay for raw products they would naturally take great care to ensure that all felled logs were utilized as fully as possible.

The other weakness of the concession was the absence of adequate mechanism to check on all monthly and annual returns which the company submitted to the State; this made it difficult to certify that the correct amount of royalty was being paid. Of course, from the company point of view, this method was advantageous as it operated in their favour.

It was this state of affairs which the Assistant Conservator of Forests was objecting to when he described this mode of calculating royalty as the most unsatisfactory of all 'since royalty is paid without the slightest regard for the volume of timber cut or the rate of cutting.'<sup>21</sup>

During this same period and throughout the early 1930s the company, while paying a royalty of 3% on net sales, was selling its sleepers at the following prices: Mukusi between 40 Ngwee and 52 Ngwee, and Mukwa or Mulombe at K1.00. The royalty paid was, according to Clements, '... only a little more than one-fortieth of their selling price.'<sup>22</sup> The damage to forests was very great indeed.

Meanwhile, it would appear there were some clandestine moves by ZSM to try and secure another, broader, concession that would finally let the company into Barotseland, Yeta's Forests. It was probably the pressure from the company, coupled with the fear of getting "a raw deal" which forced the Litunga to grant the Power-of-Attorney under his seal and hand to the then Governor of NR, Sir Herbert Young. This power allowed the Governor to handle all timber concession hunters on Litunga's behalf.

Later in 1926 the then Director of ZSM, W.E. Tongue, still desirous of entering Machili-Mulobezi Forests, wrote to the government to find out:

concession expired, it would be granted a ten-year licence

If it is possible to open up negotiations with a view to obtaining permission to cut timber in Barotseland within the next few years when the sizeable timber from Crown Forests we are now cutting in will have been exhausted. 23(a)

In accepting this lump sum, it is quite certain the government The company was taking these measures because the area in question, as we indicated above, was a Native Territory. They were aware that their supplies at the time '... will only suffice to keep our Livingstone mill running at its present capacity for another 3 years or thereabout... otherwise an industry which is of some importance to the town and district may be lost to Livingstone. 23(b)

As we shall see later, the royalty was further reduced to After protracted negotiations through round table meetings and correspondence over the terms, royalty and operational boundaries, the Governor granted the company a three-year concession up to 30 April, 1929. This was Lease Number 35.

It allowed the ZSM to do everything it saw fit in preparation for logging. The company was obliged to pay K200 p.a. to the Litunga as a retainer. This money, like the other royalties, went into the coffers of the BNT. If, however, the company started actual logging before the three-year

concession expired, it would be granted a ten-year licence and would have to pay a lump sum to the BNT annually. The company accepted these terms and offered to pay K1,500 p.a. to the Litunga. NRG accepted.

In accepting this lump sum, it is quite certain the government was unaware of the magnitude of the company's operations. This was yet another change by the company which had since 1925 been paying a flat three per cent, on net sales or .72 Ngwee per hoppus foot (= 0.0362455 cubic metre). It had previously rejected the proposed three Ngwee per sleeper or one-and-half Ngwee per cubic metre. These changes show how determined the company was to secure very low royalties. As we shall see later, the royalty was further reduced to .42 Ngwee per cubic metre in the 1937 lease! This was a desire to cut down on costs of production and increase profits.

What is perhaps most interesting is how the company arrived at the royalty of K1,500 p.a. There were two other saw-milling companies in Barotseland at the time, one in Balovale (now Zambezi), a Crown Land area, the other in

TABLE I

Senanga, part of Native Territory. The Balovale mill being in Crown Land over which the Litunga held only titular

control, paid no royalty while the Senanga mill paid K1.50

per tree to the BNT on all timber cut for whatever purpose.

Since this mill was allowed an annual total of 200 trees, it paid K300 annually. Using the same rate, the ZSM offered its

annual royalty of K1,500 on the assumption that it would cut

only 1,000 trees each year. This offer was, as we pointed out

earlier, accepted by the State without any question! No

measures were taken to ensure that the company did not cut

more than the said number. It soon became apparent that

the company's '...actual daily average of cut trees was

about 700 or so...'<sup>24</sup> As Table I shows, between June 1925

and January 1932, nearly 2.0 million cubic metres

[1 hoppus foot = 1.28 cubic feet = 0.0362455m<sup>3</sup>] of timber

were cut and sold by the company.

NOTES: \* These figures are conversions and rounded off to nearest whole number. Original figures are in hoppus feet.

SOURCE: Adapted from, Martin, 'The Mukusi Forests', 72

TABLE I

ZAMBEZI SAWMILLS TIMBER OUTPUT FOR SELECTED YEARS

YEAR	VOLUME SOLD (CUBIC METRES)*	ROYALTY DUE AT PROPOSED 0.72N PER CU. MT.	
JUN. 1925 - JUN. 1926	24,796	K 178	N 53
JUL. 1926 - JUN. 1927	22,089	159	04
JUL. 1927 - JUN. 1928	24,574	176	93
JUL. 1928 - JUN. 1929	33,636	242	17
JUL. 1929 - JUN. 1930	36,011	259	27
JUN. 1930 - DEC. 1930	17,142	123	42
JAN. 1931 - JAN. 1932	36,970	266	18
TOTAL	195,218	1405	54

NOTES \* These figures are conversions and rounded off to nearest whole number. Original figures are in hoppus feet.

SOURCE: Adapted from, Martin, 'The Mukusi Forests', 72

it could and did outproduce its only major rival, Arthur Harrington ("Matepeta") in Senanga. This man, born in 1873, had come to Barotseland in 1907. Discussion of his company is outside the scope of this study and so nothing (more) need be said here.

We have shown how the annual payment of K1,500 was arrived at by the company. The company had also rejected the 0.72 Ngwee per cubic metre royalty. It was reported in 1938 that the rate of 3% on net sales '... was absurdly inadequate and appeared to have been based on a wrong estimate of the quantity of timber available in the forests [Yeta's].'<sup>25</sup> Our calculations in Table I above indicate that the company robbed the Barotse people of their due royalty. By January 1932, from a total of 195,218 cubic metres of timber sold, the company should have paid total royalties amounting to K2,928.27 at the rejected one-and-half Ngwee per cube rate plus the K10,500 accumulated annual payments. But instead, only K1,4054 and K10,500 were paid. A total of K1,522.73 was lost to BNT. The company further made 'good' business by deliberately keeping the timber/sleeper market under-supplied so as to keep prices high. Of course on several occasions the company was incapable of satisfying demand but it still retained the monopoly. This was because it could and did outproduce its only major rival, Arthur Harrington ("Matepeta") in Senanga. This man, born in 1873, had come to Barotseland in 1907. Discussion of his company is outside the scope of this study and so nothing (more) need be said here.

It should be pointed out that since the company was not obliged to guarantee afforestation, it spent very little money on this exercise except as regards fire protection. Its insistence that its operations did not amount to deforestation '... but merely removing the mature trees, possibly 5-10% of the total stand, and leaving the younger trees to mature in perhaps another 20-40 years...' <sup>26</sup> seemed convincing enough to blind NRG to the reality of the operations. The reported daily average cut of 700 trees further robbed the BNT of a potential royalty of K1,050 at the rate paid by Matepeta on a daily basis! It would appear the company justified this primitive accumulation by the lack of either external, government or other assistance to the company in terms of funding. The Mines and Railways on the other hand received developmental funds, though not from the government, but from foreign sources such as the World Bank, USA through the Economic Corporate Administration, a government agency and also from London. <sup>27</sup> But even then, the amount of damage the company wrought to southern Barotseland's forests was in some cases irreparable.

THE NATURE OF SOME EARLY COMPANIES

We have already intimated that the policy of the NR government was in the tradition of laissez-faire. This means industrial development was left in the hands of private enterprises. No attempt was made to stimulate even 'artificial' encouragement to the private entrepreneur to set up his industrial base in NR. And, as Alistair Young argues; 'Tariffs were intended for revenue, not for protection.'<sup>28</sup> In other words, NR industries were not in any way protected against stiff competition from SR and SA companies.

It was not until 1921 that a pioneer step was taken in the right direction. The government passed a Companies Ordinance Act. One of its aims was to regulate the entry and operations of foreign based companies. The Act stipulated that all companies comprising 20 or more people, and having as their motive the acquisition of surplus, must be registered locally. The companies did not object, as long as this did not adversely affect their business. In any case, the Act had a few flaws. It '... provided for companies registered abroad to operate locally as foreign companies provided they were so registered [sic]'<sup>29</sup>

SOURCE: M.J. Busschan, Report on The Development of Secondary Industries in Northern Rhodesia (Lusaka: Government Printer, 1955) Appendix XII, pp.87f.

TABLE 2

COMPANIES REGISTERED UNDER PROVISION OF COMPANIES ORDINANCE ACT, 1921

REGISTRATION NUMBER	NAME OF COMPANY	DATE REGISTERED	REGISTERED OFFICE	AMOUNT OF SHARE CAPITAL	NATURE OF BUSINESS
4	LIVINGSTONE DAIRY CO. LTD	15 JAN. 1923	LIVINGSTONE	K 8000	DAIRY AND CREAMERY
6	MOPANI ESTATES LTD.	8 JUN. 1923	"	100000	RANCHING, FARMING AND STORE-KEEPING
11	R.F. SUTHERLAND LTD.	27 SEPT. 1924	"	20000	GENERAL CARRIERS AND MERCHANTS
35	THE NATIVE LABOUR ASSOCIATION LTD.	11 MAR. 1930	KITWE	20000	RECRUITING NATIVE LABOUR FOR MEMBERS
37	NORTHERN CATERERS LTD	17 JULY 1930	"	200000	HOTELIERS AND GENERAL MERCHANTS. (SUSMAN BROS.)
77	J. JACOBS, LTD.	21 FEB. 1935	LIVINGSTONE	8000	AFRICAN LABOUR RECRUITERS AND GENERAL MERCHANTS
128	RHODESIA WOOD INDUSTRIES, LTD.	31 MAY 1940	"	10000	PLYWOOD AND TIMBER MANUFACTURERS (ZSM SUBSIDIARY).
132	BAROTSE TRADING CO. LTD	7 AUG. 1940	"	10000	GENERAL MERCHANTS
137	SUSMAN BROS. LTD.	14 OCT. 1940	"	150000	RANCHERS, CATTLE DEALERS ETC.

SOURCE:

W.J. Busschan, Report on The Development of Secondary Industries in Northern Rhodesia (Lusaka: Government Printer, 1935) Appendix XII, pp.87f.

This provision made it unnecessary for ZSM to register locally although they shifted their headquarters to Livingstone later in 1924. Table 2 shows companies registered under the provision of the 1921 Act.

The pattern was somewhat different with regard to manufacturing firms as these were quite few. Almost all of them served the mines in one way or another. Perhaps it was for this reason that there was a strong link in terms of ultimate national origin which more or less coincided with the source of mining and railway capital.

We note from Table 2 that among the companies registered under the material Act were two local labour recruiting agencies.

This clearly shows the ZSM did not enjoy the services of any labour agency yet this did not pose any problems as regards labour supply. The fact that ZSM was established in or near Barotseland was to a large extent advantageous as this region was regarded as a labour reservoir.<sup>30</sup> In fact the state had, either by commission or omission created a precedent: the country was informally divided into three economic zones, viz. the mining belt; the agricultural belt and labour reserves to which Barotseland belonged.

Even as early as before World War One, a number of factors - both artificial and natural-combined to force the Barotse people (Lozi) to go and look for employment outside their villages. Cattle sales had fallen due to diseases, fishing was not a commercial enterprise, farming was purely at subsistence level and so wage labour was the only sure source of tax money. Among the factors that attract people in their choice of employment is proximity to employment centre and since ZSM was about the nearest major employer, many flocked there.<sup>31</sup> Able-bodied Lozi men involuntarily found themselves vacillating between two statuses, from peasant to wage earners and then back to the former in the last stages of their useful lives. Palmer and Parsons define peasants and proletarians [or labourers in a loose sense] as

Small agricultural farmers who intend to make a living by selling part of their crops or herds, while proletarians are wage-earners in the hire of an employee.<sup>32</sup>

The conditions described in the above definition were exactly those most Lozi men found themselves in. The fact that there were always hundreds or thousands of them looking for employment with the company made it convenient for the company to keep wages low. The general wage for all labourers throughout

the 1920s and 1930s was 50 Ngwee per ticket. The workers' contracts were known as 'Ticket to Ticket'. Field research in Mulobezi revealed that the ticket for fellers ("bamangamu") meant, initially, six trees a day. This was later raised to ten. The trees, whatever the size, were felled by axes or adzes.

YEARS	E M P L O Y E E S	
	WHITES	AFRICANS
1922	30	700 <sup>a</sup>
1929-30	100	3,300
1930-31	80	3,000
1931-32	60	3,000
1932	61	2,933
1933	60	1,600

The subject of company employees and their conditions of service will be discussed at length in the next chapter. Suffice here to give a table showing number of employees for selected years to 1933. This covers the period during which the company was confined to Crown Lands. After that year, its operations moved into Yeta's Forests following the opening of Mulobezi. Then the company's capital doubled to K120,000 as its operations assumed a much larger scale than they had been hitherto.<sup>33</sup>

SOURCES (a) Livingstone Mail, 21 December, 1922  
 J.D. Martin, "The Mukusi (B.Plurijuga harms) Forests of Northern Rhodesia," Agriculture Department, Second Annual Bulletin (1932):74

NOTES  
TABLE 3

ZSM EMPLOYEES IN CROWN FORESTS

YEAR	E M P L O Y E E S	
	WHITES	AFRICANS
1922	30	700 <sup>a</sup>
1929-30	100	3,300
1930-31	80	3,000
1931-32	60	3,000
1932	61	2,933
1933	60	1,600

SOURCES (a) Livingstone Mail, 21 December, 1922

J.D. Martin, "The Mukusi (B.Plurijuga harms) Forests of Northern Rhodesia,"

Agriculture Department, Second Annual Bulletin (1932):74

The Livingstone Mail, 21 December 1922.

Dick Hobson, 'The Oldest Railway Engines', in Northern Rhodesia Journal 4 (1961), 439.

'Oldest Industry', 8

Carolyn Baylies, 'The State and Class Formation in Zambia' (Ph.D Thesis, University of Wisconsin, 1973), p.198 (mimeo).

NOTES(cont'd)

NOTES

12. Hobson, 'The Oldest Railway Engines', 489
13. Pim Report, Parag. 451, p. 242; NAZ ZA/1/9/3 Resume of
1. J.B. Clements, 'Report on Mukushi Forests of Northern Rhodesia: Special Report A',  
The Minutes of Proceedings at the First and Second Meetings of the Native Development Board, with Appendices.  
(Lusaka: Government Printer, 1938), 55
14. Dahn, 'The S'
15. 'Oldest Indus'
16. D. Stevenson, 'Some Important Native Timber'
2. J.D. Martin, 'The Mukusi (Baikiaea plurijuga harms) Forests of Northern Rhodesia', in the Department of Agriculture, Second Annual Bulletin, 1932, 74.
17. NAZ. ZA/1/9/3
3. There are other sources who give different names for the founders of the company. L. Mihalyi gives Messrs Knight, Foster and Tongue in 1916; an Indeco publication gives Messrs Night[sic] and Young; see Mihalyi, 'Timber Production in Zambia', ZGA Magazine, 21, (January 1973), 10; 'Zambezi Sawmills (1968), Ltd: Historical Background', Indeco publications, FSS/LS/1981.
- 19.
- 20.
4. 'Northern Rhodesia's Oldest Industry', Shell in Industry (Salisbury, 1960), 8
5. Martin, 'The Mukusi Forests', 74.
6. This term was used in a personal communication by John Mwitumwa, Mulobezi, 26/11/1985. Mwitumwa started working for ZSM in 1941 and was still in employment at the time of our interview.
- 24.
7. John Dahn, 'The Strangest Railway in the World', in Horizon (August 1964), 20
26. NAZ, SEC 1/947, W.E. Tongue to Chief Secretary,
8. The Livingstone Mail, 21 December 1922.
9. Dick Hobson, 'The Oldest Railway Engines', in Northern Rhodesia Journal 4 (1961), 489. Growth;
10. 'Oldest Industry', 8
11. Carolyn Baylies, 'The State and Class Formation in Zambia' (Ph.D Thesis, University of Wisconsin, 1973), p.198 (mimeo).

NOTES(cont'd)

12. Hobson, 'The Oldest Railway Engines', 489
13. Pim Report, Parag. 451, p.242; NAZ, ZA/1/9/3 Resume of The History of ZSM.
14. Dahn, 'The Strangest Railway', 20
15. 'Oldest Industry', 8
16. D. Stevenson, 'Some Important Native Timbers', First Annual Bulletin of the Department of Agriculture, 1931, 43.
17. NAZ, ZA/1/9/3 Resume of the History of ZSM.
18. Pim Report, Parag. 452, p.242.
19. The Position was only partly redressed in 1935 and finally in 1939. See Department of Agriculture, Annual Reports for the years 1935 and 1939.
20. NAZ, ZA/1/9/3 Resume of the History of ZSM.
21. NAZ, SEC1/947 J.D. Martin, Assistant Conservator of Forests to Chief Secretary, 22 October, 1934.
22. Clements, 'Report on Mukusi Forests', 62
23. (a) and (b). NAZ, SEC 1/947 W.E. Tongue, ZSM Director to Chief Secretary, 22 October, 1926.
24. NAZ, ZA/1/9/3 Resume of the History of the ZSM.
25. Pim Report, Parag. 452, p.243.
26. NAZ, SEC 1/947, W.E. Tongue to Chief Secretary, 22 October, 1926.
27. Baylies, 'The State and Class Formation', p.277;  
R.E. Baldwin, Economic Development and Export Growth; A Study of Northern Rhodesia, 1920-1960  
(Berkeley: University of California Press, 1966), p.175.

