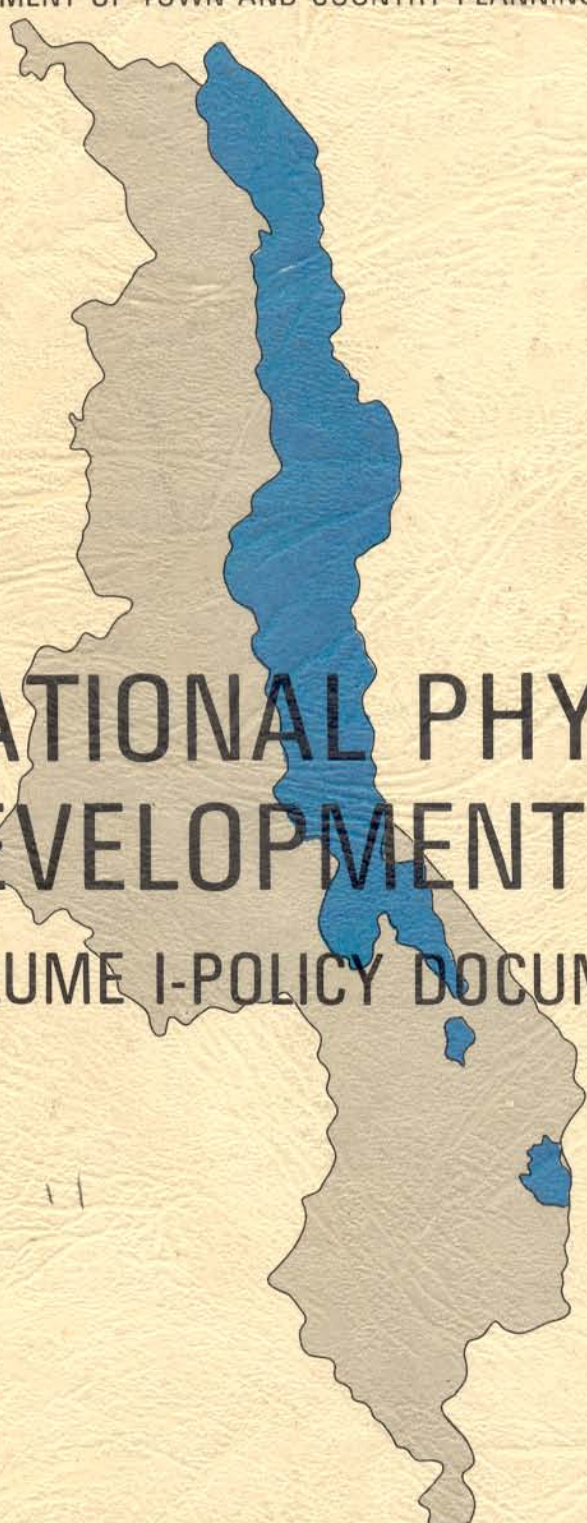




REPUBLIC OF MALAWI

OFFICE OF THE PRESIDENT AND CABINET  
DEPARTMENT OF TOWN AND COUNTRY PLANNING



**NATIONAL PHYSICAL  
DEVELOPMENT PLAN**  
VOLUME I-POLICY DOCUMENT

NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
UNDP/UNCHS (HABITAT) PROJECT MLW/79/012

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DEPARTMENT OF TOWN AND COUNTRY PLANNING

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VOLUME I - POLICY DOCUMENT

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MAY 1987

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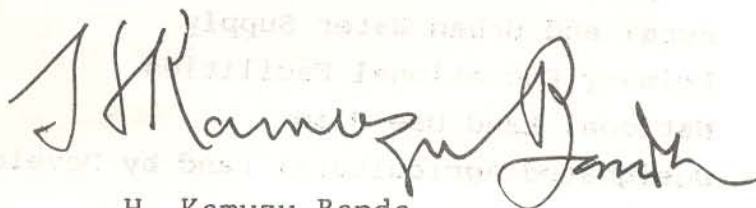
## FOREWORD

Since Malawi attained independence on the 6th July, 1964, efforts to improve the standard of living of the people and to achieve rapid economic development have been paramount and intensified over the years. One of the fundamental national development policy objectives is that the fruits of social and economic development should be spread as evenly as possible in all parts of the country and among all sections of the people.

In our efforts to achieve balanced development within the framework of the fundamental objective stated above, the Government is implementing many development programmes and projects in all parts of the country. From a physical planning point of view, the geographical distribution of these development efforts is of particular importance and, in this respect, the Government has adopted the policy of decentralised development. The first step in the implementation of this policy was the move of the capital city from Zomba to Lilongwe and the designation of Liwonde as an industrial town. Currently, the Secondary Centres Development Programme and the Rural Growth Centres Project are being implemented.

The National Physical Development Plan is intended, inter alia, to provide comprehensive spatial development strategies for achieving balanced socio-economic development.

I commend the Plan to the attention of Government ministries and departments, statutory organisations, the private sector, donors and all those who are charged with the duty of implementing it.



H. Kamuzu Banda  
LIFE PRESIDENT

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## PREFACE

Until the 1970s physical planning in Malawi was limited to local planning only, involving the preparation of plans for urban centres (ranging from cities to rural centres) and selected special areas; and the exercise of development control in statutory planning areas. Today physical planning has assumed a wider role as an integral part of national development policy, and it is applied at national, regional, district and local levels. The first three levels constitute "country planning" and the local level is basically "town planning".

I need not overemphasize the necessity and need for physical planning services in this country. Experience in other parts of the world has clearly shown that the more a country becomes developed the more physical planning services become necessary and essential. Malawi is no exception to this phenomenon because of the reasons stated below. Rapid urbanisation is inevitable and we must plan for it in advance. Rapid socio-economic development is accompanied by intensive competing and conflicting demands for land; the country is already experiencing land pressures in urban centres and in some districts. Public infrastructure investments are long-term and long-lasting hence must be properly located in relation to resources and present and future population distribution. Furthermore, rapid economic development if not properly planned and effectively guided can result in adverse environmental effects, particularly pollution.

The National Physical Development Plan is the first comprehensive plan of its kind in Malawi. It is an attempt to integrate socio-economic planning and development with physical or spatial planning in order (a) to achieve spatially balanced development; (b) to co-ordinate sectoral development; (c) to ensure the proper use of land; (d) to provide for the sound development of service centres and inter-settlement functional linkages; (e) to enhance environmental conservation and preservation; and (f) to provide, generally, guidelines for public and private investment activities.

I wish to stress the fact that the acceptance and adoption of the National Physical Development Plan alone does not guarantee the success of implementation. The actual physical development recommended in the Plan will take several decades to fully achieve through the efforts of the many authorities involved and responsible for its implementation. Thus the successful implementation will depend on their co-operation and commitment to the principles and strategies of the Plan.



S.M. Kakhobwe

SECRETARY TO THE PRESIDENT AND CABINET

## ACKNOWLEDGEMENT

We are indebted to the National Physical Development Plan Project Team (See Appendix 1a) for their concerted effort and co-operation in preparing this Plan. We would like to extend our gratitude to the various government and statutory organisations for their co-operation and valuable contributions in the form of written comments on draft documents of the Plan and consultations.

We acknowledge with thanks the assistance given by the United Nations Development Programme (UNDP), the funding agency, and the United Nations Centre for Human Settlements (Habitat), the executing agency.

The Draft Plan was discussed at a two-day seminar and, we wish to gratefully acknowledge the valuable contributions of all the officials who participated.

It is not possible to mention all those organisations who assisted during the preparation of this Plan. But we should mention the Survey Department, who in spite of heavy commitment to their work programme, deployed some of their staff full-time in cartographic work.



## Acronyms and Abbreviations

ADMARC	- Agricultural Development and Marketing Corporation
BSR	- Background Study Report
DA	- District Administration
DPMT	- Department of Personnel Management and Training
DEPD	- Department of Economic Planning and Development
DRIMP	- District Road Improvement Programme
DOLV	- Department of Land and Evaluation
ESCOM	- Electricity Supply Commission of Malawi
EPU	- Energy Planning Unit
GDP	- Gross Domestic Product
GITEC	- Gitec Consult GMBH
HC	- Health Centre
HP	- Health Post
HSC	- Health Sub Centre
MITCO	- Malawi International Transport Company
MFNR	- Ministry of Forestry and Natural Resources
MR	- Malawi Railways
MOA	- Ministry of Agriculture
MOEC	- Ministry of Education and Culture
MOH	- Ministry of Health
MOTIT	- Ministry of Trade, Industry and Tourism
MOTC	- Ministry of Transport and Communication
MOWS	- Ministry of Works and Supplies
NPDP	- National Physical Development Plan or National Physical Development Plan Project
NRCP	- National Rural Centres Programme
NSO	- National Statistics Office
OPC	- Office of the President and Cabinet
PHC	- Primary Health Centre
PHAM	- Private Hospital Association of Malawi
PLAN, THE	- National Physical Development Plan
RGC	- Rural Growth Centre
SCDP	- Secondary Centres Development Project
TCPD	- Town and Country Planning Department
TPU	- Transport Planning Unit/DEPD

## INTERPRETATION

### Policy, Objectives, Strategies

The use of words such as "objective", "goals", "strategies", and "policies" always creates semantic problems or arguments, sometimes they are used inter-changeably.

In this Document **policy** means a course of action or general plan of action (to be) adopted by the Government. The (recommended) policies are presented as **objectives** (that is, purposes to be attained) and **strategies** (that is, ways and means of achieving the objectives).

### The use of shall, Should, Will and May

For the purpose of the Plan the word "shall" expresses an imperative course of action; "should" expresses a professional duty and an advisable course of action; "will" expresses an expected result; and "may" expresses a permissive course of action.

### Figures

The scale of the Figures presented in this Document is not appropriate for measuring boundaries or areas accurately.

## 1.0 INTRODUCTION

This National Physical Development Plan (the Plan), the first policy document of its kind in Malawi, deals with issues outlined below (1.1.1 - 1.1.4) and, generally, the spatial development aspect of national socio-economic development. While socio-economic conditions and sectoral development issues have been taken into consideration, the Policy Plan itself deals only with the spatial, geographical or physical planning aspects of sectoral development policies. The Plan should be considered as being supportive of and complementary to the development efforts of all Government Ministries, Departments and Statutory Organisations. The Plan provides guidelines for sectoral development and a spatial framework for the co-ordination of physical, social and economic development. There are, of course, other matters in the Plan which fall within the jurisdiction of the Town and Country Planning Department and are governed by the Town and Country Planning Act.

### 1.1 Integration of Social, Economic and Physical Development

#### 1.1.1 Spatially Balanced Development

The Government's Statement of Development Policies (1971-1980) says that "the fruits of development (should be) spread as evenly as possible throughout all sections of the population and all parts of the country." Several official documents also have stated that the country should strive for a spatially balanced development in terms of both regional and urban-rural composition. The National Rural Development Programme and the National Rural Centres Programme are directed towards this objective.

An "urbanization policy" emphasizing the diffusion of urbanization and the benefits of economic opportunities to rural areas has been in effect since the mid-sixties. The development of the new capital city, Lilongwe, the creation of Liwonde as an industrial growth centre and the Secondary Centres Development Project are examples.

#### 1.1.2 Human Settlements and Service Centres

Development in a predominantly agricultural country with a large rural population, such as Malawi, depends among other things on functional relationships between urban and rural settlements. It calls for the development of a hierarchy of urban and rural service centres, in a decentralized pattern, in order to provide the necessary socioeconomic functions to support agricultural and rural development throughout the country. The goal of increased agro-productivity and equity in income distribution cannot be attained effectively without an integration of rural and urban functions.

#### 1.1.3 Spatial Co-ordination of Sectoral Development

Malawi's development since independence in 1964 has been accompanied by unprecedented massive investment in basic infrastructure, development programmes and projects; that is, transport, education and health facilities, housing, power, telecommunications, water, commerce and trade, industry, agriculture, administration, etc. These investments, however, are a product of independent decisions and plans by sectoral ministries, statutory organisations, the private sector and foreign aid donors.