NOTES (cont'd)

28. A. Young, Industrial Diversification in Zambia (New York: Praeger Publishers, Inc. 1973), p.18
29. Baylies, 'The State and Class Formation', p.244.
30. See for instance, W. Allan, The African Husbandman (London: Oliver and Boyd, 1965); Passim; and Hermitte, 'An Economic History', passim.
31. For a full discussion of pull factors of labour, see J.C. Mitchell, 'Factors Motivating Migration From Rural Areas', in R.J. Apthorpe (ed.), Present Inter-relations in Central African Rural and Urban Life. (Lusaka: Rhodes-Livingstone Institute, 1958), pp.12ff and E.J. Berg, 'Backward Sloping Labour Supply Functions in Dual Economies - The African Case', in I. Wallerstein (ed.), Social Change: The Colonial Situation (London: John Wiley and Sons, 1961), pp.117ff.
32. R. Palmer and N. Parsons (eds.) 'Introduction: Historical Background', in Palmer and Parsons (eds.), Roots of Rural Poverty in Central and Southern Africa (London: Heinemann, 1977), p.2.
33. Pim Report, Paragraph 451, p.242.

### CHAPTER THREE

these timbers the company made railway sleepers, parquet flooring, crossings, bridge and mining timbers, flush, panel and batten doors and builders' joinery. The company was also the

#### ZAMBEZI SAWMILLS IN MULOBEZI, 1936-68

'sole contractor to Northern Rhodesian and South African governments, Rhodesia Railways, copper and gold mining companies.'

#### A. PERIOD OF CONTINUITY AND CHANGE, 1936-48

In the preceding chapter we indicated that the ZSM entered Yeta's Forests and started logging in the early 1930s. By 1936 Mulobezi had been established as the new headquarters.<sup>1</sup> With a number of timber houses already erected, the site became a permanent settlement and a hive of activity within a few years.

In this chapter we take a closer look at the nature of the company's operations in Mushitu-wa-Mulena and the various

stages of change through rationalization. We also discuss the workers' conditions of service. In the second section of the chapter we develop the discussion right up to the time the company was nationalized in 1968.

From the time the company started its operations in Mulobezi, that is, from 1936 onwards, its headed papers bore in bold type the following information: Employer number 4475010/21/03. As sawmillers and timber merchants, it dealt mainly in

Baikiaea plurijuga harms and Pterocarpus angolensis. From

these timbers the company made railway sleepers, parquet flooring, crossings, bridge and mining timbers, flush, panel and batten doors and builders' joinery. The company was also the 'sole contractor to Northern Rhodesian and South African governments, Rhodesia Railways, copper and goldmining companies.'

To ease sales services, maintain efficiency and keep good business relations with its clients, the company established subsidiaries and agents: In SA the subsidiary was Zambezi Flooring, (Pty), Ltd., while F.W. Mackenzie Ltd. was the agent. Both were based in Johannesburg. Vigers Stevens and Adams, Ltd. were the London associates. In Northern Rhodesia, John Pierson, Ltd. of Ndola was the Copperbelt agent while Rhodesia Wood Industries of Livingstone was the subsidiary.

Because of the amount of investment the company had, by 1930, pumped into Mushitu-wa-Mulena, it felt it had a very strong case in its favour to secure a very favourable concession from the Barotse Native Authority. As far back as 1928 the company had been incurring a very heavy capital expenditure in the construction of communications and other infrastructure in readiness for logging in the area. Its 1926 short-term concession (had) obliged the company to make roads, and bridges, exploitation together with such water and grazing rights as are necessary for the purpose. The company expressed its ability

to develop the whole forest belt which covered some 1,295 square kilometres. The company further emphasized erect and construct dwelling houses, offices, sawpits and machinery in Yeta's Forests. On account of these investments the company did not want any rivals in Barotseland.

The most immediate cause of the company's worries was the presence in Barotseland of another sawmilling company - Messrs Arthur Harrington and Hale, Ltd. in Senanga west. It dealt - like the ZSM itself - in Pterocarpus timbers making all kinds of household furniture, punts and boats. The ZSM got even more alarmed, later in 1933, when it learnt that there were negotiations between the Lozi Paramount Chief and Messrs Jehiel Jacobs of Livingstone. Messrs Jacobs wanted a timber concession in the area between Machili and Lui Rivers. This is a very vast expanse of land between Mulobezi in the east and Senanga in the west. It enveloped the entire belt which the ZSM also wanted. Desirous of cutting off or forest-alling these and any other future negotiations for timber concessions and any possible competition, the company directors in October 1933 wrote to the Chief Secretary asking for exclusive timber prospecting rights in Barotseland. The company wanted to be granted, '... in return for an annual payment, the right of exploitation together with such water and grazing rights as are necessary for the purpose.'<sup>2</sup> The company expressed its ability

to develop the whole forest belt which covered some 1,295 square kilometres.<sup>3</sup> The company further emphasized:

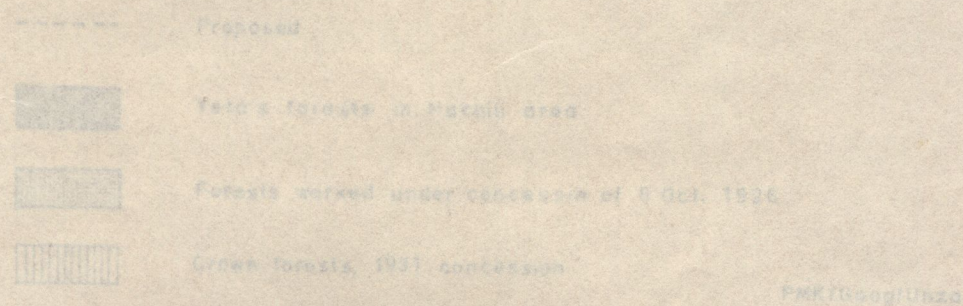
We need hardly stress the importance of the Native Timber Industry [sic] in the economics of Northern Rhodesia and rely upon your [Government's] assistance in this effort on our part to ensure its future development.<sup>4</sup>

Initially, the ZSM wanted the Litunga's fiat to make a thorough investigation of the potential timbers in the same area that Messrs Jacobs wanted. This was with a view to extending their area of operation against any third party being given timber concessions in the forests. The Litunga found himself in a situation Lobengula was in in the 1880s. Not quite confident of 'handling' this new brand of concession-seekers, he asked the NRG to act on his behalf and conclude whatever agreements and terms it deemed fit. The Litunga, however, did not blindly surrender his powers like that. He insisted that any concessionaire to whom the Chief Secretary or His Excellency the Governor granted a lease '... in any contract agreement... there shall be reserved to me the right at anytime to fell trees in the said strip of country for the purpose of making canoes for my own use.'<sup>5</sup>

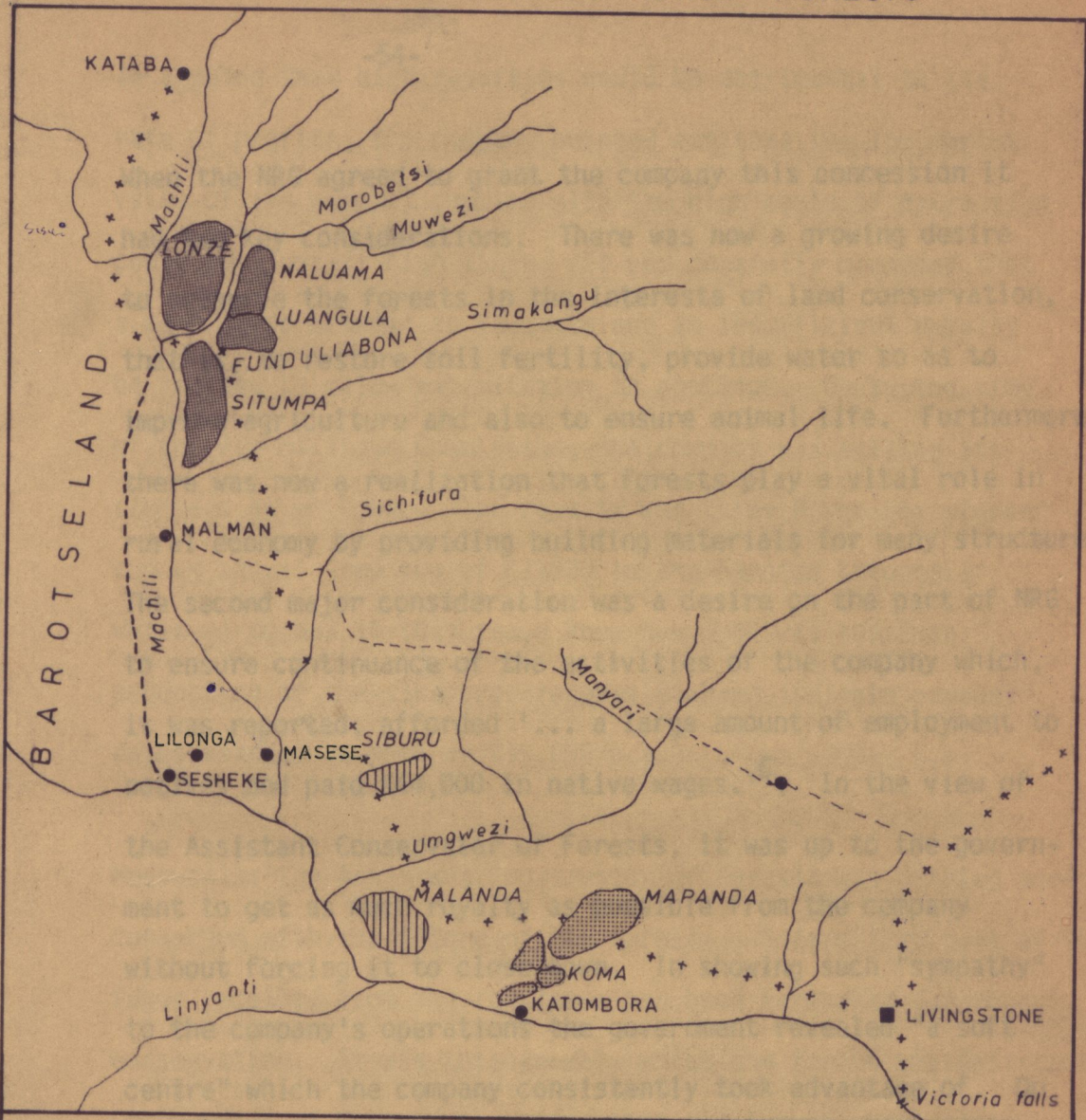
MAP SHOWING MACHILI-MULOBEZI MUKUSI FORESTS

In 1934 the Mulobezi mill started its maiden production as a sleeper mill. But due to the still erratic supplies of logs during the time the company was moving from Crown Lands to Barotseland, it started getting part of its timber logs from SR through the agency of Susman Brothers . The logs were ferried across the Zambezi near Katombora by pontoon. Unfortunately, this supply ended later in 1934 when the pontoon sank. This, consequently, forced the company to rely, for all its supplies, on forests in Machili River Concession. The forests covered under this concession as shown in Map 2 included Situmpa, covering 97.2 square kilometres, and exploited in 1933-40; Lonze, covering some 103.6 square kilometres and exploited between 1937-39; Luangula (31.1sq.km.); and Naluama (36.3 sq.km.). Although these forests lay outside Barotseland, they nevertheless formed part of Yeta's Forests. By the terms of Lease 27 of 1926 through which the company held a 25-year lease over Crown Lands west of Livingstone, it also had an option of a 20-year lease over these forests and had to pay a royalty to the Litunga.

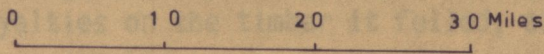
BAROTSELAND



MAP SHOWING MACHILI - MULOBEZI MUKUSI FORESTS



Source: NAZ SEC 1/947 Timber forest concession [n.d.]



- Boundary of crown forest
- + + + + Trolley/Railine
- - - - Proposed
- Yeta's forests in Machili area
- ▨ Forests worked under concessin of 6 Oct. 1926
- ▤ Crown forests, 1931. concession

In arguing that high royalties would be detrimental to its rate of profits, the company pointed out that the low market value of its product coupled with the high costs of extraction had two key considerations. There was now a growing desire to preserve the forests in the interests of land conservation, a compromise between an adequate and an insufficient royalty that is, to restore soil fertility, provide water so as to be reached to allow exploitation to continue. Up to the time of the Pim-Milligan Commission, the company was selling its sleepers at 52 Ngwee. The royalty was three Ngwee per sleeper rural economy by providing building materials for many structures. and an annual lump sum of K1,500 to the Barotse Litunga. The second major consideration was a desire on the part of NRG to ensure continuance of the activities of the company which, production of the sleepers, records at hand indicate company it was reported, afforded '... a large amount of employment to sales reached as much as K15,000 p.a.'<sup>6</sup>. In the view of

the Assistant Conservator of Forests, it was up to the government to get as much royalty as possible from the company concerned with the future of the forests. Before 1936 none of the funds received from the royalties had been earmarked for forest conservation. It was this anomaly which now forced the Assistant centre" which the company consistently took advantage of. On many occasions the company pressed hard its demand to secure provide a check on company operations. This would ensure very low royalties on the timber it felled, always threaten- preservation of the forests as a perpetual asset not only of the Lozi but of the country as a whole. He observed that earlier royalty.

concessions had been carelessly drafted and so allowed ZSM to cut, take and clear away all timber in the concession areas

In arguing that high royalties would be detrimental to its rate of profits, the company pointed out that the low market value of its product coupled with the high costs of extraction could not justify high taxes. It was generally proposed that a compromise between an adequate and an insufficient royalty be reached to allow exploitation to continue. Up to the time of the Pim-Milligan Commission, the company was selling its sleepers at 52 Ngwee. The royalty was three Ngwee per sleeper and an annual lump sum of K1,500 to the Barotse Litunga. While we do not at this stage know how much was spent on production of the sleepers, records at hand indicate company sales reached as much as K15,000 p.a.<sup>7</sup>

Meanwhile, the Assistant Conservator of Forests was getting more concerned with the future of the forests. Before 1936 none of the funds received from the royalties had been earmarked for forest conservation. It was this anomaly which now forced the Assistant Conservator of Forests to demand that all future concessions provide a check on company operations. This would ensure preservation of the forests as a perpetual asset not only of the Lozi but of the country as a whole. He observed that earlier concessions had been carelessly drafted and so allowed ZSM to cut, take and clear away all timber in the concession areas

without defining the size of trees to be cut, or any other logging regulations. If the licencees so desired, they could remove all tree growth from the area.<sup>8</sup>

It must be realized that the weaknesses mentioned above came about as a result of the absence of a strong forest department which would have looked into the issue. Although a forest branch had been established in 1929 under the Department of Agriculture, the colonial state even in 1938-39 still showed little or no direct interest in forestry. In fact during the depression the forest branch had either been abolished or allowed to go into oblivion due to shortage of staff and funds. In 1937 the Pim Commission strongly recommended that a forest branch be reconstituted as a separate and autonomous department in view of the important role it should play in both Barotse and national economy.

Nevertheless, the absence or weakness of the Forest Department did not deter the Director of Agriculture and the Assistant Conservator of Forests from demanding that the Baikiaea Forests be exploited with regard to their Silvicultural requirements. In fact, this led to a more determined call for the employment

8. W. C. S. 1/370. Forest Development Report by  
W. C. S. 1/370. Forest Development Report by  
W. C. S. 1/370. Forest Development Report by  
Annual Report for the Year 1939.

of an experienced European Forester to supervise company operations. There was also need for Forest Guards whose duties would include the carrying out of fire protection regulations.<sup>9</sup> It was not until after a decade that the government took a decisive step.

The BFF just mentioned was officially launched in 1936 following an advance from NFF to enable the urgently needed fire-protection exercise to take off. All royalties from 75M were to be paid into this Fund except the annual retainer of K1,500 which was to be paid to the Libungu for a year. Table A shows the BFF's income and expenditure in the first few years of its existence.

YEAR	REVENUE	ESTIMATES	EXPENDITURE
1936	K360	K2078 <sup>3</sup>	K1760
1937	K4,158	K1656	K1444
1938	K4,600	K1550	K2700
1941	K4644	-	K714

NOTES: + Included half salaries of European staff engaged in forest work up to 1939 after which there was a sharp drop in expenditure for some time.

+ January - April only

SOURCE: NAZ, SEC 1/970, Forest Development Report by J.B. Clement; Department of Agriculture, Annual Report for the Year 1938.

time. It was, however, agreed that part of this expense be debited to the BFF; Note that no royalty from Yeta's Forests went into government coffers.

The BFF just mentioned was officially launched in 1936 following an advance from NRG to enable the urgently needed fire-protection exercise to take off. All royalties from ZSM were to be paid into this Fund except the annual retainer of K1,500 which was to be paid to the Litunga for ten years. Table 4 shows the BFF's income and expenditure in the first few years of its existence.

TABLE 4

BFF INCOME AND EXPENDITURE,  
1936-38;1940-41.