A considerable proportion of these development programmes/projects have been carried out (on the ground) without spatial co-ordination within the context of a national physical development plan. As a result, sectoral development projects have been sited to satisfy only the projects' locational requirements (land, raw material, labour, transportation, electricity, water, markets, etc.).

It appears that very little or no thought has been given to the likely existence of an alternative location which would have both satisfied the locational requirements and complemented other development efforts, induced growth or transformation of a deprived rural area, and/or supported the government's policy of decentralization. In other cases development projects have been carried out without proper locational studies to ensure that water, for example, was or could be made available.

#### **1.1.4 The Use of Land**

There is a need for a national land use policy which will (a) balance space requirements and regulate competing demands for land for agriculture, forestry, national parks, industry, human settlements and related infrastructure; (b) in particular, designate the best arable lands for agriculture, the backbone of Malawi's economy, and (c) provide for the protection of the environment.

## 1.2 Purpose and Scope of the Plan

### 1.2.1 Objectives

- (a) To integrate all aspects of physical planning into national programmes of development so that the physical development of Malawi is accomplished with the optimal use of all national resources, both human and physical.
- (b) To provide a spatial framework for the co-ordination and implementation of sectoral programmes and development projects.
- (c) To facilitate the promotion of a more spatially balanced economic growth that will ensure an optimal distribution of productive activities and population.
- (d) To promote the development of a system of urban and rural settlements and a hierarchy of service centres that will be in conformity with the location of natural and human resources and permit the provision of infrastructure and other facilities on an economic basis.
- (e) To provide guidelines for the development of a transportation network to strengthen the functional links between rural and urban settlements with respect to the movement of people, commodity flows, the delivery of services, and general socioeconomic activities.

(f) To provide a spatial framework for the provision of physical infrastructure and social services in relation to the distribution of productive activities and population.

(g) To rationalise and promote the optional use of land and, in particular, the preservation of the best arable lands.

### 1.2.2. Major Components of the Plan

The Plan is published in two separate volumes. Volume I is the Policy Document consisting of a summary of background information, which outlines the basis for the Plan, physical planning and development proposals, and related policy statements and figures. Volume II, the Background Study Report, consists of an analysis of existing socioeconomic and physical conditions, projections of future growth and development trends, and the implication (of the existing conditions) for the preparation of the Plan.

The major thrust of the Plan is illustrated in Figure 1-1. The various components are considered in the following sections of the Plan:

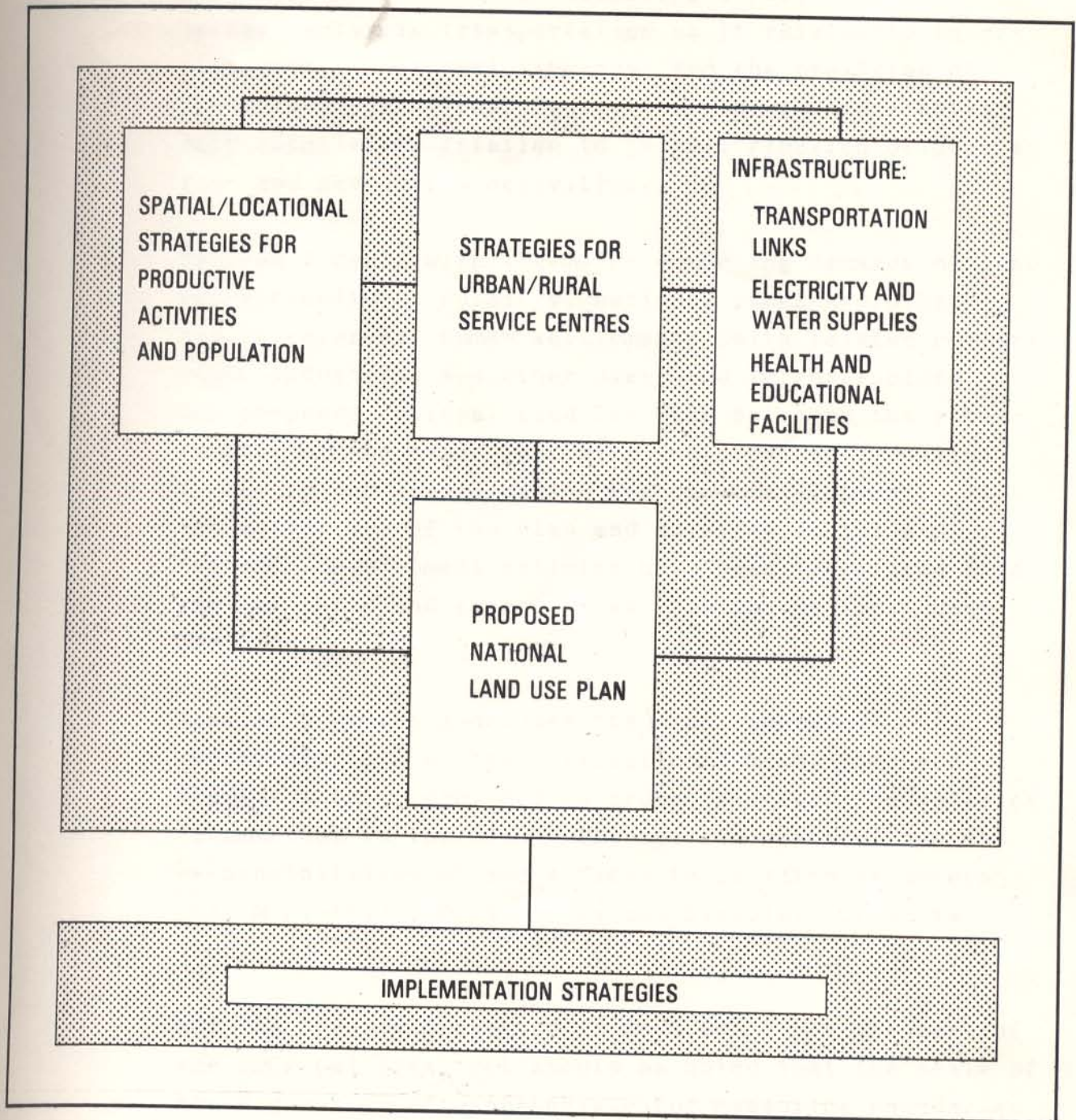
Section 2 deals with spatial/locational strategies for productive activities (agriculture, industry and tourism), employment and population. The spatial strategies are directed towards minimizing the disparities in the distribution of productive activities and employment, and distributing the future population in relation to the location of resources.

Section 3 is concerned with urban and rural service centres. It (a) deals with the functions of service centres; (b) provides guidelines for the location of service centres and facilities; (c) establishes the size of the service area or catchment area of each level of service centre, on the basis of the distance factor in the accessibility of a centre; (d) recommends the threshold population required in the service area that can make the provision of services and facilities viable; (e) presents a design for a balanced distribution of service centres; and (f) recommends priorities for the promotion of the various levels of service centres.



FIGURE 1-1

MAJOR THRUST OF THE NATIONAL PHYSICAL DEVELOPMENT PLAN



Section 4 deals with the following aspects of infrastructure: transportation as it relates to inter-settlement functional linkages; and the provision of health and educational facilities, water, and electricity supplies in relation to the distribution of population and productive activities.

Section 5 deals with the major competing demands on land for agriculture, forestry, national parks and other nature reserves, human settlements (with related commercial, industrial and other uses) and infrastructure. The proposed National Land Use Plan balances the requirements of the major land uses and provides a spatial framework for co-ordinating sectoral development. All the objectives of the Plan and existing social and economic development policies have been translated into spatial terms and incorporated into the National Land Use Plan.

Section 6, which concludes the Plan, contains recommendations on the institutional mechanisms and framework to be provided in order to effect the policies recommended in the Plan. The Section also defines the responsibilities of and actions to be taken by Government Ministries, Departments and Statutory Organizations.

All the Figures presented in Sections 2 - 5 are part of the NPDP policies. It should be noted that the scale of the Figures is not appropriate for measuring boundaries or areas accurately.

### 1.2.3 Background Studies: Context for the Plan

The Plan is based on a wide range of analytical studies of existing socioeconomic and physical conditions and on certain assumptions about future growth and develop-

ment trends. The findings of the studies are published separately under the title National Physical Development Plan, Volume 2: Background Study Report. The wide range of subjects covered in the Report includes population growth and characteristics, employment, agriculture, industry, tourism, urbanization, rural and urban settlements and service centres, general land use, land tenure, soil potential and natural physical constraints, population-carrying capacity of the land, major infrastructure, energy (with special reference to wood energy), and the Town and Country Planning Act.

1.2.4 **Planning Process and Consultations with Government Ministries, Departments and Statutory Organizations**

The planning process employed in the preparation of the plan is presented in Figure 1-2. The Figure is self-explanatory, but it should be mentioned that extensive consultations were held with Government Ministries, departments and statutory organisations. Background study reports (presented in Volume II of the Plan) and the Draft Plan were distributed for comments. In addition to the written comments received, a Seminar was held

- (a) To enable ministries, departments and statutory organisations to obtain a better understanding of the major problems and issues relating to the spatial aspects of Malawi's socioeconomic development and in particular sectoral development programmes/plans;
- (b) to present and discuss the major findings of the Background Study Reports and Recommendations of the Plan;
- (c) to offer an opportunity for inter-ministerial exchange of views on the recommendations of the Plan;
- (d) to obtain views and suggestions from high-level officials who have interest in the Plan; and
- (e) to reach a general agreement on the recommended policies/proposals presented in the Plan.

The Plan incorporates the views and written comments submitted by the various ministries, departments and statutory organisations.

## 2. SPATIAL (LOCATIONAL) STRATEGIES FOR PRODUCTIVE ACTIVITIES AND POPULATION

### 2.1 AGRICULTURE

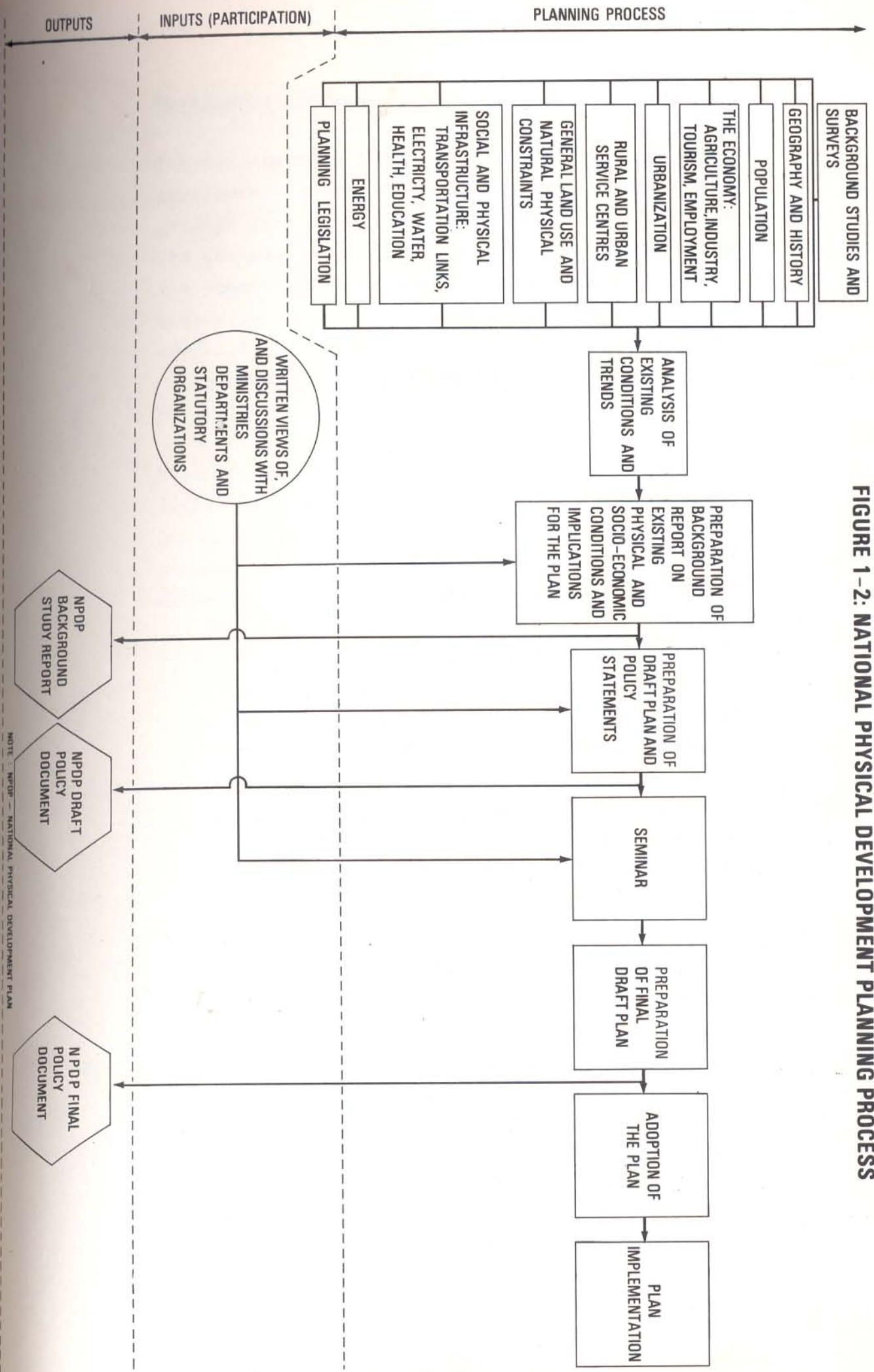
#### 2.1.1 Background Information and Major Issues

Agriculture is the backbone of the economy of Malawi: its contribution to the gross domestic product in 1984 was approximately 37.2%; the Agricultural Sector accounted for nearly 90% of the total employment, and K240.6 million or 88.9% of the country's export earnings in 1983. Between 1980 and 1983 the real annual growth rate of the sector was 3.5%. The estate sub-sector of agriculture was the major growth centre, as real output increased by more than 20% between 1981 and 1982. This performance was due to increased production of tea and tobacco. The major export crops in the country include tobacco, tea, sugar and groundnuts.

Recently, 1983-1984, the agricultural sector experienced an increased average growth rate of 6.3% per annum. The smallholder sub-sector accounted for the entire increase in agriculture value added as large scale agricultural output became stagnant<sup>(1)</sup>.

---

(1) Source: EPD, NSO, Treasury and Reserve Bank of Malawi in "Economic Report, 1985"



**FIGURE 1-2: NATIONAL PHYSICAL DEVELOPMENT PLANNING PROCESS**

NOTE: NPDP - NATIONAL PHYSICAL DEVELOPMENT PLAN

## Development Policy

The Government's major policy statement on agricultural development since Independence has always emphasized "a general rise in agricultural productivity to be achieved quickly and using the most economical means" so that the country can achieve its objectives of self-sufficiency in food staples and expansion of agricultural exports<sup>(1)</sup>. This general policy applies to all aspects of agriculture, including animal husbandry, fishery and forestry.

Prior to the mid-seventies, one of the major thrusts of public investments in smallholder agriculture was the introduction of intensive, integrated development programmes which provide infrastructure (roads, markets, water, health facilities), credit facilities, land improvements, extension services, etc. The programmes include: (i) the Lilongwe Land Development Programme; (ii) the Shire Valley Agriculture Development Project; (iii) the Salima Lakeshore Rural Development Project; and (iv) the Karonga Rural Development Project.

In the mid-1970's, it was realised that such intensive and costly capital investments could not be replicated in the other parts of the country within a reasonably short time. The Government consequently considered an alternative strategy, which resulted in the introduction of the National Rural Development Programme (NRDP), a programme directed towards (a) providing agricultural services to a larger segment of the population but concentrating resources on the more immediately productive areas;

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(1) Statement of Development Policies 1971-80

(b) increasing the level of smallholder production through the provision of agricultural inputs and farm services, including marketing and credit services; (c) preserving the natural resources through proper land use, protection and conservation measures; and (d) generally spreading the benefits of rural development more rapidly in order to raise the living standard of the smallholder farmer. For N.R.D.P. activities, the country is divided into eight Agricultural Development Divisions with headquarters at Karonga, Mzuzu, Kasungu, Lilongwe, Salima, Liwonde, Blantyre and Ngabu.

### Existing Agricultural Activities

Agricultural produce in Malawi includes a wide range of crops which are cultivated on small holdings and large commercial estates.

### Smallholder Subsector

The smallholder subsector accounts for over 85% of all agricultural production, meets the country's demand for food staples (maize, beans, groundnuts, sweet potatoes and rice) and provides some surplus for export. Smallholders sell to private traders at the farm, local village markets, district council markets, and the markets in urban areas, and occasionally they dispose of their surplus through barter with other farmers. A majority of smallholders also grow cash crops, such as tea and tobacco, on a commercial basis. Smallholders are also encouraged to grow flue-cured tobacco, tea and sugar under controlled schemes financed with commercial loans. Farming methods are extremely labour intensive. Most farmers work with simple hand tools such as hoes and axes. The use of work oxen and ox-carts is being encouraged. Except for some irrigated rice fields in



the Lakeshore and other low land areas, all farming takes place under rainfed conditions.

### Estates/Plantations

The estate subsector concentrates on tobacco, tea and sugar, which account for about 80% of all exports from the subsector. Cotton, macademia nuts and coffee are also grown by the estate subsector. The bulk of the country's agricultural exports come from this subsector, which has functioned as a principal earner of foreign exchange and stimulated Malawi's development. As of March, 1980 the number of estates totalled 1,108. Of these 524 produced flue-cured tobacco; 556, Burley tobacco; 27, tea and 2, sugar.

### Paid Employment

Employment in the agricultural sector increased from 42,600 in 1969 to 148,300 in 1978 and in the process absorbed a great number of migrant labourers returning from South Africa and Zambia. This translates into an average annual growth rate of 15%. The average number of paid employees in the sector in 1983 was 197,208, representing nearly 51% of the total number of paid employees in the country. The total number of hired workers on the estates in 1983 was between 154,000 and 171,000.

### Areas of major agricultural activities

The following are the areas where major agricultural production takes place:

**Table 2.1.1:  
Major Crop Production Areas**

Crop	District of Occurrence
Tobacco	Mzimba, Kasungu
Tea	Thyolo, Mulanje, Nkhata Bay
Sugar Cane	Chikwawa, Nkhotakota
Groundnuts	Rumphi, Mwanza, Nkhotakota, Karonga, Chitipa
Rice	Chikwawa, Mangochi, Zomba, Machinga, Nsanje, Salima, Karonga
Coffee	Rumphi, Karonga, Chitipa, Dedza
Cotton	Chikwawa, Nsanje, Salima, Ntcheu, Karonga, Nkhotakota
Maize	Chitipa, Rumphi, Mzimba, Kasungu, Mchinji, Ntchisi, Dowa, Lilongwe, Dedza, Ntcheu, Mwanza
Beans	Mzimba, Dedza, Ntcheu, Mwanza, Chikwawa, Nsanje, Mulanje, Thyolo
Rubber	Nkhata Bay
Citrus	Mwanza
Potatoes	Ntcheu, Thyolo, Chiradzulu
Banana	Mulanje, Thyolo, Chiradzulu
Pineapples	Mulanje, Dedza
Wheat	Ntcheu, Ntchisi
Cassava	Nkhata Bay, Nkhotakota

### Agricultural Land

The ability of Malawi to produce food, and the availability of arable land within the various districts for future smallholder agriculture depend on the following factors:

- (a) land suitability for agriculture and land carrying capacity
- (b) natural physical constraints
- (c) future population growth and characteristic
- (d) agricultural land use
- (e) land use densities expressed in terms of persons per square kilometre of arable land
- (f) the proportion of non-farm or urban employment and
- (g) agricultural land use management, farming practice and technology.

This Section deals with (a) while other Sections deal with (b)-(g).

### Land Suitability for Agriculture

Of a total land area of 94,274 Km<sup>2</sup> in the country, 29,278 Km<sup>2</sup> (31.0%) is classified as having a high potential for agriculture; 13,559 Km<sup>2</sup> (14.4%) has medium potential; 9,019 Km<sup>2</sup> (9.6%) has low potential; and 42,418 Km<sup>2</sup> (45.0%) is marginal and unsuitable. See Table 2.1.2.

Of the 29,278 Km<sup>2</sup> of land classified as having high potential for agriculture, the highest proportion is found in the Southern Region, 14,960 Km<sup>2</sup> (51%), particularly in the Districts of Mangochi, Machinga, Mulanje, Chikwawa, Zomba and central Mwanza. The Central Region has 10,306 Km<sup>2</sup> (35%), predominantly in the Districts of Lilongwe, Ntcheu, Dedza, Dowa and Salima. The remaining land with high potential, 4,012 Km<sup>2</sup> (14%), is found in the Northern Region, mainly in the District of Mzimba.

Of the total land of 13,559 Km<sup>2</sup> classified as having medium potential for agriculture, the highest proportion, 7,650 Km<sup>2</sup>, representing about 56%, is found in the Central Region, mainly in the Districts of Kasungu, Mchinji and Lilongwe. The Northern Region has 4,493 Km<sup>2</sup> (33%), mainly in the districts of Mzimba and Chitipa; and the Southern Region has 1,416 Km<sup>2</sup> (11%), mainly in the Districts of Mangochi, Nsanje, Mwanza and Machinga.

Of the total land area of 9,010 Km<sup>2</sup> classified as having low potential for agriculture, the Southern Region has the highest proportion, 3,700 Km<sup>2</sup> (41%) mainly in Machinga District, followed by the Central Region, 3,635 Km<sup>2</sup> (40%), and the Northern Region, 1,684 Km<sup>2</sup> (19%).

Table 2.1.2

Population Carrying Capacity of the Land, by District, Year 2000

District	Total Land Area (Km <sup>2</sup> )		High Agricultural Potential		Medium Agricultural Potential		Low Agricultural Potential		Marginal and Unsuitable Area (Km <sup>2</sup> )	Total Potential Rural Population
	1	2	3	4	5	6	7	8		
Chitipa	4,290	59	18,185	981	141,490	84	9,630	3,166	168,305	
Karonga	3,355	780	240,411	166	23,942	127	13,048	2,282	277,401	
Nkhata Bay	4,088	52	16,027	21	3,029	415	42,637	3,600	61,693	
Rumphhi	4,767	290	89,384	426	61,442	64	6,575	3,987	157,401	
Mzimba	10,430	2,831	872,568	2,899	418,125	994	102,123	3,706	1,392,817	
<b>Northern Region</b>	<b>26,930</b>	<b>4,012</b>	<b>1,236,575</b>	<b>4,493</b>	<b>648,029</b>	<b>1,684</b>	<b>173,014</b>	<b>16,741</b>	<b>2,057,618</b>	
Kasungu	7,878	370	114,041	3,251	468,894	573	58,870	3,684	641,805	
Nkhotakota	4,259	207	63,801	643	92,740	732	75,205	2,677	231,747	
Ntchisi	1,655	214	65,959	530	76,442	81	8,322	830	150,723	
Dowa	2,998	1,232	379,726	368	53,077	636	65,342	762	498,145	
Salima	2,239	1,189	366,473	0	0	480	49,315	570	415,788	
Lilongwe	6,159	3,652	1,125,616	1,168	168,462	64	6,575	1,275	1,300,653	
Mchinji	3,356	116	35,753	1,571	226,587	398	40,890	1,271	303,230	
Dedza	3,624	1,497	461,404	119	17,163	16	1,644	1,992	480,211	
Ntcheu	3,424	1,829	563,733	0	0	655	67,295	940	631,027	
<b>Central Region</b>	<b>35,592</b>	<b>10,306</b>	<b>3,176,507</b>	<b>7,650</b>	<b>1,103,365</b>	<b>3,635</b>	<b>373,459</b>	<b>14,001</b>	<b>4,653,331</b>	
Mangochi	6,272	2,925	901,541	610	87,981	191	19,623	2,546	1,009,145	
Machinga	5,964	2,846	887,192	207	29,856	1,002	102,945	1,909	1,009,993	
Zomba	2,580	1,805	556,336	0	0	170	17,466	605	573,801	
Chiradzulu	767	713	219,760	0	0	0	0	54	219,760	
Blantyre	2,012	660	203,425	88	12,692	617	63,390	647	279,507	
Mwanza	2,295	1,053	324,555	211	30,433	357	36,678	674	391,666	
Thyolo	1,715	332	102,329	0	0	586	60,205	797	162,534	
Mulanje	3,450	2,173	669,760	0	0	327	33,596	950	703,356	
Chikwawa	4,755	1,821	561,267	68	9,808	450	46,233	2,416	617,308	
Nsanje	1,942	632	194,795	232	33,462	0	0	1,078	228,256	
<b>Southern Region</b>	<b>31,752</b>	<b>14,960</b>	<b>4,610,959</b>	<b>1,416</b>	<b>204,231</b>	<b>3,700</b>	<b>380,137</b>	<b>11,676</b>	<b>5,195,327</b>	
<b>Malawi</b>	<b>94,274</b>	<b>29,278</b>	<b>9,024,041</b>	<b>13,559</b>	<b>1,955,625</b>	<b>9,019</b>	<b>926,610</b>	<b>42,418</b>	<b>11,906,276</b>	

The remaining land area of 42,418 Km<sup>2</sup> is classified as marginal and unsuitable. It includes natural forest and nature reserves, unsuitable for agriculture; marsh; and dry-season grazing; in some areas with potential for rice cultivation. Of this amount 16,741 Km<sup>2</sup> (40%) is found in the Northern Region, evenly distributed throughout the districts. The Central Region has 14,000 Km<sup>2</sup> (33%) mainly in the Districts of Kasungu and Nkhosakota; and the Southern Region has 11,676 Km<sup>2</sup> (27%) mainly in the Districts of Mangochi and Chikwawa.