YEAR	REVENUE	ESTIMATES	EXPENDITURE, ACTUAL +
1936	K360	K2078	K1760
1937	K4,158	K1656	K1444
1938	K3,116*	K1560	K2708
1940	K4,839	-	K674
1941	K4644	-	K714

NOTES + Included half salaries of European staff engaged in forest work up to 1939 after which there was a sharp drop in expenditure for some time.

\* January - April only

SOURCE: NAZ, SEC 1/970, Forest Development Report by J.B. Clement; Department of Agriculture, Annual Report for the Year 1938.

We have just mentioned the new ten-year concession the company won in 1936. We must now point out that when the final draft was presented to the company it raised sharp objections on the government-proposed royalties which it considered as 'too high and prohibitive'. The company further objected to one of the clauses which gave the Crown 'the right to calculate the royalty on standing timber, which royalty has to be paid before cutting, [this] we cannot agree to.'<sup>10a</sup>

The other reason why the company objected to the new royalty rate was that it would end up being forced to pass on increased overheads to the consumer. This would in turn make the company products more expensive than those of their

competitors. This, the company feared, would destroy its business. In a letter to the Chief Secretary, the company said:

We would like to remind you that our chief market is in the Union of South Africa and is likely to continue to be so in the future. There we have to meet competition of not only our rivals in South Africa, but also that of the Austrian hardwood importers.<sup>10b</sup>

The company's fears here were quite genuine. It usually exported about 80% of its total output of which half consisted of railway sleepers and about a quarter mining timbers. Of this volume, not less than two-thirds were exported to SA and RR.<sup>11</sup> (see Appendix E).

Although the ZSM concentrated on sleeper and parquet production, it also tried to diversify into one other line. It started preparing ground for its operations in this hitherto unexploited land, devoid of human habitation. Through these company efforts, the tentacles of 'western civilization' were stabbing deeper into the heartlands of these Baikiaea forests. Additional offices were opened at Machili, some 12 kilometres west of Mulobezi. Later the same year, 1936, the company reported it had cleared 587km of road in the concession area as shown below:

TABLE 5

ROAD DISTANCES CLEARED BY ZSM, 1936-37

Machili to Sesheke	=96km
Sesheke to Katima Mulilo and round the forests	=112km
Machili to Kataba	=112km
Machili to Cordon Forests (Kalomo District)	=35km
Miscellaneous Roads	=232km

building industry. There was also a corresponding improvement in the company's transport system and workers' conditions of service. In the chapter above we made brief reference to the company's railway system. Perhaps now we can return to it with a little more detail before we look at the workers.

Although the ZSM concentrated on sleeper and parquet production, it also tried to diversify into one other line. It turned part of its attention to the local tanning of hides and leather manufacture. The experiment was first attempted in 1929, but the results were not satisfactory owing to the high percentage of tannin in the bark of Mukusi. But the company seemed to have continued tanning hides and manufacturing leather on a non-commercial scale, more especially as from 1936. Some experimental footwear and other leather goods were manufactured. Unfortunately, available sources do not say

much about the progress of this undertaking as the data is too scanty and somewhat suspect. It is however, reported that the trials continued throughout the 1940s; in 1947 for instance, the company tanned 972 hides and disposed of 35,200kg of leather,<sup>12</sup> a drop from 10,659 hides and 58 tons of leather in 1946.

Meanwhile the main production line continued expanding owing to the mining boom in SA and SR, expansion in railways and building industry. There was also a corresponding improvement in the company's transport system and workers' conditions of service. In the chapter above we made brief reference to the company's railway system. Perhaps now we can return to it with a little more detail before we look at the workers.

ZSM RAILWAY SYSTEM

The first train the company bought arrived in their workshop in 1924. The rails were secondhand metals bought from SAR by RR and finally by ZSM from RR. On three occasions these rails had been discarded due to increased traffic. This was later to happen even on the ZSMR where they were replaced by 132kg rails between Mulobezi and Livingstone. These 99kg rails ended up on the Mulobezi-Kataba line in the 1950s. They still lie there to date.

From the start the railway was strictly (speaking) a logging tramway. It, therefore, had neither comfort nor speed. The line itself covered a distance of 163km from Livingstone to Mulobezi by end of the Second World War (WWII). Ten years later it had reached Kataba and so became the longest privately owned railway line in the world.<sup>13</sup> It naturally became the company's most important asset as well as the lifeline of its operations. Further, the railway provided the principal means of access into southern Barotseland for both people and goods.

The locals called this train as Sitima sa mangamu (timber train). It, nevertheless, carried passengers as a community service only because many of them have no other way of getting about in that part of the world.<sup>14</sup> Records at hand indicate that passenger services started in 1929 following the purchase of trains for the purpose the year before. This passenger train operated along the main line. Within a radius of 80km from Mulobezi into all directions the company laid down temporary tracks to bring in the logs to the mill. On these wagons passengers were carried at their own risk on top of the timber. The risks were indeed immense: passengers rolled down with the logs and either sustained fractures or were crushed to death or they were plucked off the slow-moving wagons by marauding lions or elephants.<sup>15</sup>

By 1941 this logging railway extended to as far afield as Lilonga, Mululwe, Namuzingu, Namena, Sisisi, Simatula, Simungoma and Masese near Sesheke. Masese became the company's southern sub-centre for sites within a 16km radius.

Company and NRG employees were entitled to free passage on these trains, but the rest of the passengers had to pay fares ranging from five to 65 Ngwee, depending on distance. By the mid-1950s the fare between Mulobezi and Livingstone was about K1.10.<sup>16</sup> We must here point out that by now the company had made slight improvements to its passenger services by adding one or two more coaches on the main line. But these coaches had neither seats nor inside lights. It appears neither the company nor the passengers themselves worried about these 'anomalies'. In fact, the passenger coaches on the train still do not have lights to this day! What is true, however, is that these trains became an incomparable asset to the commonalty in more ways than one. Quite apart from the transport and community services so provided, the Sitima sa Mangamu became a source of income to a broad section of the community through employment, trade and market centres. It now became possible for people to open shops and taverns and to transport cattle for sale to Livingstone. In addition, a number of settlements started along the line at such places as Makunka and Ngwezi. These settlements became trade centres as [Fig.1] shows. It is obvious therefore, that the success of these

forms of commerce was dependent on the ZSMR. And emphasiz-

one person pointed out:

of the South-Eastern  
[Barotseland]  
on the railway for  
the inhabitants of  
is the only  
transport to the  
the rest of

enger trains, one baggage van

shown in Table 6;

ON THE ZSMR BY 1938



Fig. 1 Brisk trade between train passengers and local vendors at Ngwezi, one of the settlement stations along ZSMR line.

CLASS	COACH NO.	SERVICE ENTRY	COST PRICE (K)
1st class	1800	1928	12,822
2nd class	2013	1930	10,426
3rd class	3004	1930	9256
4th class	4049	1932	7216
Baggage van	220	1938	8780
Locomotive	23 <sup>+</sup>	1928	6400

NOTES: + This became the first company locomotive to be equipped with an electric generator and headlight.

SOURCE: Personal Collections of Mr. Geoffrey Calvert, Formerly Forest Officer, Machili, now in Zimbabwe. Manuscript given to National Monuments Commission, Livingstone.

forms of commerce was dependent on the ZSMR. And emphasizing the importance of this railway, one person pointed out:

the fact that the company was privately owned we are inclined

to conclude ... most inhabitants of the South-Eastern part of Western Province [Barotseland]

are very much dependent on the railway for communication. For the inhabitants of

the area ... the railway is the only appropriate mode of transport to the

nearest towns and finally the rest of the country. 17

addition to the trains given in table 6, by the end of the

By 1938 the company had four passenger trains, one baggage van and one "electric" locomotive as shown in Table 6;

locomotive trains in the years 1966-70. All these trains were

99-kg metals whose

trains and relief forest main line trains. They were all 7th

TABLE 6  
PASSENGER SERVICE COACHES ON THE ZSMR BY 1938

CLASS	COACH NO.	SERVICE ENTRY DATE	COST PRICE (K)
1st class	1800	1928	12,822
2nd class	2013	1930	10,426
3rd class	3004	1930	9256
4th class	4049	1932	7216
Baggage van	220	1938	8780
Locomotive	23 <sup>+</sup>	1928	6400

NOTES: + This became the first company locomotive to be equipped with an electric generator and headlight.

SOURCE: Personal Collections of Mr. Geoffrey Calvert, formerly Forest Officer, Machili, now in Zimbabwe. Manuscript given to National Monuments Commission, Livingstone.

The company continued adding to its fleet of second-hand trains as its operations expanded to unprecedented levels. Considering the fact that the company was privately owned we are inclined to conclude that it was making very encouraging profits by looking at the number of trains it owned, the amount spent

SAR ZSMR NUMBER	RAILWAY + NUMBER	CLASS	AND WORKS	BUILT BY ZSM	BOUGHT
855	CGR 300	7A	DIIBS & CO.	1896	1966
856	CGR 323	7A	DIIBS & CO.	1896	1966
857	CGR 301	7A	DIIBS & CO.	1896	1966
858	CGR 302	7A	DIIBS & CO.	1896	1966
859	CGR 303	7A	DIIBS & CO.	1896	1966
860	CGR 304	7A	DIIBS & CO.	1896	1966
861	CGR 305	7A	DIIBS & CO.	1896	1966
862	CGR 306	7A	DIIBS & CO.	1896	1966
863	CGR 307	7A	DIIBS & CO.	1896	1966
864	CGR 308	7A	DIIBS & CO.	1896	1966
865	CGR 309	7A	DIIBS & CO.	1896	1966
866	CGR 310	7A	DIIBS & CO.	1896	1966
867	CGR 311	7A	DIIBS & CO.	1896	1966
868	CGR 312	7A	DIIBS & CO.	1896	1966
869	CGR 313	7A	DIIBS & CO.	1896	1966
870	CGR 314	7A	DIIBS & CO.	1896	1966
871	CGR 315	7A	DIIBS & CO.	1896	1966
872	CGR 316	7A	DIIBS & CO.	1896	1966
873	CGR 317	7A	DIIBS & CO.	1896	1966
874	CGR 318	7A	DIIBS & CO.	1896	1966
875	CGR 319	7A	DIIBS & CO.	1896	1966
876	CGR 320	7A	DIIBS & CO.	1896	1966
877	CGR 321	7A	DIIBS & CO.	1896	1966
878	CGR 322	7A	DIIBS & CO.	1896	1966
879	CGR 323	7A	DIIBS & CO.	1896	1966
880	CGR 324	7A	DIIBS & CO.	1896	1966
881	CGR 325	7A	DIIBS & CO.	1896	1966
882	CGR 326	7A	DIIBS & CO.	1896	1966
883	CGR 327	7A	DIIBS & CO.	1896	1966
884	CGR 328	7A	DIIBS & CO.	1896	1966
885	CGR 329	7A	DIIBS & CO.	1896	1966
886	CGR 330	7A	DIIBS & CO.	1896	1966
887	CGR 331	7A	DIIBS & CO.	1896	1966
888	CGR 332	7A	DIIBS & CO.	1896	1966
889	CGR 333	7A	DIIBS & CO.	1896	1966
890	CGR 334	7A	DIIBS & CO.	1896	1966
891	CGR 335	7A	DIIBS & CO.	1896	1966
892	CGR 336	7A	DIIBS & CO.	1896	1966
893	CGR 337	7A	DIIBS & CO.	1896	1966
894	CGR 338	7A	DIIBS & CO.	1896	1966
895	CGR 339	7A	DIIBS & CO.	1896	1966
896	CGR 340	7A	DIIBS & CO.	1896	1966
897	CGR 341	7A	DIIBS & CO.	1896	1966
898	CGR 342	7A	DIIBS & CO.	1896	1966
899	CGR 343	7A	DIIBS & CO.	1896	1966
900	CGR 344	7A	DIIBS & CO.	1896	1966
901	CGR 345	7A	DIIBS & CO.	1896	1966
902	CGR 346	7A	DIIBS & CO.	1896	1966
903	CGR 347	7A	DIIBS & CO.	1896	1966
904	CGR 348	7A	DIIBS & CO.	1896	1966
905	CGR 349	7A	DIIBS & CO.	1896	1966
906	CGR 350	7A	DIIBS & CO.	1896	1966
907	CGR 351	7A	DIIBS & CO.	1896	1966
908	CGR 352	7A	DIIBS & CO.	1896	1966
909	CGR 353	7A	DIIBS & CO.	1896	1966
910	CGR 354	7A	DIIBS & CO.	1896	1966
911	CGR 355	7A	DIIBS & CO.	1896	1966
912	CGR 356	7A	DIIBS & CO.	1896	1966
913	CGR 357	7A	DIIBS & CO.	1896	1966
914	CGR 358	7A	DIIBS & CO.	1896	1966
915	CGR 359	7A	DIIBS & CO.	1896	1966
916	CGR 360	7A	DIIBS & CO.	1896	1966
917	CGR 361	7A	DIIBS & CO.	1896	1966
918	CGR 362	7A	DIIBS & CO.	1896	1966
919	CGR 363	7A	DIIBS & CO.	1896	1966
920	CGR 364	7A	DIIBS & CO.	1896	1966
921	CGR 365	7A	DIIBS & CO.	1896	1966
922	CGR 366	7A	DIIBS & CO.	1896	1966
923	CGR 367	7A	DIIBS & CO.	1896	1966
924	CGR 368	7A	DIIBS & CO.	1896	1966
925	CGR 369	7A	DIIBS & CO.	1896	1966
926	CGR 370	7A	DIIBS & CO.	1896	1966
927	CGR 371	7A	DIIBS & CO.	1896	1966
928	CGR 372	7A	DIIBS & CO.	1896	1966
929	CGR 373	7A	DIIBS & CO.	1896	1966
930	CGR 374	7A	DIIBS & CO.	1896	1966
931	CGR 375	7A	DIIBS & CO.	1896	1966
932	CGR 376	7A	DIIBS & CO.	1896	1966
933	CGR 377	7A	DIIBS & CO.	1896	1966
934	CGR 378	7A	DIIBS & CO.	1896	1966
935	CGR 379	7A	DIIBS & CO.	1896	1966
936	CGR 380	7A	DIIBS & CO.	1896	1966
937	CGR 381	7A	DIIBS & CO.	1896	1966
938	CGR 382	7A	DIIBS & CO.	1896	1966
939	CGR 383	7A	DIIBS & CO.	1896	1966
940	CGR 384	7A	DIIBS & CO.	1896	1966
941	CGR 385	7A	DIIBS & CO.	1896	1966
942	CGR 386	7A	DIIBS & CO.	1896	1966
943	CGR 387	7A	DIIBS & CO.	1896	1966
944	CGR 388	7A	DIIBS & CO.	1896	1966
945	CGR 389	7A	DIIBS & CO.	1896	1966
946	CGR 390	7A	DIIBS & CO.	1896	1966
947	CGR 391	7A	DIIBS & CO.	1896	1966
948	CGR 392	7A	DIIBS & CO.	1896	1966
949	CGR 393	7A	DIIBS & CO.	1896	1966
950	CGR 394	7A	DIIBS & CO.	1896	1966
951	CGR 395	7A	DIIBS & CO.	1896	1966
952	CGR 396	7A	DIIBS & CO.	1896	1966
953	CGR 397	7A	DIIBS & CO.	1896	1966
954	CGR 398	7A	DIIBS & CO.	1896	1966
955	CGR 399	7A	DIIBS & CO.	1896	1966
956	CGR 400	7A	DIIBS & CO.	1896	1966
957	CGR 401	7A	DIIBS & CO.	1896	1966
958	CGR 402	7A	DIIBS & CO.	1896	1966
959	CGR 403	7A	DIIBS & CO.	1896	1966
960	CGR 404	7A	DIIBS & CO.	1896	1966
961	CGR 405	7A	DIIBS & CO.	1896	1966
962	CGR 406	7A	DIIBS & CO.	1896	1966
963	CGR 407	7A	DIIBS & CO.	1896	1966
964	CGR 408	7A	DIIBS & CO.	1896	1966
965	CGR 409	7A	DIIBS & CO.	1896	1966
966	CGR 410	7A	DIIBS & CO.	1896	1966
967	CGR 411	7A	DIIBS & CO.	1896	1966
968	CGR 412	7A	DIIBS & CO.	1896	1966
969	CGR 413	7A	DIIBS & CO.	1896	1966
970	CGR 414	7A	DIIBS & CO.	1896	1966
971	CGR 415	7A	DIIBS & CO.	1896	1966
972	CGR 416	7A	DIIBS & CO.	1896	1966
973	CGR 417	7A	DIIBS & CO.	1896	1966
974	CGR 418	7A	DIIBS & CO.	1896	1966
975	CGR 419	7A	DIIBS & CO.	1896	1966
976	CGR 420	7A	DIIBS & CO.	1896	1966
977	CGR 421	7A	DIIBS & CO.	1896	1966
978	CGR 422	7A	DIIBS & CO.	1896	1966
979	CGR 423	7A	DIIBS & CO.	1896	1966
980	CGR 424	7A	DIIBS & CO.	1896	1966
981	CGR 425	7A	DIIBS & CO.	1896	1966
982	CGR 426	7A	DIIBS & CO.	1896	1966
983	CGR 427	7A	DIIBS & CO.	1896	1966
984	CGR 428	7A	DIIBS & CO.	1896	1966
985	CGR 429	7A	DIIBS & CO.	1896	1966
986	CGR 430	7A	DIIBS & CO.	1896	1966
987	CGR 431	7A	DIIBS & CO.	1896	1966
988	CGR 432	7A	DIIBS & CO.	1896	1966
989	CGR 433	7A	DIIBS & CO.	1896	1966
990	CGR 434	7A	DIIBS & CO.	1896	1966
991	CGR 435	7A	DIIBS & CO.	1896	1966
992	CGR 436	7A	DIIBS & CO.	1896	1966
993	CGR 437	7A	DIIBS & CO.	1896	1966
994	CGR 438	7A	DIIBS & CO.	1896	1966
995	CGR 439	7A	DIIBS & CO.	1896	1966
996	CGR 440	7A	DIIBS & CO.	1896	1966
997	CGR 441	7A	DIIBS & CO.	1896	1966
998	CGR 442	7A	DIIBS & CO.	1896	1966
999	CGR 443	7A	DIIBS & CO.	1896	1966
1000	CGR 444	7A	DIIBS & CO.	1896	1966

NOTES: + CGR, IMR and CSAR were amalgamated in 1910 to form SAR. Table 7 gives the pertinent particulars of these locomotives.

SOURCE: Geoffrey Calvert, Private Memo on ZSMR, National Monuments Commission, Livingston.

TABLE 7

PARTICULARS OF ZSM'S LAST TRAINS

SAR/ZSMR NUMBER	PREVIOUS RAILWAY + NUMBER	SAR CLASS	BUILDERS' AND WORKS NUMBER	YEAR BUILT	YEAR PURCHASED BY ZSM
955	CGR 322	7	NRC. 4447	1896	1966
956	CGR 323	7	NRC. 4448	1892	1966
992	CGR 389	7A	SSC. 4149	1896	1966
993	CGR 390	7A	SSC. 4150	1896	1970
1006	CGR 723	7A	DIIBS & CO. 3360	1896	1966
1021	CGR 733	7A	DIIBS & CO. 3646	1898	1971
1037	IMR 108/ CSAR 378	7B	NRC. 5815	1900	1966
1040	IMR 113/ CSAR 388	7B	NRC. 5820	1900	1966

NOTES: + CGR, IMR and CSAR were amalgamated in 1910 to form SAR.

SOURCE: Geoffrey Calvert, Private Memo on ZSMR, National Monuments Commission, Livingstone.


\* He was then Secretary of State for Colonies.

remodelled both inside and outside and then renumbered as  
As of now, Locomotive Number 955 is still in use as a  
stationary boiler in Livingstone, just like numbers ZSMR 1021  
and 1040. The rest of these locomotives are either marooned  
at the Mulobezi or Livingstone mills or were abandoned in the  
Machili-Kataba Forests where several rails are still lying.  
It is, however, their age and history which make these locomotives  
some of the most important national relics as defined by the  
National Monuments Commission Act, Chapter 226. Consequently,  
whenever and wherever they are found, these metals are automatically  
protected against destruction or disposal without the Commission's  
knowledge and permission. In other words, we repeat what we pointed  
out earlier, the We observe, also, that in addition to these trains  
there was another very famous engine, next in fame to the 'Princess  
of Mulobezi'. This was the prestigious Pullman Coach Number 1,  
built in 1900 by Lancaster Carriage and Wagon Co. It was originally  
owned by RR where it began its maiden operations in 1901.  
It was later placed at the disposal of Mr. Joseph Chamberlain\*  
while on tour of SA in 1901-2 where it formed part of the so-called  
'train-de-luxe.' In 1931 this coach was slightly

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\* He was then Secretary of State for Colonies.

Track almost 100 years old... engines that  
remodelled both inside and outside and then renumbered as  
the Cape to Cairo railway... these are  
Coach No. 1000. Some 28 years later the ZSM bought it  
railway, linking the teak forests of  
from RR for the exclusive use of its General Manager on his  
ZSM in Livingstone.  
tours of the sawmills along the line.

These locomotives were kept in motion by the company's  
All these locomotives were steam engines using timber (off-cuts  
mechanics, fitters and engineers in Mulobezi and Livingstone.  
from Mulobezi. This made them easy and cheap to maintain.  
Men like George Wilson who joined the company in 1925  
[Fig.2  shows a fireman at work.] Decades after their  
became so closely associated with the company fleet such  
contemporaries had been discarded and broken up for scrap,  
that people started calling the railways as 'Gwk'. Together  
these locomotives still carried on, bringing out timber from  
with others, George Wilson built and improvised, swapping  
the forests of Barotseland; In this way they played a vital  
and changing pieces from one model to another, or simply  
role in an industry that employed thousands of people. In  
'manufacturing' pieces. At Sala for instance - one of the  
other words, we repeat what we pointed out earlier, the  
stations along the line - there is a 16-metre bridge which was  
railway was a sine qua non of the whole sawmilling industry.  
originally a locomotive turntable at Kimberley.  
The company argued that since it was principally a logging  
railway, it did not have to be maintained to the same standards  
By the mid-1940s, the company had cut timber in an area of  
as a passenger railway. For the same reason, the company  
259 square kilometres without restocking. The company  
always opted to buy secondhand cheap engines that had originally  
was certainly at the peak of its production, felling a  
been bought by millionaire Alfred Beit for his prodigious BMR  
record 84,950 cubic metres of timber per year (- 3 million  
and RR network. Dahn described the entire system more lucidly,  
cubic feet).  
when he wrote in the mid-1960s:

Track almost 100 years old... engines that were at work when Cecil Rhodes dreamed of the Cape to Cairo railway... These are in daily use on the world's most unusual railway, linking the teak forests of Barotseland with the headquarters of ZSM in Livingstone.<sup>18</sup>

In the following section we have to attempt answering these questions.

These locomotives were kept in motion by the company's mechanics, fitters and engineers in Mulobezi and Livingstone.

Men like George Wilson who joined the company in 1925

ZSM EMPLOYEES: LABOUR ROUTES (MAP 3)  
became so closely associated with the company fleet such that people started calling the railways as 'GWR'! Together with others, George Wilson built and improvised, swopping and changing pieces from one model to another, or simply 'manufacturing' pieces. At Sala for instance - one of the stations along the line - there is a 16-metre bridge which was originally a locomotive turntable at Kimberley.<sup>19</sup>

More than 90% of the company's workers were from within

Barotseland with the majority coming from Sesheke and Senanga Districts. After all, migrations in Barotseland were not a new phenomenon. In the second half of the 19th and early 20th centuries the territory had witnessed two waves of migration. The first involved the MAKINDO, a Lozi name for their western neighbours. They were so-called because of the way they weaved their hair and sharpened their teeth.<sup>21</sup> They are

By the mid-1940s, the company had cut timber in an area of 259 square kilometres without restocking.<sup>20</sup> The company was certainly at the peak of its production, felling a record 84,950 cubic metres of timber per year (3 million cubic feet).

They were so-called because of the way they weaved their hair and sharpened their teeth.<sup>21</sup> They are

This expansion was possible largely because of the workers who felled the trees and operated the machinery that milled.

But who were these men and whence did they come and why?

In the following section we have to attempt answering these questions.

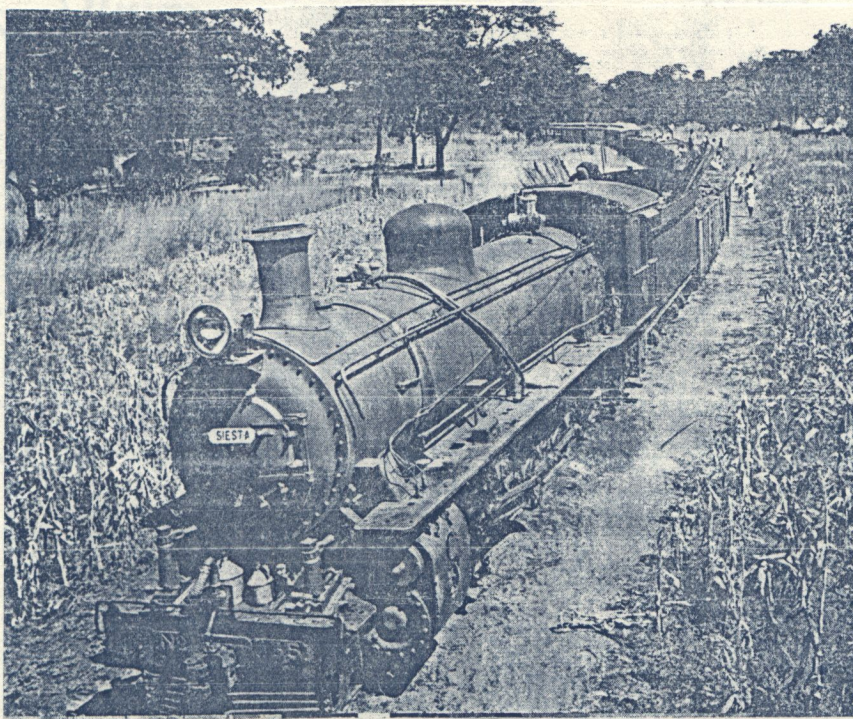
#### ZSM EMPLOYEES: LABOUR ROUTES (MAP 3)

The location of the industry in relation to the sources of labour was a great advantage. There was very little competition for labour in the region in the sense that other employers such as farmers, RR, SA and SR mines and the Copperbelt were very far away.

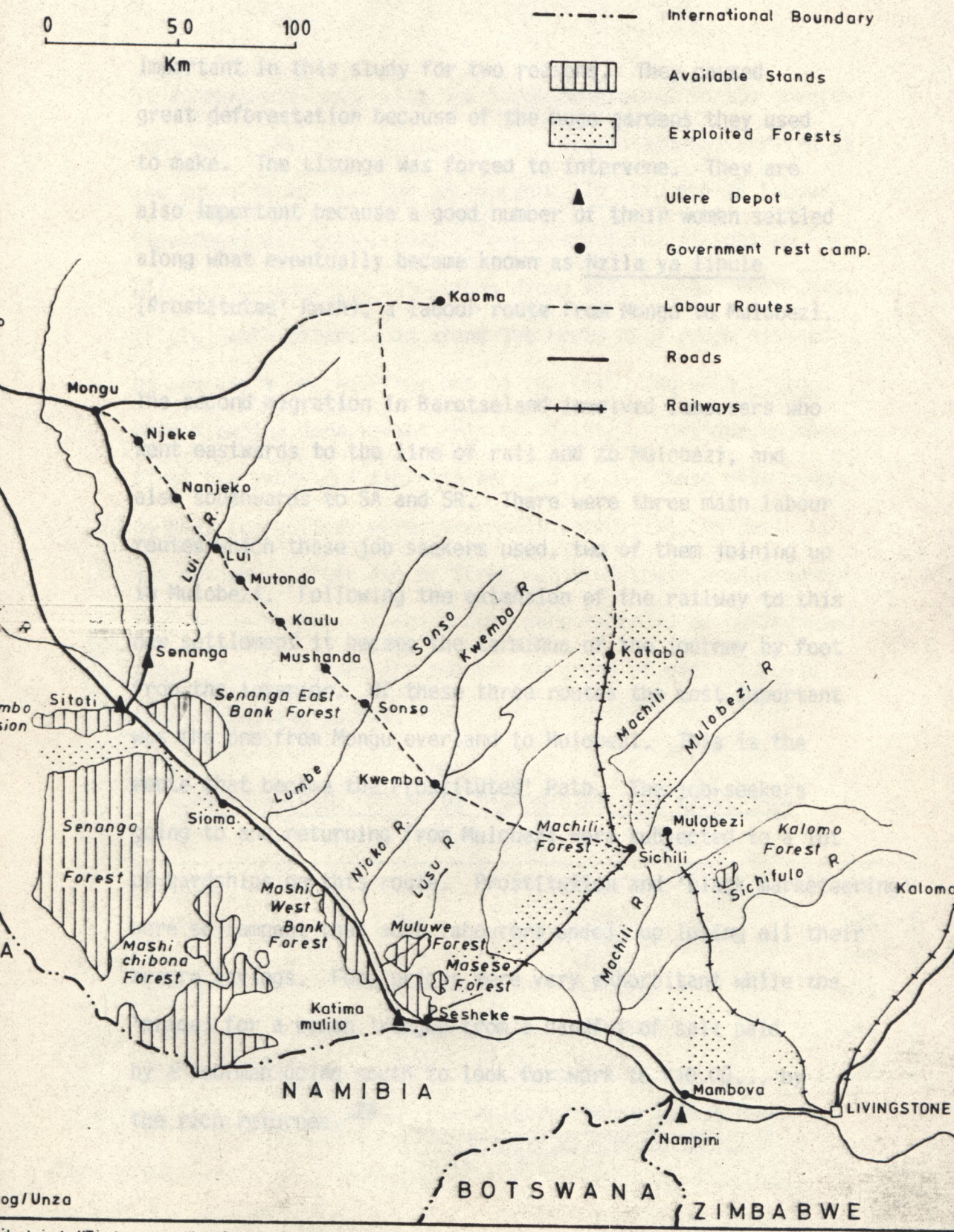
More than 90% of the company's workers were from within Barotseland with the majority coming from Sesheke and Senanga Districts. After all, migrations in Barotseland were not a new phenomenon. In the second half of the 19th and early 20th centuries the territory had witnessed two waves of migration. The first involved the MAWIKO, a Lozi name for their western neighbours. They were so-called because of the way they weaved their hair and sharpened their teeth.<sup>21</sup> They are



**Fig. 2a** A fireman putting timber offcuts into a ZSM into a ZSMR steam engine.

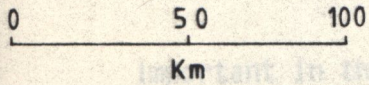






**Fig. 2b** One of the earliest ZSM locomotives now at the Livingstone Railway Museum.



og/Unza

# IMPORTANT TIMBER FORESTS AND LABOUR ROUTES IN BAROTSELAND



- International Boundary
-  Available Stands
-  Exploited Forests
-  Ulere Depot
-  Government rest camp.
- Labour Routes
- Roads
- +— Railways



PMK/Geog/Unza

important in this study for two reasons. They caused great deforestation because of the huge gardens they used to make. The Litunga was forced to intervene. They are also important because a good number of their women settled along what eventually became known as Nzila ya lihule (Prostitutes' Path), a labour route from Mongu to Mulobezi. (Piulu) were established along the route at a rough distance

of one day's journey from one to the next. At each piulu The second migration in Barotseland involved labourers who were sleeping dormitories (Fig.3 calata). But during the went eastwards to the line of rail and to Mulobezi, and first two years the migrants refused to use these rest camps also southwards to SA and SR. There were three main labour routes which these job seekers used, two of them joining up as they feared they were government recruiting centres. It was not until after two or three years of their establishment in Mulobezi. Following the extension of the railway to this that large numbers of sojourners were recorded as having used new settlement it became the terminus of the journey by foot from the interior. Of these three routes the most important 1944, totalling 10,044.

was the one from Mongu overland to Mulobezi. This is the route that became the Prostitutes' Path. The job-seekers going to and returning from Mulobezi were subjected to a lot

of hardships on this route. Prostitution and 'black marketeering' were so rampant that some labourers ended up losing all their meagre savings. Food prices were very exorbitant while the 'price' for a woman ranged from a handful of salt paid by a poorman going south to look for work to K10.00... by the rich returnee.<sup>23</sup>

<sup>23</sup> 'The Mulobezi-Mongu Labour Route', Rhodes-Livingstone Journal 3 (June 1945), 53.

It appears the company at one stage complained to the government about the sorry state in which most employees arrived at the sawmills to look for employment. In 1940 the NR Labour Department was established. Four years later it sent an officer to study the conditions along this route. Rest camps (Piulu) were established along the route at a rough distance of one day's journey from one to the next. At each piulu were sleeping dormitories (Fig.3) (calata). But during the first two years the migrants refused to use these rest camps as they feared they were government recruiting centres. It was not until after two or three years of their establishment that large numbers of sojourners were recorded as having used them. Table 8 gives the numbers recorded at each piulu in 1944, totalling 10,044.

TABLE 8  
MONTHLY AVERAGE OF LABOUR MIGRANTS AT EACH CAMP, 1944

MULOBEZI	1,536	MUSHANDA	688
SICHILI	1,604	KAULU	565
SISIBI	935	LUI	390
NJOKO	670	MUTONDO	444
KWEMBA	1,157	NANJEKO	644
SONSO ("JUBEKI")	762	NJEKE	649

SOURCE: R. Philpott, 'The Mulobezi-Mongu Labour Route', Rhodes-Livingstone Journal 3 (June 1945), 53.

Fig. 3b Lozi labour migrants en route to Mulobezi and beyond to look for employment. Route is along the Prostitutes Path along which were 12 piulu.

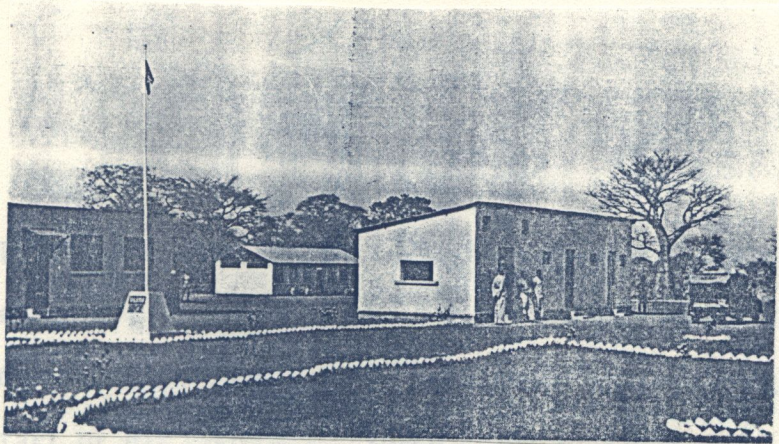


Fig. 3a A labour piulu showing (l-r) calata, eating shelter, offices and government flag in the foreground.