#### Land Carrying Capacity and the Smallholder

Analysis of the population-carrying capacity of land indicates that the land can support a rural population of 11,906,276 persons. This number is more than the projected rural population of 9,248,300 (Year 2000). See Table 2.1.2 and Table 2.4.3. in Section 2.5. No vacant land will be available for agriculture by year 2000 in the Districts of Thyolo, Mulanje, Zomba, Blantyre, Chiradzulu, Dedza, Ntchisi and Nkhata Bay. By contrast, large amounts of land will be available after the year 2000 in the Districts of Mzimba, Kasungu, Salima, Ntcheu, Mangochi, Mwanza, Chikwawa and Machinga.

The methodology employed in estimating the population carrying capacity of the land is described in Appendix 3.2.1 NPDP Volume II Background Study Report.

## Major Issues

The major agricultural issues which are of significance to the Plan are:

- (a) the shortage of arable land in some districts;
- (b) population growth pressure and limited carrying capacity of land in other districts;
- (c) scattered and isolated farms/gardens and the size distribution of the existing population, which make it difficult for a large number of the country's farm population to be provided with infrastructure and services, including agricultural extension (Section 5);
- (d) conflict between the expansion of estates and the smallholder agricultural activities; and
- (e) conflict between crop production and cattle grazing (Section 5).

The preceding issues are outlined in Section 5 and discussed in more detail in the NPDP Background Study Report.

### 2.1.2 Recommended Policies

The policies relating to agricultural development are dealt with under Sections 2.2, 2.5.3, 3 and 5.

## 2.2. INDUSTRY

### Background Information and Major Issues

Even though Malawi is an agricultural country, the great contribution of industry (manufacturing) to the economy cannot be overemphasized. In 1983 industry contributed K98.3 million (or 12.8%) to the gross domestic product (G.D.P.) of K775.1 million and its share of the national paid employment of 387,500 was 49,212 or 12.7%. In terms of comparative sectoral importance (in G.D.P.), industry was third after agriculture (37.5%) and distribution (13.4%).

Structurally, there are two types of industries : (a) agro-industry for export and (b) manufacturing industries for domestic demand. Agro-industry for exports consists of those industries based on raw material produced by large agricultural estates; e.g. sugar, tea and cotton. Expansion in this group of industries has of late been difficult due to factors beyond the country's control; principally, problems with the transportation of the finished products to external markets.

The second type of industry, namely manufacturing for local demand, transforms local agricultural, livestock, forest and fishery produce or imported semi-processed materials into finished goods for private consumption or construction. Examples are the cement factory, bakeries, food canning, rice milling, chemical industries, weaving, leather processing, etc. Since independence, Malawi's industrial development policy has emphasized import substitution. It has been realised, however, that with a limited domestic market there is limited room for expansion in this direction. Therefore industrial development policy has been geared towards diversifying exports. Under SAL III there is a major drive towards achieving this policy objective through defining an export promotion strategy apart from revising the Industrial Development Act aimed at improving incentives for manufacturing for export.

### 2.2.2 RECOMMENDED POLICIES

#### **OBJECTIVES**

##### 2.2a

To promote decentralized balanced industrial development\* in order to spread the benefits of employment throughout the country, help minimize rural-urban migration, and support the development of rural and urban service centres.

#### **STRATEGIES/ACTIONS**

##### 2.2a

Based on studies by the MOTIT, UNIDO, the World Bank and NPDP regarding the location of industrial raw materials and development potential, the following places have been designated in the plan as strategic Industrial locations:

##### Agriculture-based Industries

Blantyre, Lilongwe, Mzuzu, Liwonde, Mulanje, Dwangwa, Nchalo, Thyolo, Mchinji and Ntcheu

\*Promotion of decentralisation will, of course be subject to the functional/locational requirements of industrial establishments and the need for economies of scale or agglomeration where necessary.



### Livestock-based Industries

Blantyre, Lilongwe, Liwonde, Mzuzu, Karonga.

### Fishery-based Industries

Salima, Mangochi, Chilumba, Nkhotakota

### Forestry-based Industries

Chikangawa, Chintheche, Dedza, Zomba, Mzuzu, Blantyre, Lilongwe, Nkhata Bay.

### Mineral-based industries

Mulanje, Chungalume (near Zomba)  
Kasungu, Mchinji, Chamama, Lilongwe, Blantyre, Karonga, Livingstonia.

Small Enterprises: Guidelines for the location of small-scale and cottage industries are given in Section 3 Table 3.6.

The following are recommended as priority Centres for industrial location based on the availability of industrial raw materials in the rural hinterland, the existence of infrastructure linkages and the level of services.

### Priority Number One

Northern Region: Mzuzu, Karonga and Dwangwa

Central Region: Lilongwe, Kasungu, Salima

Southern Region: Mangochi, Blantyre\*, Liwonde, Zomba, Mulanje, Thyolo, Luchenza, Balaka, and Nchalo.

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\*Blantyre is included in the case of industries requiring strong linkages

### Priority Number Two

Northern Region: Nkhata Bay, Rumphu, Mzimba, Chitipa, Euthini and Chintheche.

Central Region: Ntcheu, Dedza, Mchinji, Nkhotakota, Dowa, Mponela and Ntchisi.

Southern Region: Mangochi, Bangula, Mwanza, Ngabu, Chikwawa, Nsanje, Phalombe, Namwera, Namadzi and Muloza.

#### 2.2b

To provide special incentives to new industries which locate outside the City of Blantyre and in the selected strategic locations

#### 2.2b

The MOTIT and the MOF should consider the appropriate measures to be taken and/or incentives to be created in order to encourage industries to locate outside the District of Blantyre while of course maintaining the present level of tax incentives given to industries which locate in Blantyre. The new Chirimba Industrial Area in Blantyre which is being promoted under a tax incentive offers an opportunity to test the feasibility of similar measures elsewhere. For example, for industrial establishments which locate outside Blantyre, the investment allowance of 10% granted to manufacturers for new plant and equipment should be increased; and the fixed company tax rate of 50% should be reduced.

2.3

## TOURISM

2.3.1

### Summary of Background Information (1)

Tourism in Malawi is largely an undeveloped and unexploited sector of the economy, but the country possesses a wide range of marketable assets which offer definite attractions for potential tourism. A pleasant climate, stability, friendly and hospitable people and diversity of natural settings from lakes to mountains and game parks are considered significant potential for the development of tourism in Malawi.

### Economic Impact

Income from Tourism makes a fair contribution to Malawi's foreign exchange earnings. The available information is rather dated but it shows that in 1978 foreign visitors in Malawi spent a total of K4,961,383 or 0.6% of G.D.P. In that year, tourism ranked fourth in terms of foreign exchange earnings, as compared to Malawi's other principal export commodities; that is, tobacco, (9.7%), tea (3.2%), sugar (1.2%), groundnuts (0.5%). Its present contribution to the G.D.P. is not known but it did show an upward trend from K5.0 million or 0.6% to K10.7 million or 0.9% during the period 1978 to 1984. During the same period tobacco's contribution rose from 9.7% to 13.5%; tea 3.2% to 6.7%; and Sugar from 1.2% to 1.7%.

Field work by a WTO team in 1980 also showed that some 1,861 persons were directly employed in hotels and government rest houses and a further 13 in the Department of Tourism.

(1)

The background information is based on NPDP/WTO study.

Tourism can be expected to generate about another 2,000 full-time job equivalents, indirectly, according to the developing countries' norm of one indirect job equivalent for every direct job. Tourism is also likely to contribute to the earnings of more than those numbers estimated above through ancillary services for tourists, such as the production of arts and crafts.

### Tourism Attractions

The nations tourist attractions include:

#### Lake Malawi

Malawi's major tourist attraction is Lake Malawi with its beautiful and unspoiled beaches. The Lake's immense scenic appeal and beauty can also be appreciated through travel by boat.

#### National Parks

There are five designated national parks in the country. These are recognised as important environmental and revenue-producing features of the country. Wildlife is abundant in the national parks.

- (a) Nyika, situated in the Northerh Region, is probably the finest park in Malawi. It has a large variety of wildlife.
- (b) Kasungu offers the most extensive range of game to be seen in Malawi. The park attracts both day and overnight visitors.
- (C) Liwonde National Park is the most accessible of Malawi's parks. It has a wide variety of game. Its location gives it significant tourism potential.

(d) Lengwe National Park. A short distance from Blantyre, Lengwe is an easy day trip and offers an opportunity to see the rare, shy Nyala Antelope.

(e) Lake Malawi National Park. Certain areas covering the Lakeshore around the Namkumba peninsula, Nkhudzi Bay, and offshore islands have been designated as a National Park. Cape Maclear and the Golden Sands Beach are located within the park.

**(f) Other Natural Attractions**

Mount Mulanje - From its high points one obtains spectacular/panoramic views of the tea estates below it. It also has attraction for tourists interested in mountain walking, rock climbing and fishing.

Zomba Plateau - This offers a spectacular views of Zomba and has attraction for tourists interested in mountain climbing, walking, horseback riding and fishing.

**Cities**

Blantyre - The largest city in the country and the main commercial, industrial and communication centre.

Lilongwe - The capital; a beautiful, well laid out city, with the second largest population.

Zomba - A former capital, now playing the role of an educational centre. The town is located at the base of the Zomba Plateau.

Mzuzu - The largest town in the Northern Region. Nestled in the Mzuzu hills, it offers easy access to the Northern Lakeshore areas and Nyika National Park.

### Major Issues

The following are the major issues in tourism development.

- (a) Insufficient hotel accommodation of acceptable international standards in cities.
- (b) Lack of entertainment facilities in the country.
- (c) Insufficient tourist resorts (recreational facilities) to meet the needs of tourists. The fact that 43% of the tourists who arrived in the country in 1982 came for the purpose of recreation has considerable implications for physical planning for tourism.
- (d) Poor access to tourist destinations.
- (e) A user survey never has been carried out to determine the attitude of both local and international tourists toward tourist facilities, services, entertainment and night life in the leading urban centres.

### 2.3.3

#### RECOMMENDATIONS

##### STRATEGIC LOCATIONS FOR TOURISM AND THE DEVELOPMENT OF ATTRACTIONS AND FACILITIES

The Plan recognizes that Malawi's considerable tourism potential has not been fully exploited and promotes further development of the country's wide range of tourist assets in order to create jobs and generate foreign earnings. The attention of Malawi tourism strategies is focused on Lake Malawi, the National Parks and the four urban centres of Lilongwe, Blantyre, Zomba and Mzuzu. Tourists visit a country because of its natural and man-made attractions. The Department of Tourism is therefore interested in having the attractions developed and made more accessible to both tourists and local visitors. The following should be included in the Government's strategies directed towards the development of the tourist industry. Some of the objectives reflect Government policy.

## RECOMMENDED POLICIES

### OBJECTIVES

#### 2.3a

To promote the development of tourism in order to create and increase foreign currency earnings.

#### 2.3b

To become adequately informed about user needs, demands and preferences and to be in a better position to promote the development of tourist facilities and services

#### 2.3c

To capitalize on Lake Malawi's scenic appeal and water-oriented recreational attraction.

## STRATEGIES/ACTIONS

### 2.3a and 2.3b

The Department of Tourism in consultation with the NSO should conduct a comprehensive (a) study of needs/demand for tourist facilities and services and (b) user survey to determine the attitude of both local and visiting tourist accommodation (all types), shops, passive and active recreation, restaurants, transportation (including car hire) natural attractions and night life in Lilongwe and Blantyre, the leading cities.

The survey results should be published and distributed to the City Councils of Blantyre and Lilongwe, the Department of National Parks and Wild Life, private establishments connected with the provision of tourist facilities and services, and other interested parties.

### 2.3a and 2.3c

The Government should encourage the development of resort hotels along the lakeshore. The Lakeshore Development Plan, which is part of the NPDP, has designated tourist/recreational development zones along the lakeshore; North Senga Bay, Cape Maclear, the Lakeshore "strip" between Monkey Bay

and Mangochi, Chewe Point, Ngana Point; Chintheche and Likoma Islands. See Figure 5-1 The development of the designated areas will be subject to site-specific feasibility studies. Other areas not shown in Figure 5-1 are identified in the Lakeshore Development Plan

Figure 5-1 also shows a proposed tourist-oriented lake cruise route stopping at various points of interest along the lakeshore and connecting buses/cars for destination points inland. This will cater to both local and international tourists.

The pleasure boat cruise will start from an envisaged game lodge overlooking the Shire River at Liwonde National Park from there the boat will go up the Shire River through Lake Malombe to Lake Malawi and northwards. The tourist destination points include inter alia, Nkopola Lodge, Club Makokola, Cape Maclear, Kambiri Point, Grand Beach Hotel, Nkhotakota, Likoma Island, Chintheche Inn, Nkhata Bay, Usisya and Chilumba to connect road transport to Livingstonia, Nyika National Park, Mzuzu and back to Nkhata Bay or Chilumba for the return boat trip south.



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**Objectives**

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**Strategies/Actions**

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**2.3d**

To improve/develop tourist accommodation in National Parks and other tourist destinations to acceptable standards.

**2.3a and 2.3d**

The Department of Tourism in cooperation with the Department of National Parks and Wildlife should design a special promotional/marketing brochure on the development of tourist accommodation (lodges, chalets etc,) and other facilities in Nyika, Kasungu, Liwonde and Lengwe National Parks, and at Cape Maclear and Mulanje Mountain. The brochure should provide relevant information which will be of interest to prospective local and foreign investors. It should include (aerial) photographs, conceptual designs, sketches and Government incentives for development. (That is, tax incentives and the provision of infrastructure). This action should be carried out preferably after 2b

**2.3e**

To improve/develop other types of accommodation which serve local travellers and visitors on low budgets.

**2.3a and 2.3e**

Extensions and renovations should be made to resthouses, inns and motels in the main urban areas if the recommended study results (2b) justify such improvements.

**2.3f**

To improve access roads to tourist destinations

**2.3a and 2.3f**

Access roads to Nyika, Kasungu, Liwonde and Lengwe National Parks and Cape Maclear should be improved. If the recommended survey/study results (see 2b) prove positive, these access roads should be tarred. (See also 2d)

**2.3g**

To attract regional international conferences/seminars to Malawi as part of promoting tourism and increasing foreign earnings.

**2.3a and 2.3g**

the DEPU and MOTIT, should explore the feasibility of developing a first class convention complex in Lilongwe.

2.4.1 Summary of Background Information

According to the 1977 Population Census, the total employment in all agricultural and non-agricultural economic sectors was 2,241,700. This constituted 98% of the labour force (that is, the economically active persons aged 10 years and over), thus implying an unemployment rate of 2%<sup>(1)</sup>.

Regional distribution of employment was as follows: Northern Region; 184,300 (8.2%), Central Region; 930,500 (41.5%), and Southern Region; 1,126,900 (50.3%). The Southern Region's dominance in employment reflected its relative strength in the labour force distribution.<sup>(2)</sup>

In addition, the same trend is visible in labour participation rates. The Southern Region had a rate of 0.99. The corresponding rates for the Northern and Central Regions were 0.95 and 0.98 respectively, compared with the national average of 0.98.

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(1) The unemployment rate of 2% is an official NSO statistics. The low employment rate is characteristic of a largely rural country where most of the people are counted as farmers in the population census. Thus the unemployment rate may reflect school leavers without jobs and who do not farm. See Appendix 2.2.

(2) Regional distribution of 1977 labour force; Northern Region, 193,100 (8.4%), Central Region: 940,700 (41.1%) and Southern Region: 1,154,500 (50.5%) of total of 2,288,300.

The agricultural sector, including agriculture, livestock, fishing and forestry, provided the bulk of the employment. This sector employed 1,932,400 persons or 86.2% of the total employment whilst the non agricultural sector, made up of manufacturing, mining and quarrying, utilities, construction, distribution, transport, finance and services, employed 309,300 or 13.8% of the total employment.

The Central Region had the largest proportion of agricultural employment. 843,900 persons or 91% of its total employment force were engaged in agriculture, compared with 156,000 (85%) in the Northern Region and 932,500 (83%) in the Southern Region. In terms of non-farm employment, the Southern Region had the highest proportion with 194,400 persons or 17% of its total employment in non-agricultural economic activities, compared with the Northern Region's 28,400 persons (15%) and Central Region's 86,500 (9%).

The Southern Region had 145,800 persons in urban employment, representing 62.8% of the total urban employment of 232,100 persons. The corresponding number of employed persons for the Northern and Central Regions were 21,500 (9.3%) and 64,800 (27.9%) respectively. Whilst 981,100 persons were engaged in rural employment in the Southern Region, constituting 48.8% of the total rural employment of 2,009,600, the Northern and Central Regions' shares of the rural employment were 162,800 (8.1%) and 865,700 (43.1%) respectively.

#### 2.4.1.2 Trends in Formal Sector Employment: 1977 - 1983

Since the 1977 Population Census, there have been as many persons working in the agricultural sector (paid employment) as in the non-agricultural formal sector. In 1977, 154,700 persons were engaged in paid agricultural employment, especially the estates, representing 50.1% of the total formal sector employment of 308,900. The non-agricultural activities' share was about the same; i.e. 154,200 or 49.9%. See Appendix Table 2.1

In 1980, however, there was a slight reverse ; the non-agricultural sector employment had increased to 186,200 or 50.7% of the total formal sector employment of 367,300 as against agriculture's share of 181,100 or 49.3%. The situation finally changed in 1983 when agriculture took a greater share of 197,200 or 50.9% of the total 387,500 compared with the non-agricultural share of 190,300 or 49.1%.<sup>(1)</sup> This equality in agricultural/non-agricultural formal sector employment distribution over the eight-year period signified a slow growth in industrialization.

The total formal sector employment showed a cumulative growth over the period 1977-1983, though not without periodic fluctuations. As can be seen from Appendix 2.1 the total formal sector employment registered an overall increase of 25.4% over the period. Agricultural activities registered a higher growth rate of 27.5% compared with the non-agricultural activities, which showed an increase of 23.4%.

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(1)

Source: NSO

The periodic growth fluctuations can also be seen from the above-quoted Appendix. From a growth rate of 9.7% between 1977 and 1978, the total employment growth rate declined to 4% in 1978-1979, falling gradually to a negative growth rate of -10.9% in 1980-1981, after which the growth picked up momentum, registering 5.1% between 1981-1982, rising to a rate of 12.6% in 1982-1983 (Appendix Table 2.1). Of the total formal sector employment, the agricultural sector recorded a better growth performance periodically. Even though its growth rate dropped to -13.3% in 1980-1981, compared with -8.5% for the non-agricultural sector, the agricultural sector registered a very high growth rate of 25.4% between 1982 and 1983 compared with a growth rate of only 1.8% by the non-agricultural activities in the same period. The fluctuations in the formal sector employment, both agricultural and non-agricultural, were very much in step with the general performance of the economy.<sup>(1)</sup> Considering the extent to which the economy has improved since 1983, it is expected that employment will continue to grow in the foreseeable future.

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(1) For instance in 1977, 1978/79 and 1980/83 the GDP increased by 5.4%, 4.4% and 5.7% respectively compared with corresponding increases in employment of 9.7%, 4.0% and 12.6% respectively in the same period. On the other hand, in 1980/81 when the GDP growth rate was -3.5%, the employment growth rate was -10.8% during the same period. The employment elasticities, i.e. the responsiveness of employment growth to the GDP growth, are quite high in Malawi due to the use of labour-intensive technologies. For detailed discussion on the changes in the GDP, and also on employment elasticities, see Background Study Report on Employment.

#### 2.4.1.3 Estimated Total Employment, Year 2000

On the assumption that the employment-labour force<sup>(1)</sup> ratio in the year 2000 will be 0.98, it is estimated that the total employment by the year 2000, including paid and non-paid employment, will be 4,783,000.

#### 2.4.1.4 Projected Urban Employment

Based on trends in the non-agricultural sector, and on the forecast of its GDP and possible impact on future employment growth, it is estimated that urban employment will increase from 232,100 in 1977 to 728,100 in the year 2000. The distribution of the projected urban employment by district is shown in Table 2.4.1. The distribution is based on natural resources and development potential, future population growth, existing and proposed strategic industrial locations and the types of service centres in the various districts<sup>(2)</sup>.

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(1) According to the 1977 population Census, the employment rate achieved was 98% or labour participation ratio of 0.98%. Total employment was 2,241,800 compared with a labour force of 2,288,400. For details on this, see Background Study Report on Employment.

(2) For discussion on Employment forecast, see attached methodology: Appendix 2.2.