Fig. 3b Lozi labour migrants en route to Mulobezi and beyond to look for employment. This is along the Prostitutes Path along which were 12 piulus.

appropriate category on a Ticket-to-Ticket Contract. A

complete ticket was 30 working and marked days. Various

Employment Cards had to be completed for each worker at the

start of his contract. These cards gave all vital data

pertaining to the worker - (see Appendices D1-5). A study

of a cross-section of these employment cards revealed that

even as late as the end of the 1940s all labourers such as

fellers, sawdust removers, tender boys, ballast gangers, railway

plate layers, firemen and loaders started at 50 Ngwee per 30

day ticket on what were known as Oral Contracts of Service.

The workers, however, usually received some bonuses on top of

their wages and/or in lieu of ration. These bonuses normally

ranged between ten Ngwee and 50 ngwee; there were exceptional

cases when a worker would receive one to two Kwacha! The

bonus was never bigger than one's actual wage. These

bonuses were a remuneration for honesty and diligency, but

they also served to control and manage the workers. Since

the bonus was a privilege, any worker guilty of truancy,

malingering, drunkenness on duty and rudeness to supervisors

would not deserve any. When the bonus was added to one's purse

the total amount received compared quite favourably with wages

received by workers elsewhere as the table below shows.

TABLE 9  
AVERAGE AFRICAN WAGES IN AGRICULTURE AND MINING, 1927-36

YEAR	AGRICULTURE	MINING
1927	K0.50 - K1.25	K0.50 - K1.50
1928	K0.50 - K1.25	K0.50 - K1.50
1929	K0.75 - K1.25	K0.50 - K1.50
1930	K0.50 - K1.25	K0.50 - K1.50
1931	K0.50 - K1.25	K0.50 - K1.50
1932	K0.50 - K1.25	K0.50 - K1.50
1933	K0.50 - K1.00	K0.50 - K2.00
1934	K0.50 - K1.00	K0.50 - K2.00
1935	K0.75 - K1.00	K0.50 - K1.50
1936	K0.75 - K1.00	K0.50 - K1.50

SOURCE: P.M. Report, parag. 123, p.52.

Although ZSN is included under industry in the table, there was no African worker employed there as such as K2.00 during the period covered. The general average was K1.25. The highest paid African workers in NR were miners. The annual report

TABLE 9  
AVERAGE AFRICAN WAGES IN AGRICULTURE AND INDUSTRY, 1927-36

YEAR	AGRICULTURE	INDUSTRY
1927	K0.50 - K1.25	K0.50 - K1.25
1928	" "	K1.00 - K2.00
1929	K0.75 - K1.25	" "
1930	" "	" "
1931	" "	" "
1932	K0.65 - K1.25	K0.65 - K2.00
1933	K0.50 - K1.00	K0.50 - K2.00
1934	" "	" "
1935	K0.75 - K1.00	K0.75 - K2.00
1936	" "	" "

SOURCE: Pim Report, parag. 123, p.52.

All these goods could be easily purchased from the shops run by the company or its associates in Mulobezi. Further, the workers do not seem to have spent a substantial amount of their earnings on food since they were given free

Although ZSM is included under industry in the table, there was no African worker who received as much as K2.00 during the period covered. The general average was K1.25.<sup>25</sup> The highest paid African workers in NR were miners. The annual report of 1936 reported that underground miners earned K3.15 while surface workers received K1.80. All got free housing and ration. The lowest wages in NR then were among agricultural workers in NER who earned between 60 Ngwee and K1.00 plus ten Ngwee ration.<sup>26</sup> Generally speaking, domestic workers, particularly kitchen boys, occupied an enviable position and averaged K2.00 plus access to the bwana's food.<sup>27</sup>

During our fieldwork in southern Barotseland, we established that although the company wages were low, Africans seemed to have found them adequate for their immediate needs. Goods in shops were very cheap: As late as the end of WWII one could buy a shirt and a pair of shorts from 50N! A blanket and a pair of canvas shoes cost K1.50 while two metres of cloth cost 25N.<sup>28</sup> All these goods could be easily purchased from the

shops run by the company or its associates in Mulobezi. Further, the workers do not seem to have spent a substantial amount of their earnings on food since they were given free such as Asians and coloureds and African labourers respectively. All African houses were made of pole and dagga. African

employees based in Livingstone had slightly better housing compared to their Mulobezi counterparts. Toilet facilities were communal. In Livingstone the company's African compound, a sprawling township (1952 population 1750) was popularly known as SOMILI, a corruption of sawmill.

ration. The exact quantities given are not easy to establish, but we tend to think it was just the bare minimum required to subsist the workers. Ration was issued twice a week and the amount depended on the worker's marital status. Apart from senior employees who had to buy their own food<sup>29</sup>, the rest received eleven tins of mealie-meal plus two extra per child for couples, a chunk of meat - [ $\frac{1}{4}$  to  $\frac{1}{2}$  kg] three times a week, a cupful of salt and sugar, a tin of beans and vegetables and fish when available. Bachelors received one tin of mealie-meal a day. In addition to all this, every one was entitled to an ewer of local beer (sipesu) on Saturday evenings.<sup>30</sup> In 1966 these ration issues ended and were replaced by cash in the sum of K10.00 for couples and slightly less for bachelors.<sup>31</sup> It was not immediately clear as to what facilitated this change, but it seems both workers and employers accepted the changeover.

As regards housing, it was company responsibility to provide workers' accommodation. In Mulobezi there were three types of houses, all made of timber. The three types were in categories A, B and C for European senior staff, middle management staff such as Asians and coloureds and African labourers respectively. All African houses were made of pole and dagga. African

employees based in Livingstone had slightly better houses compared to their Mulobezi counterparts. Toilet facilities were communal. In Livingstone the company's African compound, a sprawling township [1952 population 1750], was popularly known as SOMILI, a corruption of sawmills.

All employees were covered in a company-run Pensions Scheme. As all other similar social security covers, this scheme gave out some retirement benefits to company employees once they left employment. In addition, there was compensation given to a workman who got injured or killed in the course of his duty. If, however, it was medically proved that the workman was under the influence of beer while on duty and consequently got injured, compensation would be withheld. Otherwise, all genuine cases were properly covered. A glance at the Record Book for Kataba Forest Mill indicates that throughout the period up to 1960, a number of industrial accidents, deaths and retirements were covered in the company's social security scheme. The Records Book also gives many cases of industrial accidents in which workmen who lost their limbs had artificial ones fixed by a Bulawayo firm, Messrs Hodges Orthopaedic and Surgical Services. Payment for

these services was made by the Atlas Assurance Company of Kitwe on behalf of ZSM. Retirement benefits which each employee received at the end of his contract were endorsed on the Employment Cards. There were also a number of employees who were given long service awards, normally in form of a cash bonus.<sup>32</sup>

As regards industrial clothing the company does not seem to have provided the employees with any other than sackcloth, but even then, not always. This was given to those labourers engaged in loading sleepers, logs in the forest and those on the milling lines where there was a lot of sawdust. There were no protective glasses for the face and no (gum) boots. Figure 4 shows loaders at work.

Fig. 4 Loaders without protective wear - pack sleepers into wagons

While the workmen's children were provided with elementary education at the company-run Mulobezi Primary School, there are no records of worker training at any one stage. Yet in 1945 plans were made to provide some form of training to African employees as apprentice Forest Guards. This was to last for six months. Initially, this training was supposed to

be taken at Katombora. Then in 1946 the SRG opened the Mtao Forest Training School offering two-year Rangers' courses:

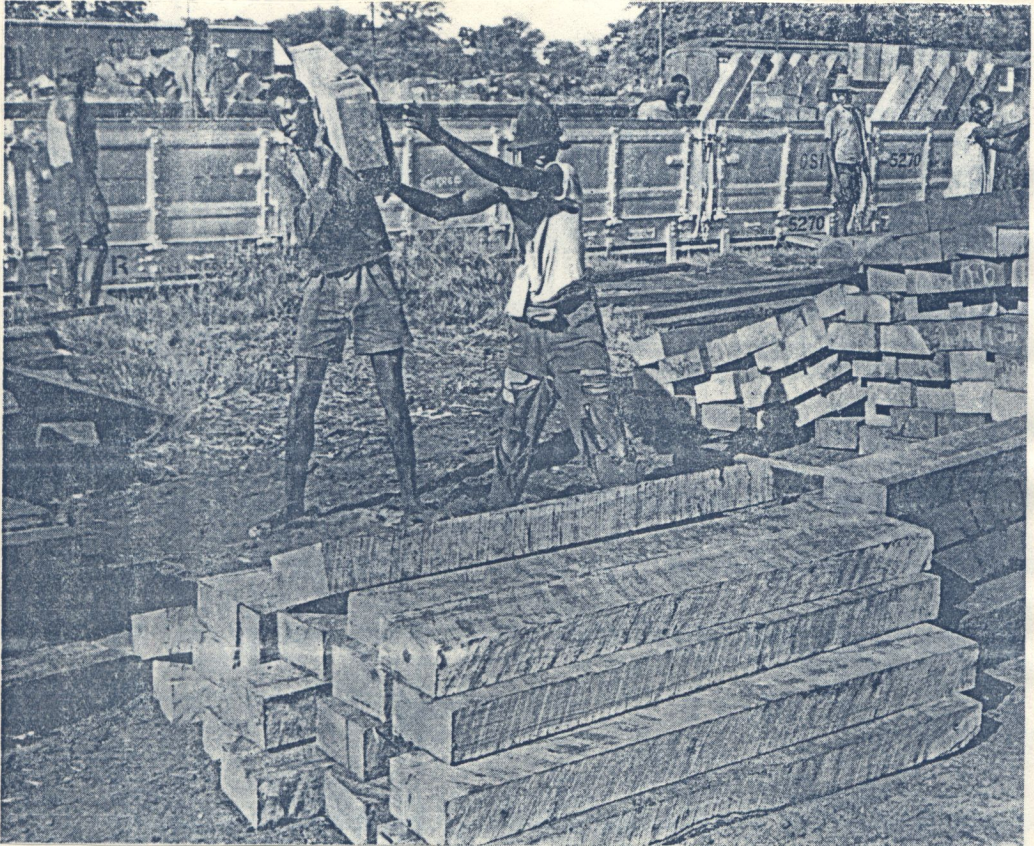


Fig. 4 Loaders- without protective wear- pack sleepers into wagons to Livingstone for further processing and marketing.

and K1.30 and production clerks with a primary school certificate earned an enviable K30.00. The wages of the ZSM school teachers had also risen from 67 Ngwee in the late 1930s to K1.50, a salary for mission teachers in 1936-37.<sup>35</sup>

be taken at Katombora. Then in 1946 the SRG opened the Mtao Forest Training School offering two-year Rangers' courses; three years later the Mwekera Forest College was opened in Kitwe. None of these training centres, according to our records, enrolled students from the ZSM. In view of this and looking at the nature of work Africans did for the company, we are inclined to conclude that the company did not need skilled African workers. It seems to have been company policy to reserve skilled jobs for whites, Asians and Coloureds, although workers in these last two racial groups were very few.

Otherwise, the only form of 'training' African workmen ever got was on-the-job training from where they could rise to such positions as capitao and Forest Surveyor.<sup>33</sup>

It would appear that by 1948 most workers had been given some wage increases: A capitao now earned K3.00 per month while general labourers like loaders and fellers earned between K1.10 and K1.30 and production clerks with a primary school certificate earned an enviable K30.00.<sup>34</sup> The wages of the ZSM school teachers had also risen from 67 Ngwee in the late 1930s to K1.50, a salary for mission teachers in 1936-37.<sup>35</sup>

of logging camps from Sisibi Forests to the remaining

We are forced to conclude that while it may have been unexploited parts of Simungama and Simatula. These transfers company policy not to send its African workers for specialized training, it certainly was a well-calculated move for two reasons. The first reason was to keep African wages very low since they were not skilled and could be replaced easily.

The second reason is related to the first: There was a fear that 'too much education' and training would create agitators who would demand some form of representation and bargaining power to seek higher wages.<sup>36</sup>

It is common knowledge that capitalism thrives on exploitation of labour. So while African labourers continued getting these low wages the company continued expanding. Throughout the Second World War the company was felling a record 84,950 cubic metres of timber.<sup>37</sup> After the war, however, there was a steady decline in production, yet demand for timber for reconstruction was showing a marked rise. There was also a corresponding decline in the number of workers: For example, between 1945 and 1946 the numbers dropped from 130 Europeans and coloureds and about 4000 Africans to 116 Europeans and 347 Africans.<sup>38</sup> These huge redundancies were a consequence of the complete transfer of logging camps from Sisibi Forests to the remaining

unexploited parts of Simungoma and Simatula. These transfers were followed by massive recruitment of Africans the following year so that the numbers rose to 3,235 African employees with 109 Europeans and coloureds.

These dislocations over some periods were so regular and disruptive that major clients who needed undisturbed supplies were adversely affected. It was for this reason that the Coppermines were forced to rely more and more on their local supplies of native timbers of the Brachystegia-Isoberlinia species. External supplies of timber had become insubstantial, so were coal supplies from SR. This problem had actually dogged the Coppermines since as far back as 1941 when they complained to NRG that ZSM were unable to increase their sales to the mines while Belgian Congo refused to accept orders.<sup>39</sup>

Some six years later, according to Baldwin, the situation was still bad:

From 1946-57 almost every annual report of the copper companies stressed the difficulties caused by inadequate coal supplies. On several occasions the mines were actually forced to close down for a few days because of coal shortages.<sup>40</sup>

So, starting from the mid-1940s the company's operations continued declining. At one stage the company even complained of sharp drops in the value of its sales per month although the volume of timber remained at almost the same level. A few senior government officials sympathised with the company on its 'declining fortunes', but others, like the Assistant Conservator of Forests, felt the company was merely being dishonest. He pointed out that the company was probably experiencing a reduction of the abnormally huge profits it was accustomed to and not that it was making losses. We find it very difficult to tell which was the case as the company was a private enterprise and its books of account were not open to the public.

But what is perhaps interesting is that at this same time the company was seeking the Litunga's permission through the government 'to make a short timber "cruise" in Barotseland west of Zambezi and north of the international boundary between Northern Rhodesia and Southwest Africa.'<sup>41</sup> [Zone 'A' on Map 4]. The Paramount Chief had no objections as this would in fact open the forests to "civilization". He only gave two conditions:



# LAND OWNERSHIP AND THE FOREST ESTATE

- 1 Mukwa Extension
- 2 Teak with Mukwa
- 3 Mukwa Extension
- 4 Mixed Miombo
- 5 Mixed Miombo Extension

... Main Commercial  
 Timber Areas

Protected  
 Forest Areas  
 and Forest  
 Reserves

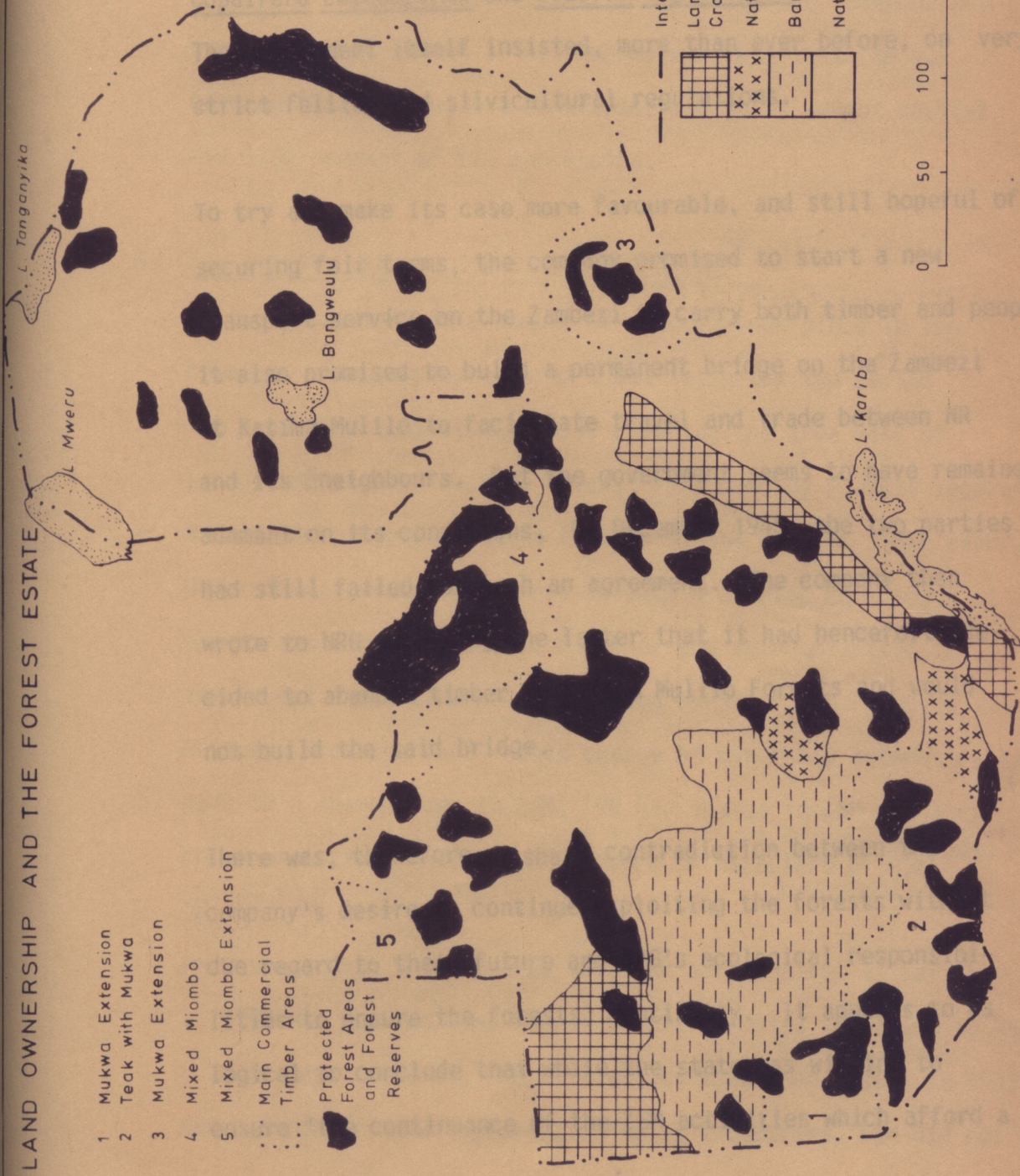
International Boundary

Land in Private Ownership and  
 Crown Lands

Native Reserve

Barotseland Protectorate

Native Trust Lands



half the royalties therefrom to be paid to him and the rest to the BFF; no fruit trees such as Ricinodendron rautanenii, Copaifera coleosperma and Dialium englerianum should be cut. The government itself insisted, more than ever before, on very strict felling and silvicultural regulations.