**Table 2.4.1**  
**Distribution and Growth in Urban and Rural Employment by District 1977 – 2000**

DISTRICT	URBAN GROWTH			RURAL GROWTH			TOTAL GROWTH		
	1977 <sup>1</sup>	2000	Rate (%)	1977	2000	Rate (%)	1977	2000	Rate (%)
Chitipa	1,200	2,700	3.6	19,700	57,200	4.7	20,900	59,900	4.7
Karonga	3,700	16,000	6.5	26,600	94,500	5.7	30,400	110,500	5.8
Nkhata Bay	3,400	8,200	3.9	22,700	21,000	-0.3	26,100	29,200	0.5
Rumphi	3,000	4,700	2.0	15,300	53,600	5.6	18,300	58,300	5.2
Mzimba	10,100	64,000	8.4	78,600	474,300	8.1	88,600	538,300	8.2
<b>NORTHERN REGION</b>	<b>21,300</b>	<b>95,600</b>	<b>6.7</b>	<b>163,000</b>	<b>700,600</b>	<b>6.5</b>	<b>184,300</b>	<b>796,200</b>	<b>6.6</b>
Kasungu	6,900	14,400	3.3	79,300	218,600	4.9	86,200	233,000	4.4
Nkhotakota	4,300	7,100	2.2	29,400	78,900	4.4	33,700	86,000	4.2
Ntchisi	900	3,900	6.6	40,600	51,300	1.0	41,500	55,200	1.2
Dowa	3,600	4,900	1.5	103,700	169,500	2.2	107,300	174,400	2.1
Salima	6,500	9,700	1.8	58,700	141,500	4.0	65,200	151,200	3.7
Lilongwe	29,800	201,700	8.8	264,000	443,600	2.3	293,700	645,300	3.3
Mchinji	3,000	4,900	2.2	75,000	103,200	1.4	78,000	108,100	1.4
Dedza	4,800	9,700	3.1	130,800	163,400	1.0	135,600	173,100	1.1
Ntcheu	5,000	5,800	0.6	84,300	214,700	4.1	89,300	220,500	4.0
<b>CENTRAL REGION</b>	<b>64,800</b>	<b>262,100</b>	<b>6.3</b>	<b>865,800</b>	<b>1,584,700</b>	<b>2.7</b>	<b>930,500</b>	<b>1,846,800</b>	<b>2.8</b>
Mangochi	10,700	16,400	1.9	106,300	343,500	5.2	117,000	359,900	5.0
Machinga	8,000	16,500	3.2	141,900	343,800	3.9	149,900	360,300	3.8
Zomba	18,000	35,900	3.0	118,500	195,500	2.2	136,500	231,400	2.1
Chiradzulu	10,800	400	-13.4	57,100	74,800	1.2	67,900	75,200	0.4
Blantyre	57,000	239,600	6.4	86,600	96,300	0.4	143,600	335,900	3.1
Mwanza	1,700	5,800	5.5	34,700	133,300	6.0	36,400	139,100	6.0
Thyolo	15,300	21,300	1.4	116,800	55,400	-3.2	132,100	76,700	-2.3
Mulanje	15,200	16,500	0.2	176,400	239,500	1.3	191,600	256,000	1.2
Chikwawa	6,100	9,700	2.0	90,500	209,800	3.7	96,600	219,500	3.6
Nsanje	3,000	8,300	4.5	52,300	77,700	1.7	55,300	86,000	1.8
<b>SOUTHERN REGION</b>	<b>145,800</b>	<b>370,400</b>	<b>4.1</b>	<b>981,100</b>	<b>1,769,600</b>	<b>2.6</b>	<b>1,126,900</b>	<b>2,140,000</b>	<b>2.8</b>
<b>MALAWI</b>	<b>231,900</b>	<b>728,100</b> <sup>2</sup>	<b>5.1</b>	<b>2,009,900</b>	<b>4,054,900</b> <sup>3</sup>	<b>3.1</b>	<b>2,241,800</b>	<b>4,783,000</b> <sup>4</sup>	<b>3.1</b>

NOTES: (1) Urban employment computed from 1977 Population Census Report Vol. 2. The 1977 Population Census Report shows urban employment by place of residence of workers instead of place of work. This approach made rural non-agricultural workers, more than urban non-agricultural because of the NSO definition of "urban" which is different from the NPDP definition (See B.S.R. on Urbanisation). Another reason for the large rural non-agricultural employment is the commuters from the rural areas, e.g. from Chiradzulu, working in Blantyre. To determine urban employment by place of work all non-agricultural employment was reduced by one quarter to reflect the rural portion of the overall non-agricultural employment. This fraction has arrived at through successive calculations.

- (2) Year 2000 total urban employment obtained by applying annual growth rate of 5.1 to 1977 total urban employment of its district-wise distribution is based on growth trends and district growth potentials.
- (3) 1977 rural employment is the balance employment after considering the urban employment.
- (4) Year 2000 total rural employment the balance employment after considering Year 2000 urban employment. Distribution of rural employment based on year 2000 district rural population in Table.3.



It can be seen from the Table 2.4.1 that the following districts, namely Chitipa, Karonga, Nkhata Bay and Mzimba in the Northern Region, Ntchisi and Lilongwe in the Central Region, and Blantyre, Mwanza and Nsanje in the Southern Region, have employment growth rates higher than the average national annual population growth rate of 3.36% <sup>(1)</sup> and are therefore in a better position to provide urban jobs for rural population within the districts and migrant population from other districts.

#### 2.4.1.5 Projected Rural Employment

The projected rural employment is estimated at 4,054,900 by the year 2000 <sup>(2)</sup>. The employment figure includes all agricultural jobs and non-agricultural jobs that are expected in the rural areas.

On the basis of land carrying capacity <sup>(3)</sup>, the projected rural employment has been distributed by district, as shown in Table 2.4.1. Those districts whose rural employment growth rates will exceed the national average population growth rate of 3.36% will be in a position to provide their own rural population and even in-migrants with rural jobs. On the other hand, those with rural employment growth rates less than the national average population growth rate cannot provide sufficient employment even for their own growing (rural) labour force.

- 
- (1) This growth rate is slightly different from the estimate by the NSO. For explanation see NPDP Background Study Report.
- (2) See attached Methodology: Appendix 2.2
- (3) For details on the districts' land carrying capacity see Section 2.1

### Conclusions and Implications for the National Physical Development Plan

The background study has shown that the total employment of Malawi will grow by 3.36% p.a. from 2,241,700 in 1977 to 4,783,000 in 2000. The urban employment will increase from 232,100 in 1977 to 728,100 in 2000, an annual growth rate of 5.1%. On the other hand, the rural employment will grow from 2,009,600 in 1977 to 4,054,900 in 2000 with a 3.1% annual growth rate.

Due to industrial infrastructure, labour availability and market related conditions, the Southern Region will continue to be the centre of light and heavy manufacturing activities in Malawi. Also, in terms of utilities, transportation and, to a limited degree, the finance sub-sector functions, the Southern Region shows relatively greater development capacity. However, based on Government Policies, to decentralize economic opportunities, it is assumed that by year 2000, in relative terms, a recognizable part of socioeconomic activities will have shifted to the Central and Northern Region.

The following are the implications for the preparation of the National Physical Development Plan:

- (a) There is a need to create urban employment opportunities in areas which are a present losing their active population to other centres such as Lilongwe and Blantyre.
- (b) There is a need to establish more non-agricultural employment opportunities in the rural areas so that people are not solely dependent on agricultural employment. This will also reduce the influx of job seekers into the cities.

The knowledge of the level and distribution of the agricultural subsistent employment force and the availability and land carrying capacities form the basic criteria and the rationale for a national population distribution strategy

## 2.5 POPULATION

### 2.5.1 Summary of Background Information

For physical planning purposes, it is necessary to have a good understanding of existing and future population characteristics, size distribution of settlement of population, growth trends, internal migration and future population distribution in the country. A proper knowledge and understanding of these aspects of population will make it possible (a) to estimate the future needs for facilities such as schools and health centres/-hospitals and other infrastructure and their land requirements; and (b) to formulate land use and settlement development strategies and policies.

#### 2.5.1.1. Population Growth

The 1977 Census gave the total population of Malawi as 5,547,460 persons, consisting of 2,673,589 men and 2,873,871 women. Between 1966 and 1977 the population of Malawi increased by 1,453,877 persons, representing an annual growth rate of 2.86%. The regional growth rates were 2.4%, 3.4% and 2.6% for the Northern, Central and Southern Regions respectively.

At the district level, the districts with the highest rates of growth were those in the Central Region, where extensive estate development, with its demand for labour, had taken place. For example, Kasungu District was 6.2% per annum and Mchinji District 5.6% per annum. Blantyre and Mwanza Districts also experienced higher growth rates than the other districts. This was mainly due to in-migration. On the other hand districts such as Nsanje, Mulanje, Chiradzulu and Chitipa experienced growth rates of less than 2% per year, which are lower than national and regional averages. All the Northern districts had below-average growth rates.

Between 1966 and 1977, urban areas grew at above the national rate, particularly Lilongwe and Blantyre, with 7.3% and 6.5% per annum respectively.

#### **2.5.1.2 Population Movement**

The NPDP Background Study Report shows that there has been considerably internal migration in the country, as the differences in growth rates cannot be accounted for by natural increase. The 1977 Census showed that in nine out of the 24 districts, between 25% and 45% of the population were not born in these districts. In eight other districts, 15-25% of the people originally came from elsewhere. Migration, therefore, has played a large part in the population distribution pattern in Malawi.

#### **2.5.1.3 Size Distribution of Settlements Population**

The size distribution of settlements in Malawi existing in 1977 is shown in Table 2.5.1.

**Table 2.5.1:  
Size Distribution of Settlements Population 1977**

Settlement (Range of Population)*	Number of Settlements	Total Population	% of National Population
Pop. 500-1,000	1,532	1,225,600	22.1
Pop. 1,001-3,000	1,087	1,743,500	31.4
Pop. 3,001-10,000	26	111,000	2.0
Pop. 10,001-50,000	5	77,500	1.4
Pop. 50,001-100,000	-	-	-
Pop. 100,000 and over	2	320,000	5.9
	2,652	3,477,600	62.7
Scattered Settlements		2,069,900	37.3

The table indicates that 3,477,600 persons representing 62.7% of the 1977 national population lived in 2,652 nucleated settlements (villages, towns and cities) while 2,069,800 persons, representing 37.3% of the total population, lived in scattered and ribbon settlements (See Section 5).

#### 2.5.1.4 Future Population Levels (National Growth) (1)

The results of NPDP population projections (natural increase) have indicated that the existing national population of 5.5 million persons will increase by the year 2000 to 11.9 million under the high growth projections. The high growth projection is based on an annual average population growth rate of 3.3 % for the 23-year period, while the minimum growth projection is based on an annual population growth rate (between 1977 and 2000) of 2.6%.

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(1) This NPDP population study was completed before the publications of NSO's analytical report "Volume II, Fertility, Mortality and Population Projections." The difference between NSO's projections and the ones by NPDP is negligible: NSO's average growth rate 1977-2000 being 3.27% and that of NPDP, 3.36%, in absolute figures a difference of only 231,400 people by the year 2000. As the NPDP figures had been used extensively in other background studies, it was agreed at a meeting chaired by OPC, and attended by the NSO, EPD, MOA, and TCPD, that the figures adopted by the NPDP be used. But in any future review of the Plan the official NSO (national) figures will be used.

### 2.5.1.5 Urban Population: 1977

Out of Malawi's total population of 5,547,460 persons in 1977, 559,000 persons, representing approximately 10% of the total population, lived in urban areas or urban places, of which there were 83. Approximately 336,000 persons (60%) were located in the Southern Region's 37 urban places; 160,300 persons (29%) were located in the Central Region's 30 urban places and 62,500 persons (11%) were located in the Northern Regions's 16 urban places. Four districts, Rumphi, Karonga, Nsanje, Nkhotakota each had an urban population above the national average of 10%, Rumphi being the highest with 14.3%. Five districts, namely Chikwawa, Mangochi, Salima, Nkhata Bay and Chitipa, had urban populations ranging between 4.3 and 8.4%. Each of the remaining fifteen districts had an urban population of less than 4%; and three of them, namely Ntcheu, Mulanje and Chiradzulu, of less than 2%.

#### **2.5.1.6 Urban Population Growth Trends: 1966-1977**

According to the 1966 Census Malawi's urban population was 260,000 people, representing only 5% of total population of 4,039,683. By 1977 the urban population had increased to 559,000, representing 10.3% of the total population of 5,547,460.

Even though the existing urban component of the population was relatively low, the urban growth rate between 1966 and 1977 was substantial; that is at a rate of 7.2% per annum, thus doubling within a decade. This relatively high growth rate of urbanization can be attributed to industrialization and general economic growth over this period which provided new jobs, particularly in the new Capital City of Lilongwe and in Blantyre.

Between 1966 and 1977 the urban population within the regions increased by 4.6% in the Southern Region; 3.5% in the Northern Region; and 2.6% in the Central Region. Comparison by District is not realistic as the urban centres identified in 1977 cannot be compared with 1966 census figures.

#### **2.5.1.7. Employment Supported Urban Population: Year 2000**

Assuming an average ratio between employment and urban population of 0.28 <sup>(1)</sup> and considering the expected total urban employment of 728,100, as discussed above, the total employment-supported urban population by the year 2000 will be 2,600,400 <sup>(2)</sup>

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(1) Ratios between employment and population for urban centres ranged from 0.22 to 0.34. The Medium, 0.28, is taken here for projections. Own calculation from Population Census Vol. 2.

(2) For calculation of employment-supported urban population see attached Methodology. Appendix 2.2.



This population shows an average annual growth rate of 6.94%, which is higher than the average national natural population growth rate of 3.36%, indicating expected migration from the rural areas to urban centres. However, the laissez-faire trend will result in a total urban population of 2,500,000 by the year 2000 <sup>(1)</sup>

#### 2.5.1.8 Total Rural Population: Year 2000

The difference between the future population of 11,861,900 and the projected urban population of 2,600,400, represents the projected total rural population, which will be 9,261,500.

#### 2.5.1.9 Conclusions and Implications for the National Physical Development Plan

The results of the projections indicate that the year 2000 the population of Malawi will be between 10 and 12 million persons, representing the low and high levels of the future population respectively. In preparing the Plan it is a wise practice to consider the higher of the two levels of population growth presented in this study report, in order to ensure that the Plan is flexible and capable of accommodating a high growth or demand for land for various facilities, services and general uses.

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(1) NPDP Background Study Report on Urbanization.

The following are the implications for the preparation of the National Physical Development Plan:

- (a) The need to designate enough land for subsistence farming among the growing rural population, taking into consideration the population carrying capacity of the available farmland.
- (b) The need to formulate a strategy for the distribution of the future population, taking into consideration the existing pattern of settlements, the hierarchy of service and growth centres, and the population threshold and economies of scale required to support services and investments in towns and villages.
- (c) The need to distribute population in relation to the location of natural resources.
- (d) The need to minimize or forestall future growth pressures through appropriate planning measures.
- (e) The need to consider the future population of school-going age and translate the ensuing school enrolments into requirements for school facilities and land, and to prepare a long-term school building programme.
- (f) The need to consider the future maternity population and other age groups and prepare a long term programme for the development of health facilities.
- (g) The need to determine the requirements of future population for other physical and social infrastructure.

## 2.5.2 SPATIAL STRATEGIES FOR POPULATION

### 2.5.2.1 Distribution of Future Employment-Supported Urban Population, by District

On the basis of urban employment allocated to each district and the assumed employment-populated ratio of 0.28 for the urban areas, the desirable distribution of the future employment-supported urban population is shown in Table 2.5.2. It can be seen from the table that all the districts in the Northern Region, except Rumphi, will have the capacity to offer non-farm employment since the projected employment-supported urban population is greater than the natural increase of the population. The districts with similar capacities are as follows; Central Region, all districts except Dowa; in the Southern Region, all districts except Chiradzulu.

### 2.5.2.2. Planned Urban Population Distribution, By Service Centre

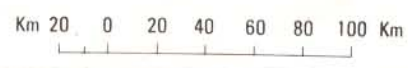
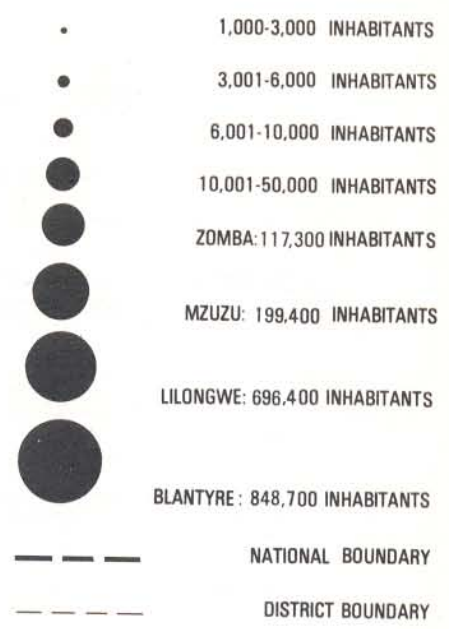
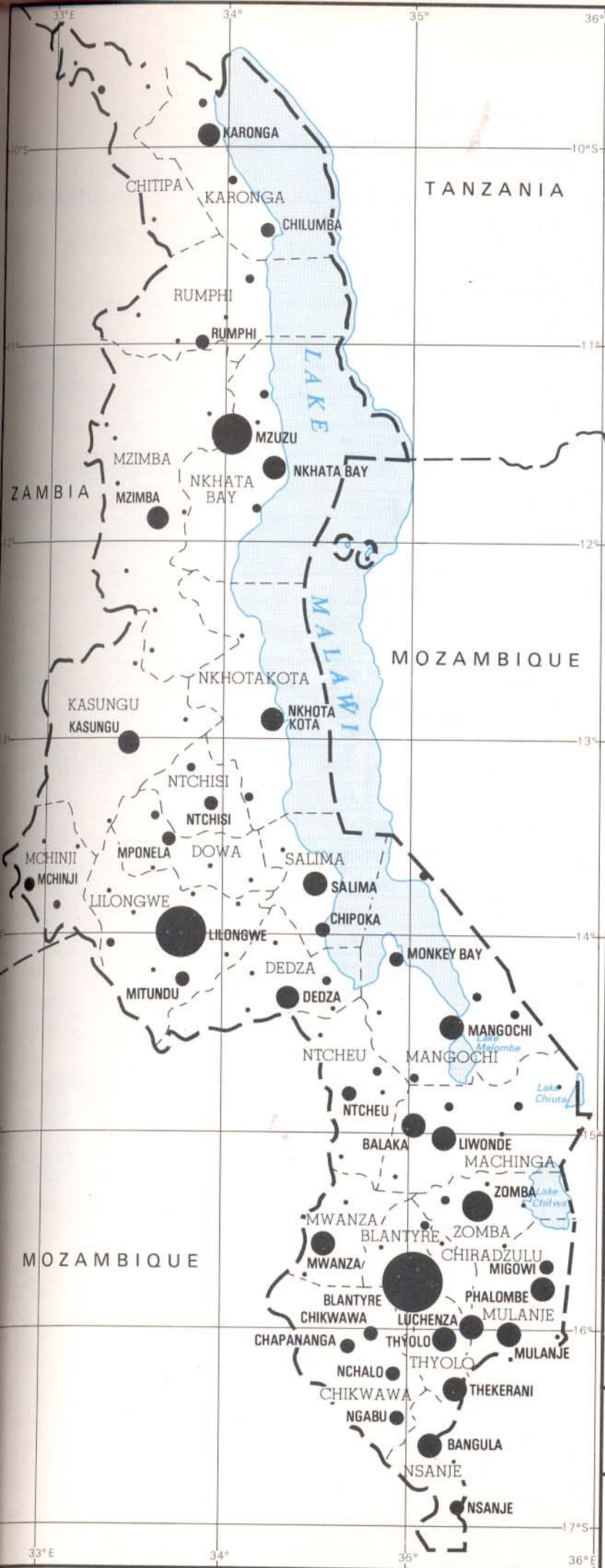
Appendix Table 2.2.1 shows the planned population for proposed urban centres and Figure 2-1 illustrates the distribution. The centres include national, regional sub-regional, district and/or main market centres, and rural market centres (See Section 3). An urban centre's population allocation is based on (a) the following factors pertaining to the districts in which the urban centre is located: the district's employment-supported urban population and development potential; (b) the centre's development potential and its importance in the district; and (c) the population threshold required to support investments.

### 2.5.2.3 Guidelines for the distribution of the projected rural population by the Year 2000, by District

Table 2.5.3 shows the implications for the distribution of the projected rural population by district if the full employment -supported urban population is realised by the year 2000. The Table compares the rural population by district (under the natural growth assumption of 3.36% per annum) with the population-carrying capacity of the land in individual districts.

Column 7 shows the districts which will have in-migration capacity indicating that vacant arable land will be available by the year 2000 to accommodate people from elsewhere. The column shows that considerable amounts of vacant land will be available in the Districts of Mzimba, Kasungu, Salima, Ntcheu, Mangochi, Machinga, Mwanza and Chikwawa. Other districts with fair amounts of in-migration or land-carrying capacity include Karonga, Chitipa, Rumphi, Nkhotakota, Lilongwe and Nsanje.

Column 8 on the other hand shows the districts where the future rural population will exceed the population-carrying capacity of the land. In other words, the arable lands in these districts will not be sufficient to accommodate the projected population. In these districts voluntary out-migration will be expected and/or people should be given incentives to settle elsewhere. The districts involved are Thyolo, Mulanje, Zomba, Blantyre, Chiradzulu, Dedza, Ntchisi, Nkhata Bay, Mchinji and Dowa.



**PROPOSED  
URBAN POPULATION  
DISTRIBUTION**

**FIG  
2-1**

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**NATIONAL PHYSICAL DEVELOPMENT PLAN  
VOLUME I**

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REPUBLIC OF MALAWI  
NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
OFFICE OF THE PRESIDENT AND CABINET  
TOWN AND COUNTRY PLANNING DEPARTMENT  
UNDP/UNCHS PROJECT MW/79/012 APRIL 1986

**Table 2.5.2**  
**Employment-Supported Urban Population: 2000**

DISTRICTS	EMPLOYMENT (1)	POPULATION		
		EMPLOYMENT SUPPORTED (2)	(3) NATURAL INCREASE	DIFFERENCE
Chitipa	2,700	9,600	6,500	3,100
Karonga	16,000	57,100	30,500	26,600
Nkhata Bay	8,200	29,300	9,500	19,800
Rumphi	4,700	16,800	19,800	(3,000)
Mzimba	64,000	228,600	66,000	162,600
<b>NORTHERN REGION</b>	<b>95,600</b>	<b>341,400</b>	<b>132,300</b>	<b>209,100</b>
Kasungu	14,400	51,400	15,000	36,400
Nkhotakota	7,100	25,400	23,000	2,400
Ntchisi	3,900	13,900	6,000	7,900
Dowa	4,900	17,500	20,000	(2,500)
Salima	9,700	34,700	13,500	21,200
Lilongwe	201,700	720,400	227,000	493,400
Mchinji	4,900	17,500	10,000	7,500
Dedza	9,700	34,600	16,000	18,600
Ntcheu	5,800	20,700	8,500	12,200
<b>CENTRAL REGION</b>	<b>262,100</b>	<b>936,100</b>	<b>339,000</b>	<b>597,100</b>
Mangochi	16,400	58,600	41,500	17,100
Machinga	16,500	58,900	28,500	30,400
Zomba	35,900	128,200	56,500	71,700
Chiradzulu	400	1,400	2,500	(1,100)
Blantyre	239,600	855,700	470,000	385,700
Mwanza	5,800	20,700	5,000	15,700
Thyolo	21,300	76,100	26,500	49,600
Mulanje	16,500	58,900	16,500	42,400
Chikwawa	9,700	34,700	34,500	200
Nsanje	8,300	29,700	28,500	1,200
<b>SOUTHERN REGION</b>	<b>370,400</b>	<b>1,322,900</b>	<b>710,000</b>	<b>612,900</b>
<b>MALAWI</b>	<b>728,100</b>	<b>2,600,400</b>	<b>1,181,300</b>	<b>1,419,100</b>

(1) Employment figures taken from Table 1

(2) Employment supported population obtained by application of a ratio of 0.28 i.e. ratio between urban employment and urban population. See Methodology attached for explanation.

(3) Natural Increase population obtained from NPDP Background Report on urbanization.