To try and make its case more favourable, and still hopeful of securing fair terms, the company promised to start a new transport service on the Zambezi to carry both timber and people; it also promised to build a permanent bridge on the Zambezi at Katima Mulilo to facilitate travel and trade between NR and its neighbours. But the government seems to have remained adamant on its conditions. By December 1945, the two parties had still failed to reach an agreement. The company then wrote to NRG informing the latter that it had henceforth decided to abandon timber in Katima Mulilo Forests and would not build the said bridge.

There was, therefore, a sharp contradiction between the company's desire to continue exploiting the forests without due regard to their future and NRG's ecological responsibilities to ensure the forests' continuity. It appears to us logical to conclude that while the state was willing to ensure the continuance of the ZSM activities which afford a

complain because their sleepers were tax free and were carried a large amount of employment to Natives,<sup>42</sup> it was nevertheless unwilling to offer the company any financial assistance. This became clearer later during the independence struggle. By 1947-48 it had become manifest that ZSM was heading towards possible bankruptcy and so it sought capital and also renewal of its concession.

B. ZSM (1948): RE-ORGANIZATION AND DECLINE

In the years 1947-49 a number of changes took place in the company. The company secured a new lease for the period 1st June 1947 to 31st May, 1957 covering the area east of Loanja and west of Machili Rivers. The company further secured an option to exploit Kataba Forests at the head of Njoko River.

Other developments which were to have a bearing on company operations were the establishment or the autonomization of the Forest Department and the buying by SR of the Rhodesia Railways from the BSAC. This change of ownership automatically made SR a shareholder in ZSM. RR had shares in ZSM and their chief executives 'sat on the Board of Directors of ZSM.'<sup>43</sup>

We observe that these shares which RR had acquired as far back as 1926 had ensured some degree of preferential treatment to RR by ZSM and vice-versa. Kanduza argues that when, later in 1933, NRG introduced tariff protection to NR industries, ZSM did not

complain because their sleepers were tax-free and were carried at specially low portage rates on the railway network.<sup>44</sup>

The publication of the Forest Policy early in 1949 was yet another major step taken by NRG to protect the territory's forests. This Policy (Appendix E) reflected, among other things, new regulations as regards forest exploitation. Under the new lease ZSM had secured in 1947, the company was to be responsible for forest protection and to ensure there was no indiscriminate wastage of trees. The principle of paramountcy of native interests was to be adhered to. Perhaps as one would have expected, the company raised strong objections and complained that,

... it finds the suggested conditions totally unacceptable ... Directors are unanimous in the view that it would be necessary to close down industry if anything resembling present proposals is insisted upon...<sup>45</sup>

It must be summed up here that among the things the company objected to was the increase in the amount of official interference in its operations, an increase in royalties to the Paramount Chief and a limitation of sizes of trees to be cut while leaving four to five mature Mukusi trees per acre as seed bearers.

From end of 1947 there were further drops in volume of timber exported by ZSM to SA. It was reported in 1948 that the volume of sleepers exported to the Union fell from 3,523.7 cubic metres in 1947 to just under 70 cubic metres.<sup>46</sup> This drop was caused, partly, by an expanded home market and a change in government policy which insisted that priority be given to the local market. Table 10 gives details on the performance and declining fortunes of the company in the years 1935-48. During this period operations were confined to Yeta's Forests. regards the company's export policy, the company would not

Another problem had emerged as a result of this new condition from NRG. While the state was still reluctant to salvage the company from its 'endemic' financial problems it was now demanding that the company sell the bulk of its products locally. The big question was how the company would secure foreign exchange. The company's principal products were still sleepers and parquet flooring. These products, as indicated earlier, were complementary: parquet blocks being made from wood that remains after squaring the sleepers. It, therefore, meant that any drop in demand for sleepers - since NR could not buy so much - would lead to a corresponding reduction in total sales for the company as happened in the late 1940s. We acquired shares in a number of enterprises in NR, among them

TABLE 10

NUMBER OF EMPLOYEES AND RECOVERY RATE

observed at an earlier stage that industrial expansion in mining and railways had stimulated forward linkages in ZSM. But for reasons not easily discernible here, after

SR bought RR from BSAC the railway network was 'unable to finance further expansion, operating as they were, within the internal economy of the Rhodesia\$[and] subject to increased postwar costs without the benefit of a far-reaching increased price for their services.'<sup>47</sup> Perhaps if the market had continued expanding, or if there was not this 'disturbance' as regards the company's export policy, the company would not have experienced the hardships it faced by 1948. Kanduzza sees nothing strange or new about the situation. He argues that such 'was typical of an industry whose success depended on strong ties with powerful financiers and industrialists in the south.'<sup>48</sup>

YEAR	EMPLOYEES	RECOVERY RATE
1947	3,235	36.0
	116 <sup>+</sup>	35.6
	109 <sup>+</sup>	36.0

During the course of the year, 1948, a number of settler families, some of whom already had businesses in NR, became interested in the ZSM. Prominent among these were the Susman, Wulfsohn and Gersh families. Earlier in 1944 the Susman and Wulfsohn families had merged and formed Susman Brothers and Wulfsohn, Ltd. In 1948 this new conglomerate acquired shares in a number of enterprises in NR, among them

1935-45; NR, Forest Department, Annual Reports

TABLE 10

NUMBER OF EMPLOYEES AND RECOVERY RATE

YEAR	EMPLOYEES		RECOVERY RATE
	AFRICANS	NON-AFRICANS	
1935	3,792	100	35.5
1936	3,700	95	51.0
1937	4,000	95	39.5
1938	4,136	99	35.2
1939	4,110	98	33.4
1940	400	103	29.2
1942	3,950	112	35.6
1943	4,000	120	31.8
1945	4,000	130	35.3
1946	347	116 <sup>+</sup>	35.6
1947	3,235	109 <sup>+</sup>	36.0
1948	3,054	131 <sup>+</sup>	33.4

NOTES: + Includes coloureds and Asiatics

SOURCE NR Department of Agriculture, Annual Reports , 1935-45;  
 NR. Forest Department, Annual Reports , 1945-48.

the ZSM. Forty-nine other families, individuals and companies also bought shares in the company.<sup>49</sup> Consequently, the company now came under a new management and was subsequently re-organized as Zambezi Sawmills (1948), Ltd. Further, it had to register as a local NR company and not as a branch of a foreign-based enterprise.

According to Baylies, of the 52 shareholders in ZSM (1948), Ltd. more than half were resident or located in SR, one-fifth in SA, one-tenth in Mozambique while the remainder, about 19% were in NR. The shares of the company were now divided into two categories; the 'A' or Preference shares and the 'B' or Ordinary shares.

It must be remembered that the three chief shareholders in ZSM (1948), Ltd. had big businesses on both sides of the Zambezi, more especially the Susman Brothers who, for instance, operated the Zambezi River Transport and the Northern Caterers, Ltd. as hoteliers. Table 11 shows the number and type of shares each of the three families held in Zambezi Sawmills (1948), Ltd. up to the time of nationalization.

	'A'	'B'
Mulfschn & Co.	13.6	6.4
Susman Bros. Ltd.	1.9	6.4
Gersh Family	3.4	22.1
	10.0	-

TABLE 11  
 I. SHAREHOLDERS (1948) II. SHAREHOLDERS (1963-4)  
 NOTES:  
 SOURCE:

TABLE 11  
SHARE-HOLDING IN ZSM (1948), LTD. BY THREE FAMILIES

I. SHAREHOLDER (1948)	'A'	'B'	II. SHAREHOLDER (1952)	'A'	'B'	III. SHAREHOLDER(1963-4)	'A'	'B'
Wulfsohn & Co.	20.0	12.1	Susman and Wulfsohn & Co.	20.0	11.4	Susman & Wulfsohn	13.6	6.4
Susman Bros. Ltd.	10.0	51.2	Susman Bros. Ltd	10.0	51.2	Wulfsohn & Co. Ltd.	1.9	6.4
Gersh Family	8.1	7.5	Wulfsohn & Gersh Family	7.5	8.1 <sup>+</sup>	Susman Bros. Ltd	3.4	22.1
						Gersh Family	10.0	-

- NOTES:
1. Table 11 (I). Susman and Wulfsohn Ltd. together held a total of 30% Preference and 63.3% Ordinary Shares.
  2. Table 11 (II)+ Held by Wulfsohn alone and not in partnership with Gersh.
  3. Table 11 (III) Susman and Wulfsohn together now held a reduced 18.9% Preference and 34.9% Ordinary Shares.

SOURCE: Adapted from Baylies, 'The State and Class Formation', p.974.

Capitalist companies doing business in other countries have numerous methods by which they ensure repatriation of profits. Although ZSM (1948) was registered as a local firm, it was still basically a foreign company and had to see to it that profits continued reaching the investors. This was against the backdrop of a changed NRG policy as regards sales. One of the methods the company used was interlocking directorships. This, in addition to the fact that the majority of shareholders were resident outside NR, ensured greater preference to the external market. There was also the continued underpricing of its main products, the railway and mining sleepers, when sold to the Union of South Africa and to SR railway systems. In 1948-49 RR bought its sleepers at 35N while SAR bought at 45N per cubic foot (= 0.2048 cubic metres). Mukusi furniture and joinery also sold per cubic metre at K1.00 while that of Mukwa was K1.20 per cubic metre. Mukusi parquet flooring was sold at 70N and Mukwa at 85N per cubic metre. Yet when the same products were sold on the Copperbelt and other NR clients it tended to be more expensive. Sleepers, for instance, were never below K1.00 per cubic metre.<sup>50</sup>

Keet concluded his report by noting that the milling itself was unnecessarily wasteful. Too much labour was being used for little output. He singled out the Livingstone mill for glaring inefficiency and under utilization.<sup>51</sup>

Soon the government became aware of this strange sales policy. It decided to engage the services of Mr J.D. Keet, Timber Controller in SA, to understudy ZSM operations, organization and sales policy. His findings revealed a number of anomalies. As regards sales, he noted that 30% of total output was sold as railway sleepers to RR at little more than production cost. He argued that much of this wood, if sawn in lumber sizes, could easily fetch double the price RR was paying for it. Keet wondered why the company was deliberately selling its sleepers at an average price of 48N for such a long time when it could easily have sold the same at 64N per cubic metre. The Assistant Conservator of Forests had made similar observations when the 1947-57 Lease was being worked out by the government.

With reference to operations, Keet pointed out that these were scandalously wasteful and this led to the very low rates of royalty. The company's logging methods were not only primitive but also ill-organized. The government was strongly urged to show greater concern in this respect so as to save the forests. Keet concluded his report by noting that the milling itself was unnecessarily wasteful. Too much labour was being used for little output. He singled out the Livingstone mill for glaring inefficiency and under utilization.

Keet's report came out just before the 1949 Forest Policy was adopted and so it was quickly revised in line with his recommendations. It was, however, agreed that the application of the Policy in Barotseland, where the company operated, was going to be different from application elsewhere. This was because Barotseland was treated in a special way as a Native Territory with its own 'government' which owned the forests. The policy could only be implemented in consultation and agreement with the Barotse Native Government. In fact the Barotse Government was to do the actual implementation while the Forest Department was to merely provide technical advice and assistance where and when sought.

We must make a slight digression here so as to mention two other important developments that took place in 1948-49. The minimum Wages and Conditions of Employment Ordinance (1948) was passed. It was meant to safeguard workers' interests by providing them with some form of legal protection against exploitative employers. This instrument further provided guidelines for determining the minimum wages and conditions of employment in NR. Labour and factory inspectors were engaged to ensure compliance; contravention by an employer was punishable

process was meant to promote efficiency and increase productivity. These changes at Mulobezi led to the installation of a new sawmill and the building of a large joinery at K2.00 while those in industries were to get more than K2.00; all workers were to be provided with free housing, ration and medical facilities.<sup>52</sup>

It appears to us the company's desire was to use less and more efficiently. During the second half of the 1940s the Forest Regeneration Fund (FRF) was established. It immediately recommended abolition of free timber licences to all government departments, institutions and missions. Henceforth, all had to pay for their timber requirements to aid the Fund. This change greatly saved Barotseland forests from unwarranted exploitation particularly by missions. Even the ZSM operations came under stricter official observation and checks.

In 1948 the ZSM received the greatest infusion of capital at any one stage. This investment made possible a massive programme of rationalization starting in 1950. Mobile cranes were introduced to load logs on the tracks in the forest. At the Mulobezi mill the company started using mechanical saws for cross-cutting,. Felling was, however, still done by adzes until about 1954 when the company brought power saws. These technological improvements clearly indicate the level of development which the company had reached by that period. The

→ process was meant to promote efficiency and increase productivity. These changes at Mulobezi led to the installation of four new seasoning kilns and the building of a large joinery and furniture shop in Livingstone. 53

On 1st June, 1957 the company decided to take up its option of It appears to us the company's desire was to use less and less human labour. During the second half of the 1950s the company made further attempts to use power saws for felling, but the effort failed. This forced the company to revert to axes. Meanwhile oxen and Massey Ferguson tractors continued hauling the logs to collection centres from where they were transported by 4-wheel drive trucks to the bush tracks. These drawbacks forced the company to invite a team of experts from SA on attachment for a short period. The experts advised the company to abandon the use of power saws in felling trees as they were 'unnecessarily' expensive to use. As for loading, mobile cranes were to be used only for heavy logs while small ones were to be loaded by hand as before. The SA experts further recommended division of functions between Mulobezi and Livingstone mills. The former was to concentrate on railway sleepers while the latter was to specialize on mining timbers, parquet flooring, small fishing boats, doors and frames. The Livingstone mill was

fourth mill was erected.

also advised to proceed with its production of leather where some encouraging progress had been recorded. This was to make use of the mountains of sawdust from Mukusi.

On 1st June, 1957 the company decided to take up its option of the 12-year lease for the Kataba Forests. A new railway line was constructed from Mulobezi to link up Kataba, some 106km.

A new settlement was built here with an aerodrome for the company's light aircraft. Before the establishment of Kataba the company had been logging at Mululwe, Kateme and Salumbwe

near Sesheke. Around 1956 a strange epidemic broke out at Mululwe and surrounding regions. It was caused by hitherto unknown non-flying flea-like insects locally called linda za mwamahutu (literary lice of the feet). Entering the human body through any opening, these lice caused untold suffering which forced the company to abandon the sites. Dipping oneself or washing in diesel brought temporary relief to the victim.

It was then that the company decided to shift to Kataba in 1957-58 when the logging line finally reached there.<sup>54</sup> During this same period, the ZSM suffered another disaster. Its Livingstone mill was almost completely gutted by fire. The little machinery that survived the fire was transferred to Mulobezi whereupon a fourth mill was erected.

One obvious effect of this programme of mechanization was a steady decline of human labour required by the company. From 1948 onwards, hundreds of labourers were laid off. But what is perhaps more surprising is that mechanization did not stimulate any marked increase in efficiency and production.

Table 12 gives a reflection of the impact of mechanization on labour force and recovery rate (q.v.). It is not easy to rationalize this apparent contradiction between technological advancement and decline in efficiency!

Year	Labour	Rate	Year	Labour	Rate
1951	3,350	39.6	1961	1,875	27.5

During the Federal period NRG placed further restrictions on timber sales. The company found itself being forced to sell more and more locally and less to its traditional clients. Eventually, sleeper sales to SA virtually ended. But even then the company still failed to satisfy local demand. We suggest here that to a large extent this assumed inability by the company was deliberate: it considered itself as an export-oriented business and not one for local market where they would not get any foreign exchange. The copper mines were, in turn, forced to import huge quantities of Douglas Fir (Oregon), Bamboos and other special hardwoods from Canada, Congo, USA and Mozambique. The situation was still critical even after independence. The local Brachystegia-Isobertinia timbers were initially for rough mine work but '... owing to difficulties of shipping space and dollar

TABLE 12

NUMBER OF AFRICAN EMPLOYEES AND AMOUNT OF TIMBER SOLD AS A PERCENTAGE OF TOTAL EXTRACT

YEAR	AFRICAN LABOUR FORCE	RECOVERY RATE	YEAR	AFRICAN LABOUR FORCE	RECOVERY RATE +
1949	2,969	32.3	1959	1,958	25.4
1950	3,366	33.9	1960	2,013	27.1
1951	3,350	39.6	1961	1,875	27.5
1952	3,170	40.6	1962	1,421	25.2
1953	3,163	36.1	1963	1,371	33.0
1954	2,837	36.4	1964 <sup>‡</sup>	-	30.3
1955	2,455	37.1	1965	-	36.2
1957	2,507	32.7	1967	-	33.5
1958	2,131	30.2	1968	-	33.7
			1969	-	40.2

NOTES: + Recovery rate represents volume of timber sold as a proportion of total volume initially extracted from the forests. The cause of the decline in the years 1958-62 may have been the trials in mechanization and use of new machinery.

‡ Employment figures for 1964 - 68 not readily available.

SOURCE: Northern Rhodesia, Department of Forestry, Annual Reports, 1949-69.

Concession. The company then started negotiating for funds from exchange, this type of timber will have to be used more generally.<sup>55</sup> Over time it looked as if the company and the colonial state were heading towards a clash. The company refused to reconcile with state demands to give priority to NR consumers. We observe that by the early 1960s the company had over 100 shareholders from its initial 51 or so in 1948. All these shareholders were members of a few families. It has been estimated that the company's liquid assets were by now 'certainly worth a good quarter of a million dollars.'<sup>56</sup> For some reason, the shareholders may have been satisfied with a non-growth enterprise, but Indeco and the state were not only unimpressed, but also suspicious! This was still the position at independence. In fact it had become quite apparent even before independence that the company had begun a deliberate policy of disinvestment and under-production. We should point out, though, that capitalist firms do not move out of business just like that. Although the company had actually ceased railway sleeper exports to SA in 1960 other forms of timber were still sold there. Then a new thought seems to have been nurtured by the company directors. In 1967 the directors conceded that the company was in dire need of capital to ensure its continuity and to enable it start logging in the now ready Kalomo Forests to the east of Mulobezi. There were only two years remaining before the expiry of the Kataba

Concession. The company then started negotiating for funds from the new Zambian government. The Government's dilemma was how to invest in a private family business whose books of account were not open to the public, a company that had evident allegiance to outside forces. It was partly problems like these which forced the Zambian Government to nationalize the commanding heights of its economy. In 1968 President Kaunda announced these intentions in the famous Matero Economic Reforms speech consequent upon which the Copperbelt's Mining Timbers, Ltd.<sup>57</sup> and Zambezi Sawmills (1948), Ltd were nationalized. On behalf of the state, INDECO acquired 51% shares in the ZSM (1948), Ltd. The company was then re-organized and renamed as Zambezi Sawmills (1968) Limited.<sup>58</sup> This is the name by which it is known today.

1. Mihalyi, 'Timber Production', 11
2. NAZ, SEC 1/947, ZSM to Chief Secretary, NR0, October, 1933.
3. ... rights because it kept large herds of cattle
4. NAZ, SEC 1/947, ZSM to Chief Secretary, October, 1933.
5. NAZ, SEC 1/947, Barotse Provincial Commissioner to Chief Ref. No. 1063/20; A/33.
6. ... Report, parag. 126, p.53
7. NAZ, SEC 1/947, Minute by His Excellency The Acting Governor of NR [1934].
8. NAZ, SEC 1/947, Memo by Assistant Conservator of Forests, 22 October, 1934.
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10. (a) and (b), NAZ, SEC 1/947, ZSM to Assistant Conservator of Forests,, No. 62, 1934.
11. Department of Agriculture, Annual Report for the Year 1937, parag. 97, p.15.
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13. Zambia Daily Mail, 20 July 1985.
14. Dahn, 'The Strangest Railway', 20-21.
15. Interview Katambo Nawala, ZSM Surveyor, Sesheke mill 3/12/85.

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NOTES

16. Interview: John Sikabongo, ZSM employee, Mulobezi, 28/11/85.
1. Mihalyi, 'Timber Production', 11
17. Letter to the Editor, Zambia Daily Mail, 4 April, 1985.
2. NAZ, SEC 1/947, ZSM To Chief Secretary, NRG, October, 1933.  
In its request the company included grazing rights because it kept large herds of cattle for hauling logs and also for meat.
18. Dahn, 'The Strangest Railway', 20-21.
19. Dahn, 'The Strangest Railway', 20-21.
20. This area includes the entire Baikiaea belt in the Livingstone and Sesheke Districts. See C.J. Lewin, Agriculture and Forestry Development Plans for 10 Years (Lusaka: Government Printer, 1945), parag.9., p.37.
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29. Interview: John Sikabongo, ZSM employee, Mulobezi, 25/11/85.
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30. Interview: Katambo Nawala, ZSM Surveyor, Sesheke mill 3/12/85.

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16. Interview : John Sikabongo, ZSM employee, Mulobezi, 28/11/85.
17. 'Letter to the Editor', Zambia Daily Mail, 4 April, 1985.
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57. This company was formally the Rhodesia Congo Border Timber  
Company, Ltd. It was created to supply the mines with their  
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demand.
58. Later the State acquired a total of 70.13% and then in 1970  
it took all the shares after Redwood Investments, the last  
private shareholder, pulled out completely. Machinery had become  
obsolete and the venture unproductive. Shortly after nationa-  
lization, the company was forced to close down temporarily and  
more than 500 employees sent on leave. See 'Zambezi Sawmills  
(1968) Ltd.: Historical Background', and Mihalyi, 'Timber  
Production in Zambia', 12.

CHAPTER FOUR

CONCLUSION

In the preceding chapters we have endeavoured to show the contributions made by the ZSM to railways, mines, building and construction and other sectors of both the national and international economies. We have also indicated that developments in these sectors stimulated growth in the company, but this growth was not sustained for a long time. In 1966 it was reported that the country's oldest manufacturing industry had been noticeably by-passed by the on-going economic boom. It was further said that the company was probably making a tolerable loss or a small profit for its 100 or so shareholders. Neither the government nor INDECO was pleased with this state of affairs.

The first observation to make now is that the company failed to herald development in southern Barotseland.

According to Brett, 'development' is 'a change process characterized by increased productivity, equalization in the distribution of the social product - and the emergence

of indigenous institutions whose relations with the outside world... are characterized by equality rather than by dependence or subordination.<sup>1</sup> Company operations in Barotseland did not bring about any such changes. What is, however, true is that the company facilitated the opening up of the region through the building of a railway and establishment of settlements. The company constructed a railway and heavily invested in it because it was anticipated that, owing to the distances between the mills and the logging sites and also the nature of the forests which rendered costs of extraction very high, profitable exploitation would depend upon a cheap, quick and efficient mode of transport.<sup>2</sup> The company also enhanced the region's money sector through the provision of wage employment to hundreds of people who in turn provided an ever-expanding market for village vendors. But still, it is very difficult, with the available evidence, to conclude that the company's operations led to an improvement in the local people's standards of living.

It was, therefore, looked upon as "a risky venture". This lack of vast

In spite of the above observation, there is little doubt that the company made some profits through exploitation of African labour and through the fact that it was extracting wildly

grown indigenous forests. The directors were not prepared to spend money on afforestation. They argued that the maintenance of the forests was the duty of either the State or the BFF which received the royalties. Another observation to note is that throughout the period under study the company was a private enterprise whose shareholders were mainly settlers resident within the southern African sub-continent. Evidence at hand indicates that neither state nor international capital participated in the running of the company. The company does not seem to have, at any one stage, sought financial assistance from either of the two until much later in 1967 as shown above. It appears international capital itself was not eager to "invade" the company probably because it did not know the life span of the industry. There was also the fear that once the mature trees get exhausted there would naturally follow a long period of no returns as it takes 50-80 years for the young trees to mature. The industry was, therefore, looked upon as "a risky venture". This lack of vast capital, in our view, delayed mechanization and diversification of company operations and forced the company to buy only second-hand machinery.

We note also that there was some conflict between company and state policy towards the future of the forests. One was basically profit-oriented while the other was more concerned with preservation and maintenance to ensure continuity in the Territory's Timber Industries. These state views were enshrined in the Forest Policy (appended) What compounded the issue further was the fact that royalties paid by the company went to the Barotse Paramount Chief and BFF and not to the state. Eventually, however, the company was persuaded to take the onus of fire-protection.

On the basis of the above premises, we are inclined to conclude that the company was only removing Barotseland's timber resources without making a commensurate contribution to the region's real development. Whatever change or "development" took place was only incidental in order to facilitate the extractive operations. This was typical of colonial (and indeed even neo-colonial) capitalist ventures. Priority was given not to the betterment of the autochthonous people, but to that of the business itself and its shareholders. Mulobezi was transformed into a supplier of cheap

labour and timber upon which the company thrived. The company had sown seeds of underdevelopment. Although we do not entirely agree with Kanduza's rather brutal conclusion that through such relations 'labor supplying zones became impoverished,'<sup>3</sup> We can still draw parallels from southern Barotseland. We doubt if a significant saw milling industry could have been established in Barotseland without the railway and vice-versa.

Neither the sawmills nor the railway represented productive capital. Rather, they symbolized extractive capital hence their failure to initiate industrial development in Mulobezi.<sup>4</sup>

The last observation to make is on one of the methods used by the company to ensure maximum returns. Workers' wages came from money raised from the Susman-Wulfsohn stores in Mulobezi and Machili. The money from timber sales was readily repatriated.<sup>5</sup> This modus operandi, in addition to low worker wages, faulty royalty arrangements, absence of a training programme for employees and repeated requests to the Litunga for monopoly rights over Barotse timbers all worked in favour of the ZSM. In spite of its internal weaknesses -

as observed by Keet for instance - and the inability to increase its recovery rate, the company was by

1947 'probably one of the largest hard-wood sawmills south of the Equator.'<sup>6</sup>

Nationalization in 1968 does not seem to have been a welcome move. It probably provided the justification for the exit of the settler shareholders, the last of whom pulled out in 1970. Thence the downfall of the company became (more) imminent. That far, the company had prospered partly by "taking undue advantage of a people lacking in initiative, ambition and industrial acumen." [our emphasis].

GLOSS -113-

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TIMBER ROYALTY:

Money paid to the state, or owner of resources, by a licensee who cuts down a tree so that the state will plant and tend another tree to replace it.

SILVICULTURE: The art of planting and tending trees to ensure regeneration in forestry.

TIMBER:

Unless otherwise defined in any licence, it means the part of any felled or fallen tree which has been cut off, or can be cut off, to provide wood whether sawn, split, hewn, sliced, veneered or otherwise fashioned, which is sound and reasonably straight and which is 1.2 metres or more long, and 30.0cm or more in diameter under bark.

GLOSSARY (cont'd)

CALATA: The origin of this term is not quite certain but most probably Sotho. It refers to a large building such as a dormitory or barrack for housing large numbers of people. This was the type of structure found at labour rest camps.

CAPITAO: A corruption of the English noun captain. Here it is used to refer to a group leader or supervisor of a work gang.

PIULU: Origin as for calata. In our text it refers to a labour rest camp or site where calatas were built.

RECOVERY RATE: The amount of reclaimed or utilizable timber which is actually milled and sold as a percentage of the total extracted from the forest. For example, a recovery rate of 30% out of the total volume felled means only that much was usable while 70% was waste wood comprising off cuts, bark and saw dust. Recovery rate reflects the efficiency of the millers.

TIMBER ROYALTY: Money paid to the state, or owner of resources, by a licensee who cuts down a tree so that the state will plant and tend another tree to replace it.

SILVICULTURE: The art of planting and tending trees to ensure regeneration in forestry.

TIMBER: Unless otherwise defined in any licence, it means the part of any felled or fallen tree which has been cut off, or can be cut off, to provide wood whether sawn, split, hewn, sliced, veneered or otherwise fashioned, which is sound and reasonably straight and which is 1.2 metres or more long, and 30.0cm or more in diameter under bark.

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APPENDIX A  
IMPORTANT TIMBER, FRUIT AND OTHER TREES PROTECTED UNDER THE BAPOTSE FOREST SCHEME

TIMBER TREES

LOCAL (LOZI) NAME	SCIENTIFIC NAME	ENGLISH EQUIVALENT	USES
1. Mukusi/Mkusi	<i>Plurijuga</i>	Rhodolia tree Redwood	super-parquet, vaseer furniture
2. Mukwe/AuTembe	<i>Procarrus argolemsis</i>	Bloodwood tree	plaque engineer, boats, cabin furniture, cabinet making.
3. Mupumens	<i>Landryaragna caudatum</i>		
4. Mutuya	<i>Myrsine spicifolia</i>	Mvase tree (sic)	making timber, hat binding, rope fibres fish nets.
5. Mwande	<i>Azadirachta indica</i>	Beau or pod Mahogany	Building houses, bridges, canoes; T Traditional medicines.
6. Mubanga	<i>Persea angolensis</i>		Canoes; premier carving material of 18; Traditional medicine.
7. Mwangula	<i>Pterocarpus</i>		handles for brooms, axes, etc.

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IMPORTANT TIMBER, FRUIT AND OTHER TREES PROTECTED UNDER THE BAROTSE FOREST SCHEME

TIMBER TREES	LOCAL (LOZI) NAME	BOTANICAL NAME	ENGLISH EQUIVALENT	SOME MAJOR USES
1. Mubula		<i>Persea nobola</i>	Hissing/cork Tree	rafters, hut poles and
1. Mukusi/Mkusi		<i>Baikiaea Plurijuga</i>	Rhodesia Teak or Redwood	sleepers, parquet, veneer, furniture
2. Mukwa/Mulombe		<i>Pterocarpus angolensis</i>	Bloodwood tree	parquet, veneer, boats, coffins, furniture, cabinet-making.
3. Mupumena		<i>Entandrophragma caudatum</i>	-	
4. Murtuya		<i>Brachystegia spiciformis</i>	Msasa tree (sic)	mining timber, hut building; root fibre for fish nets.
5. Mwande		<i>Azalia quanzensia</i>	Bean or pod Mahogany	Building houses, bridges, canoes; Traditional medicines.
6. Mubanga		<i>Pericopsis angolensis</i>	-	canoes; premier carving wood of NR; Traditional medicine.
7. Mwangula		<i>Pterocarpus antunesii</i>	-	ears, handles for brooms, hoes, axes, etc.

## APPENDIX A (cont'd)

## FRUIT TREES

LOCAL (LOZI) NAME	BOTANICAL NAME	ENGLISH EQUIVALENT	SOME MAJOR USES
1. Mubula FISH POISON (BULEMBE)	Parinari mobola	Hissing/cork Tree	rafters, hut poles and dug-out canoes.
2. Muhamani	Dialium englerianum	--	rough furniture
3. Muhuluhulu	Strychnos cocculoides	Kaffir Orange; Klapper	Toolhandles
4. Mumonsomso/Mumbole	Vangueriopsis lanciflora	Wild medlar Tree	--
5. Muhwahwa	Strychnos pungens	Bush orange	--
6. Mungongo	Ricinodendronii rautanenii	--	Handicrafts, box shooks, paper paint, varnish, stomachache medicine, thunderbolt proof.
3. Mushakashela	Swartzia madagascariensis	Snake Bean or Iron-heart tree	
7. Musuku	Uapaca kirkiana	--	
8. Mutobo	Isoberlinia tomentosa	--	
9. Muzauli	Copaifera coleosperma	Rhodesian mahogany	cabinet-making
10. Muzinzila	Berchemia discolor	--	--

APPENDIX A (cont'd)

FISH POISON (BULEMBE)

LOCAL (LOZI) NAME	BOTANICAL NAME	ENGLISH EQUIVALENT	SOME MAJOR USES
1. Munga	Acacia albida	winter thorn	canoes, tool handles, rough furniture.
2. Muyenye	Amblygonocarpus andogensis		sleepers and heavy construction.
3. Mushakashela	Swartzia madagascariensis	Snake Bean or Iron-heart tree	Turnery, carving; cabinet work and inlay; Traditional medicines.

N.B. There are other large areas of Mukusi forest more remotely situated in Barotseland, of which the possibilities of exploitation are doubtful even today.

APPENDIX B

FORESTS COVERED BY ZSM CONCESSIONS BY 1935

(i) Exploited Forests

CATEGORY	NAME OF FOREST	TYPE OF FOREST	APPROX. AREA IN SQUARE KM.
Crown Lands	Livingstone North	Sand Bush	181.3
" "	Katombora	Semi-Mutemwa	25.9
" "	Bombwe	Mutwemwa	20.7
			227.9
Native Reserves	Malanda	Semi-Mutemwa	77.7
" "	Mapanda	"	25.9
" "	Siburu	Mutemwa	67.3
(ii) Unexploited Forests			
Crown Lands	Cattle Cordon	Mutemwa	67.3
" "	Tunga	"	20.7
			88.0
Native Reserve	Nachitwe	Mutemwa	31.1
Barotseland	Lonze (Yeta's)	"	31.1
"	Sesheke (various)	"	518.0
			625.7
	GRAND TOTAL EXPLOITED AND UNEXPLOITED FORESTS =		<u>1,305.4</u>

N.B. There are other large areas of Mukusi forest more remotely situated in Barotseland, of which the possibilities of exploitation are doubtful even today.

APPENDIX C (cont'd)

CLASS AND BUILDERS' NUMBER	WORKS NUMBER	FINAL RUNNING NUMBER	YEAR PURCHASED BY ZSM	PURCHASE PRICE (KWACHA)	FINAL R R NUMBER AND/OR NOTES
7TH 4-8-0 NRC 1900	5791	69	1926	4,000	76 Worked for ZSM from July 1926 to September, 1972.
"	5792	70	1925	4,000	-
"	5797	71	1934	1,000	In service from 1915 Nov - up to 1979.
8TH, 4-8-0 NBLC. 1904	16223	60	1956	-	-
8TH, 4-8-0 NBLC. 1910	19356	66	1938	4,000	73 By 1973 still in service at Livingstone
"	19357	67	1940	4,000	74

APPENDIX C (cont'd)

CLASS AND BUILDERS' NUMBER	WORKS NUMBER	FINAL RUNNING NUMBER	YEAR PURCHASED BY ZSM	PURCHASE PRICE (KWACHA)	FINAL RR NUMBER AND/OR NOTES
8TH, 4-8-0 NBLC. 1910	19358	68	1940	4,000	75
"	19359	69	1938	-	76
9TH, 4-8-0 NBLC. 1912	19754	91	1964	2,400	-
"	19822	96	1963	2,400	-
9TH, 4-8-0 BPC. LTD. 1914	5918	109	1964	2,400	In service from 1915 Nov - up to 1979.
9TH, 4-8-0 NBLC. 1917	21475	112	1963	2,400	By 1973 still in service at Livingstone mill as stationary boiler.

SOURCE: E.D. HAMMER, 'Steam Locomotives of RR, 1892-1979' (1981).  
Unpublished private Manuscript, NWC., Livingstone.

ZAMBESI SAW MILLS, LIMITED

MULOBESI MILL  
REGISTRATION CARD

No

MILL No.		IDENTITY CERT.	
NAME	<i>Malumino</i>	REASON for DISCHARGE	<i>R/SE/</i>
BOMA	<i>Senanga</i>	HUT No.	<i>164</i>
CHIEF	<i>Kikondwama</i>	AGE	
VILLAGE	<i>Mulya</i>	WORK	<i>Drilling</i>
TRIBE	<i>Mukwandi</i>	MARRIED or SINGLE	
CONTRACT	<i>T. TO T</i>	DECEASED	
ENGAGED	<i>5. 6. 34</i>	DISCHARGED	
STARTING RATE	<i>10/-</i>	DESERTED	

INCREASES					INCREASES		
Date	By	From	To	Date	By	From	
12 JUN 1934	1/-	31/6	32/6	24.8.49	1/-	52/-	
15 JAN 1945	1/-	32/6	33/6	2.3.51	1/-	51/-	
18 AUG 1945	1/-	33/6	34/6				
18 JAN 1946	7/6	34/6	10A 42/-				
2/10/46	1/-	42/-	112 43/-				
2/1/47	2/6	S 43/-	45/6				
4/9/47	1/-	45/6	122 46/6				
3.4.48	1/-	46/6	128 47/6				
MAY 10 1949	2/6	S/S 47/6	50/-				
17/7/48	2/-	50/-	52/-				

GENERAL REMARKS:

*3/9/49 wife pass. 7/12/48 mwanza pass. 23/5/49 again*  
*28.1.46 paid leave*  
*14 aug 1951 1950 R.L. Engaged @ 40/-*  
~~*Just before paid a*~~

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
------	------	------	------	-----	------	------	------	-------	------

**TICKET STAFF RECORD** ZAMBESI SAW MILLS No. 4620

**CLASS I**

Z.S.M. No. <b>4620</b> Contract <b>MONTHLY</b>	Name <b>LUKONGA THOMAS</b>	Village <b>MBUKU</b>
Department <b>POLICE CONSTABLE</b>	I.C. No. <b>R/KL/349</b>	Date Passed By M.O. <b>22-11-43</b>
Starting Rate	District <b>KALABO</b>	Height Weight
Date Engaged <b>22-11-43</b>	Tax Folio No.	Physical Peculiarities
Date Discharged	Tribe <b>MUMBOWE</b>	Married or Single
Reason For Discharge	Chief <b>MANYIMA</b>	Name of Wife

Type of Increase	Date or Tkt. No.	From	To	Type of Increase	Date or Tkt. No.	From	To	Type of Increase	Date or Tkt. No.
<b>CLASS I GRADE A</b>	<b>85/64</b>	<b>128/110</b>	<b>171</b>						

**REGISTRATION CARD** ZAMBESI SAW MILLS (1948) LTD. Z.S.M. No. 4620

Z.S.M. No. <b>4620</b>	Contract <b>T. 10 T</b>	Name <b>Lukonga Thomas</b>	Village <b>MBUKU</b>
Department <b>1<sup>st</sup> Liee Police</b>	I.C. No. <b>2/114/349</b>	Date Passed By M.O.	
Starting Rate <b>14/6</b>	District <b>Kalabo</b>	Height	Weight
Date Engaged <b>22.11.43</b>	Tax Folio No.	Physical Peculiarities	
Date Discharged	Tribe <b>1<sup>st</sup> Lumbowe</b>	Married or Single	
Reason For Discharge	Chief <b>1<sup>st</sup> Manyima</b>	Name of Wife	

Type of Increase	Date or Tkt. No.	From	To	Type of Increase	Date or Tkt. No.	From	To	Type of Increase	Date or Tkt. No.
	<b>22.9.58</b>	<b>1 G.</b>	<b>-</b>	<b>50/</b>	<b>13/11/60</b>	<b>299</b>	<b>61/</b>	<b>62/</b>	<b>25-6-62</b>
	<b>9/12/58</b>	<b>4 G.</b>	<b>50/</b>	<b>51/</b>	<b>9-4-61</b>	<b>359</b>	<b>62/</b>	<b>63/</b>	<b>12.11.62</b>
	<b>11.7.59</b>	<b>11 G.</b>	<b>51/</b>	<b>52/</b>	<b>16/5/61</b>	<b>369</b>	<b>63/</b>	<b>65/</b>	<b>8-7-63</b>
	<b>16/12/59</b>	<b>9 17 G.</b>	<b>52/</b>	<b>53/</b>	<b>15/9/61</b>	<b>419</b>	<b>65/</b>	<b>66/</b>	
	<b>Sp. Inc.</b>	<b>9 17 16 1/2 G.</b>	<b>53/</b>	<b>60/</b>	<b>1-12-61</b>		<b>70/</b>	<b>71/</b>	
	<b>2.6.60</b>	<b>23 G.</b>	<b>60/</b>	<b>61/</b>	<b>13-2-62</b>	<b>479</b>	<b>70/</b>	<b>71/</b>	

# ORAL CONTRACT OF SERVICE

Name of Employer: ZAMBESI SAWMILLS (1948) LTD.  
 Address of Employer: P.O. Box 41 Livingstone  
 Employer's Occupation: SAWMILLERS

## PARTICULARS OF EMPLOYEE

Name		Number (ZSM)	
Sex	Nat. Reg. No.	Grade/Class	
Nationality		Type of Contract	
Date Engaged		Rate of wages	per
Date Discharged		Wages paid	
Designation		Marital Status	
Department		House or allce.	

## CHANGES IN EMPLOYEES CONDITIONS OF SERVICE

Date	Type of Contract	Rate	Wages paid	Authority

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER

## EMPLOYMENT RECORD

4617

MARDON 75423-9/10/64

GENERAL DATA		STATUTORY DATA	
Name	<i>Melomino Muliya</i>	District	<i>Senanga</i>
Number	<i>4343 4617</i>	Chief	<i>Lubondema</i>
Class	<i>1</i>	Ticket/ Salary Grade	<i>1</i>
Date Engaged	<i>5/6/34</i>	Discharged	<i>11 AUG 1966</i>
Department	<i>Mill Staff Personnel</i>	Date passed by M.O.	<i>5/6/34</i>
Designation	<i>Firewood Remover</i>	Physical Peculiarities	
Starting Rate	<i>10/-</i>		
	per Ticket/Month		

**RESIGNED**

Date	Increase or Promotion	To	Authority	Date	Increase or Promotion	To	Authority
<i>18/7/60</i>	<i>Increase</i>	<i>129/- 6/-</i>					
<i>26/3/65</i>		<i>150/-</i>					

# Forest Department

## ANNUAL REPORT FOR THE YEAR, 1968

### ZAMBIA'S FOREST POLICY—A SUMMARY

To carry out in each district forest surveys to determine the district's forest resources, the forest areas needed to be managed for land protection and for local and industrial supplies of forest produce, and the forest plantations which are needed, so that the forest estate required can be put under Government control.

To carry out all necessary research work on the ecology, protection, management and restocking of indigenous forest areas, on the establishment, protection and management of plantations and on the protective role of forests.

To carry out all necessary research on the exploitation of indigenous and plantation timbers, on the properties, seasoning, sawmilling, preservation and working qualities of these timbers, and, in co-operation with other interested organisations, to carry out necessary research and development work on timber engineering and on supplies for wood-based industries.

To provide tree seed for the Republic's plantations by the establishment of seed stands and seed orchards and by collection and purchase.

To place under Government control sufficient forest areas in each district to supply the forest produce required for people's homes, farms and local industries, and to provide for the proper management of these forest areas.

To place under Government control land for forest plantations needed to provide forest produce for people's homes, farms and local industries in districts where indigenous forest areas are unable to meet local needs, and to establish and manage these plantations.

To place under Government control and to manage those forest areas needed to supply the Republic's industries with their requirements of indigenous timber and, where possible, to supply timber for export.

To place under Government control land for forest plantations needed to supply the Republic's industries with their requirements of plantation timber, and to establish and manage these plantations.

To make arrangements for the cutting and marketing of indigenous and plantation timber.

To supply indigenous and plantation timber for industrial and local needs at an economic price.

To place under Government control, and to manage forest areas needed to protect the land against floods, erosion and desiccation and to maintain the flow of rivers.

To integrate the Republic's forest areas and plantations in a wise system of land use, and to co-operate with other organisations in the development and protection of the Republic's natural resources.

To provide an extension service in beekeeping and in the production of beeswax and honey, based on research and development work on beekeeping under Zambian conditions.

To advise and encourage local authorities and interested organisations and private persons in the practice of sound forestry.

To spread among the people of Zambia an understanding of forestry.

To provide opportunities for technical training for those engaged in forest work.

APPENDIX F

AVERAGE NUMBER OF AFRICANS EMPLOYED IN NORTHERN RHODESIA BY SECTOR IN SELECTED YEARS

YEAR	GOVT EMPLOYMENT	AGRICULTURE	MINES	RHODESIA RAILWAYS	DOMESTIC SERVICE	ZSM	OTHER	TOTAL
1927	3,708	16,062	9,113	3,223	7,482	-	3,726	
1928	2,979	15,600	10,747	3,500	8,431	-	9,721	57,162
1929	4,777	10,055	16,584	4,399	8,832	3,300	12,032	59,979
1930	5,101	10,885	21,839	6,808	12,470	3,300	13,375	73,778
1931	8,146	10,508	9,323	3,204	16,315	3,000	19,101	69,597
1932	7,580	6,530	5,503	9,666	11,966	2,933	12,476	56,654
1933	4,582	5,624	8,052	1,582	9,335	1,600	8,317	39,092
1934	4,111	8,981	14,617	1,592	10,388	3,400	9,235	52,324
1935	8,023	10,033	16,464	1,500	10,296	3,800	10,821	60,937
1949	6,295	20,300	38,140	6,100	2,969	39,015		126,818

(a) Includes Forestry; (b) Agriculture alone; (c) As Transport and Communications includes manufacturing, Building and Construction, Road Works and Other Industries.

APPENDIX F (cont'd)

YEAR	GOVT EMPLOYMENT	AGRICULTURE	MINES	RHODESIA RAILWAYS	DOMESTIC SERVICE	ZSM	OTHER	TOTAL
1936	5,726	9,155	15,137	3,621	10,142	3,700	9,681	57,162
1937	-	9,000	22,500	-	10,000	4,000	-	-
1938	-	9,000	23,754	-	10,000	4,136	-	-
1946	7,700	28,200 (a)	31,500	6,100 (c)	17,500	347	30,300	121,647
1947	7,700	15,000 (b)	32,772	4,000 (c)	17,500	3,235	26,700	106,907
1948	8,000	16,000	36,000	4,000 (c)	18,000	3,054	40,500	125,554
1949	6,295	20,300	38,140	6,100	23,000	2,969	30,015	126,818

(a) Includes Forestry; (b) Agriculture alone; (c) As Transport and Communications includes manufacturing, Building and Construction, Road Works and Other Industries.

1956	-	3994	(8028) +	3300	36115	-	-	-
1957	1629	741	(12,425) +	6118	16689	24.8	24.8	24.8
1958	1212	365	3741	5153	19317	35.1	35.1	35.1
1959	164	430	6354	5574	19317	35.1	35.1	35.1

APPENDIX 5 (cont'd)  
APPENDIX 5

TABLE SHOWING ZSM (1948) TIMBER SALES TO MAIN CLIENTS. (VOLUME IN CUBIC METRES)

YEAR	RAILWAY SLEEPERS		MINING SLEEPERS		OTHER	TOTAL	APPROXIMATE PERCENTAGE OF TOTAL SOLD TO SA
	RR	SAR	SA	COPPERBELT			
1948	4829	89	7921	1668	5708	20215	39.6
1949	5422	26	7711	2429	5327	20915	37.0
1950	4944	-	5264	1996	8317	20521	25.7
1951	4318	-	6961	3042	8820	23141	30.1
1952	5627	-	6887	3612	8025	24151	28.5
1953	4268	619	6982	1505	6134	19508	39.0
1954	1698	941	10313	2448	5380	20780	54.1
1955	3816	2695	5521	2763	6618	21413	38.3
1956	-	3994	(8028) <sup>+</sup>	-	10182	22204	-
1957	1629	741	(12,425) <sup>+</sup>	-	5320	20115	-
1958	1212	365	3741	5153	6118	16589	24.8
1959	164	430	6354	5574	6795	19317	35.1

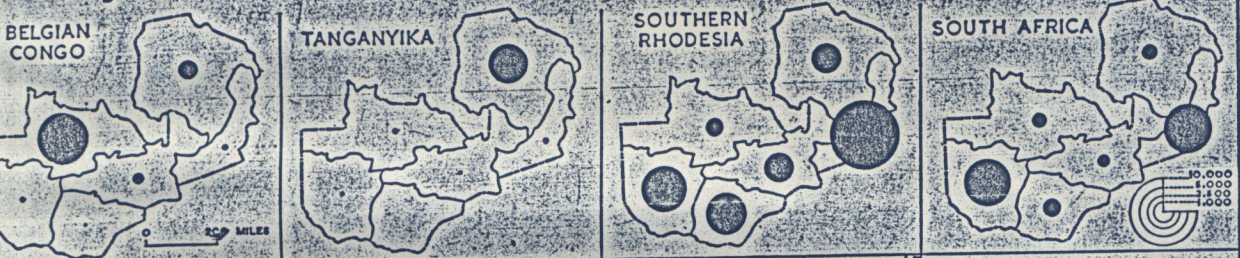
APPENDIX 6 (cont'd)

YEAR	RAILWAY SLEEPERS		MINING SLEEPERS		OTHER	TOTAL	APPROXIMATE % OF TOTAL SOLD TO SA
	RR	SAR	SA	COPPERBELT			
1960	798	-	5542	8431	7728	22499	24.6
1961	2071	-	6578	7004	7837	23490	28.0
1962	1062	-	8723	5560	5832	21177	41.1
1963	-	-	11227	5211	8319	24757	45.3
1964	-	-	9110	3212	8019	20341	44.8
1965	-	-	10805	3584	7132	21521	50.2
1966	2092	-	9014	5367	5188	21661	41.6
1967	598	467	9710	3650	4258	18683	54.4
1968	1779	-	10319	3705	5253	21056	49.0

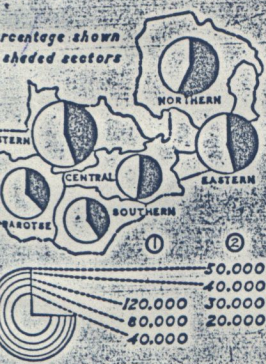
NOTES + Figures given for mining sleepers represent the total for both SA and Copperbelt.

SOURCE: NR. Forest Department, Annual Reports for the Years 1948-68.

*Origin of Northern Rhodesian Africans employed outside Northern Rhodesia*



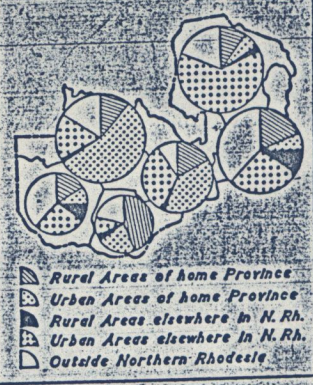
*Percentage of Northern Rhodesian African Taxpayers employed for wages*



- ▲ Northern Rhodesia Government rest camps and hostels
- Ulere depots, staging camps, and food stations
- W.N.L.A. district offices and recruiting stations



*Location of Employment of Northern Rhodesian African Taxpayers*



*Origin of Africans employed in Northern Rhodesia*