**Table 2.5.3:  
Population Year 2000 and Land Carrying Capacity**

Districts (1)	3.36% Urban Natural Growth (2)	Urban Planned Growth (3)	Urban In- Migration (4)=(3-2)	3.36% Rural Natural Growth (5)	Rural Carrying Capacity (6)	Rural In- Migration (7)=(6)-(5)	Rural Out- Migration (8)=(5)-(6)
Chitipa	6,629	9,600	2,971	148,017	168,305	20,288	-
Karonga	31,008	57,100	26,092	197,646	277,401	79,755	-
Nkhata Bay	9,623	29,300	19,677	216,636	61,694	-	154,943
Rumphi	19,023	16,800	(2,223)	114,516	157,401	42,885	-
Mzimba	67,362	228,600	161,238	577,095	1,392,817	815,722	-
<b>North</b>	<b>133,645</b>	<b>341,400</b>	<b>207,755</b>	<b>1,253,910</b>	<b>2,057,618</b>	<b>803,708</b>	-
Kasungu	14,969	51,400	36,431	400,830	641,805	240,975	-
Nkhotakota	23,523	25,400	1,877	178,286	231,747	53,461	-
Ntchisi	6,201	13,900	7,699	180,782	150,723	-	80,059
Dowa	20,101	17,500	(2,601)	508,395	498,145	-	11,250
Salima	13,472	34,700	21,228	269,398	415,788	146,390	-
Lilongwe	230,101	720,400	490,299	1,275,646	1,300,650	25,007	-
Mchinji	9,837	17,500	7,663	329,826	303,230	-	26,596
Dedza	16,252	34,600	18,348	621,424	480,211	-	141,213
Ntcheu	8,340	20,700	12,360	475,930	631,027	155,097	-
<b>Central</b>	<b>342,796</b>	<b>936,100</b>	<b>593,304</b>	<b>4,241,517</b>	<b>4,653,331</b>	<b>411,814</b>	-
Mangochi	41,700	58,600	16,900	604,853	1,009,145	404,292	-
Machinga	28,655	58,900	30,245	702,357	1,009,993	307,636	-
Zomba	57,525	128,200	70,675	695,938	573,801	-	122,137
Chiradzulu	2,566	1,400	(1,166)	374,202	219,760	-	154,442
Blantyre	476,242	855,700	379,458	396,395	279,507	-	116,888
Mwanza	5,132	20,700	15,568	147,567	391,666	244,099	-
Thyolo	26,944	76,100	49,156	661,649	162,534	-	499,115
Mulanje	16,466	58,900	42,434	1,004,762	703,356	-	301,406
Chikwawa	34,857	34,700	( 157)	380,919	617,308	236,389	-
Nsanje	28,869	29,700	831	203,708	228,256	24,548	-
<b>South</b>	<b>718,956</b>	<b>1,322,900</b>	<b>603,944</b>	<b>5,172,350</b>	<b>5,195,327</b>	<b>22,977</b>	-
<b>Malawi</b>	<b>1,195,397</b>	<b>2,600,400</b>	<b>1,405,003</b>	<b>10,667,777</b>	<b>11,906,276</b>	<b>1,238,449</b>	-

## RECOMMENDED POLICIES

### OBJECTIVES

To induce/promote a balanced or a more desirable distribution of rural population in relation to the population-carrying capacity of land and thus minimize or solve the problems associated with population pressures on land.

### STRATEGIES/ACTIONS

Land Settlement schemes, land reform, smallholder and other agricultural development projects should be carried out, as a matter of priority, in districts (Schedule "A") which have adequate land resource and population carrying capacity, in order to attract in-migrants or induce voluntary migration from those districts (Schedule "B") that will reach their land carrying capacity by year 2000 as shown below. The figures in brackets indicate the net in-migration capacity (Schedule "A") and the desirable net out-migration (Schedule "B").

<u>Schedule "A":</u>	<u>Schedule "B"</u>
Chitipa (20,288)	
Karonga (79,755)	Nkhata Bay (154,943)
Rumphi (42,885)	
Mzimba (815,722)	



<u>Schedule "A"</u>	<u>Schedule "B"</u>
Kasungu (240,975)	Ntchisi (80,059)
Nkhotakota (53,461)	Dowa (11,250)
Salima (146,390)	Mchinji (126,596)
Lilongwe (25,007)	Dedza (141,213)
Ntcheu (155,097)	
Mangochi (404,292)	Zomba (122,137)
Machinga (307,636)	Chiradzulu (154,442)
Mwanza (244,099)	Blantyre (116,888)
Chikwawa (236,389)	Thyolo (499,115)
Nsanje (24,548)	Mulanje (301,406)

Other implications for the future population growth have been taken into consideration in formulating strategies for human settlements and service centres (Section 3); physical infrastructure (Section 4); and Land Use (Section 5).

### 3. URBAN AND RURAL SERVICE CENTRES

#### 3.1 Summary of Background Information

National physical planning deals with spatial issues; thus the analysis of the nation's human settlement system is a rather prominent task in the preparation of the NPDP. While the pattern of settlement and its distribution have been dealt with in Section Two, this section analyses the quantitative, qualitative and spatial dimension of the provision of private and public services in the various levels of settlements throughout the country.

The NPDP's Background Report on Settlements and Service Centres identifies the nature of disparities in the distribution of services in Malawi. For the future, a clear strategy for service provision is therefore of the utmost importance. This is obviously best achieved within a clear hierarchical pattern of centres.

In addition to the objective of efficient service provision for the population, there is an additional argument for aiming at the (already promoted) hierarchical structure of centres. The essentially agriculture-based economic structure of Malawi calls for economic services which are well spread in order to satisfactorily serve the needs of the rural economic sectors.

Any economy which has evolved from pure subsistence into a higher stage of development needs public and private services. It becomes part of a spatial system with functional linkages among sectors, farmers, traders, producers, consumers, etc.

In brief the most important types of linkages and corresponding facilities are as shown in Table 3.1

The more effectively the linkages are functioning, the more efficiently the socioeconomic system will work. For instance, the public health standard can only be raised to a desired standard if people have access to the necessary medical facilities. Equally, farmers can enter into the cash economy only if they can sell their produce; i.e., if marketing and storage facilities are available. Communication among people, both in their social and in their economic roles, takes place only if postal facilities, telephone, broadcasting services, distribution of newspapers, bus services, etc., exist and are accessible to all.

In 1982 the NPDP conducted a comprehensive central place survey which covered all economic, social, cultural services and community facilities throughout the country in any place which, in the opinion of local leaders, showed some signs of centrality; that is, a certain number of shops, a public or private health service, or postal agency or the like at a central place which people visit. In this way, more than 250 places were identified for examination during the survey.

Through field surveys and interviews with local leaders, such as DC's, Chiefs, Subchiefs and other authorities, the exact number and qualitative level of each service were obtained. The basis for the qualitative infield assessment has been taken from a list of services which was selected in 1971 for the assessment of central services in the Lilongwe Region. (For details see NPDP, Volume 2 Background Study Report.)

**Table 3.1:  
Linkages and Related Facilities**

Types of Linkages	Elements	Facilities
1. Physical Linkages	<ul style="list-style-type: none"> <li>Transport by</li> <li>-Road</li> <li>-Railways</li> <li>-Waterways</li> <li>-Airways</li> </ul>	<ul style="list-style-type: none"> <li>Networks, Intra and Inter-system Connections (Nodal Points); e.g. Interlink between Primary, Secondary and Tertiary Roads; Ports, Stations, Airports, etc.</li> </ul>
2. Economic Linkages	<ul style="list-style-type: none"> <li>-Goods Distribution</li> <li>-Production</li> <li>-Production Linkages</li> <li>-Forward and Backward Linkages</li> <li>-Capital Flows</li> </ul>	<ul style="list-style-type: none"> <li>-Commercial Centres</li> <li>-Produce and Consumer Goods Markets</li> <li>-Input Delivery (Raw Materials, Intermediate Goods, Machinery, Tools)</li> <li>-Export Outlets</li> <li>-Import Agencies</li> <li>-Banking</li> </ul>
3. Technological Linkages	<ul style="list-style-type: none"> <li>-Diffusion of Technology:</li> <li>Skills,</li> <li>Machinery,</li> <li>Tools</li> </ul>	<ul style="list-style-type: none"> <li>-Production Input Delivery (see also Economic Linkages)</li> <li>-Vocational Training (see also Service Delivery Linkages)</li> <li>-Extension Services (Agric., Crafts)</li> </ul>
4. Service Delivery Linkages	<ul style="list-style-type: none"> <li>-Social Services</li> <li>-Communication Services</li> <li>-Technical Services</li> </ul>	<ul style="list-style-type: none"> <li>-Health Facilities</li> <li>-Educational Facilities (General Education, Vocational Training)</li> <li>-Postal Services</li> <li>-Telecommunication Facilities</li> <li>-Mass Media (Newspaper, Radio)</li> <li>-Transportation Services (Public and Private Transportation of Passengers and Goods)</li> <li>-Accommodation Facilities</li> <li>-Maintenance/Repair Workshops</li> <li>-Extension Services (Agriculture, Crafts, Industry, Trading)</li> <li>-Energy Supply</li> <li>-Water Supply, Public Utilities</li> </ul>
5. Population Movement Linkages	<ul style="list-style-type: none"> <li>-Migration Patterns (Permanent, Temporary)</li> <li>-Commuting Patterns</li> </ul>	not applicable
6. Social Interaction Linkages	<ul style="list-style-type: none"> <li>-Social Communication</li> <li>-Recreation</li> <li>-Religion</li> </ul>	<ul style="list-style-type: none"> <li>-Community Halls</li> <li>-Sports Facilities</li> <li>-Cinemas</li> <li>-Restaurants, etc.</li> <li>-Places of Worship</li> </ul>
7. Political and Administrative Linkages	<ul style="list-style-type: none"> <li>-Governmental Decision Chains</li> <li>-Jurisdiction</li> <li>-Executive Functions</li> <li>-National Security</li> <li>-Political Organisations</li> </ul>	<ul style="list-style-type: none"> <li>-Sub-National Authorities and Agencies (Administration, Maintenance, Implementation)</li> <li>-Courts</li> <li>-Police</li> <li>-Military Installations</li> <li>-Political Party Units</li> </ul>

On the basis of the weights assigned to each service, a total index was derived for each centre by aggregating the individual service scores. The aggregated scores were then used to obtain the hierarchical level of each centre. The nomenclature of the different hierarchical levels of Service Centres was agreed upon at a coordination meeting held at the TCPD in 1983. Examined places with fewer than 7 points have been disregarded as Service Centres. Therefore, the original number of more than 250 places was reduced to 187 qualified centres.

In this way, the following centres by corresponding level have been defined:

3	National Centres
1	Regional Centre
5	Sub-Regional Centres
24	District and/or Main Market Centres
50	Rural Market Centres
104	Village Centres

The development of urban places must take place in a decentralized pattern and within a hierarchical structure in order to provide the necessary social and economic functions to support economic development and in particular rural development throughout the country.

After analysing the objectives of national physical planning in Malawi, the main tasks of this section of the Plan are therefore, firstly, to define the functions of the various levels of service centres and establish guidelines for the development of services and facilities; secondly, to establish the size of the service areas or influence areas of each level of service centre, and to ensure that the influence area has a threshold population that can make the provision of services/facilities viable;

Thirdly, to design for a balanced distribution of the various levels of service centres. Fourthly, it is an essential requirement of this Plan to spell out priorities for the promotion of centres at each hierarchical level.

If these tasks are satisfactorily performed and subsequently implemented, a major step will have been taken towards a more satisfactory distribution of services and, generally, the development of rural and urban settlements.

The Government has already recognized the need for the improvement of the hierarchical settlement structure. The corresponding ongoing projects are the "Secondary Centres Development Project" and the "National Rural Centres Programme".

While the latter is clearly restricted to improving the Rural Centre level in the hierarchy, the former project, in principle, includes Regional, Sub-Regional and District and/or Main Market Centres. While work has already started at the regional and sub-regional levels, the settlements at the level of District and/or Main Market Centres have so far not received any particular attention. An issue which arises is whether this 'structure' of priorities should be allowed to continue or whether the emphasis of either the National Rural Centres Programme or the Secondary Centres Development Programme should be in the direction of District and/or Main Market Centres.

## 3.2 OBJECTIVES AND RATIONALE FOR FUTURE DISTRIBUTION AND DEVELOPMENT OF HUMAN SETTLEMENTS

### 3.2.1 National Goals related to the Distribution of Centres

Since independence the Malawi Government has felt that the existing unbalanced distribution of economic activities and service centres is not in the interest of national development. The Government's "Statement of Development Policies" 1971-1980 (See pp.1-6) points out that "... the fruits of development (should be) spread as evenly as possible throughout all sections of the population and all parts of the country".

In setting up objectives for development, the Government has always realised that Malawi's main development chances are in agriculture because the only relatively well-endowed factors of production in the country are land and labour, whereas capital and high-level skills are in short supply. As a result, the Government did not encourage the move of people into towns. To support this overall policy, a long term wage policy was applied which kept the differential between rural and urban wages low.

Nevertheless, the urbanization process has accelerated notably during the last two decades, thus calling either for additional measures to discourage rural-urban migration or for a gradual revision of the basic policy. Growing experience in rural development made it apparent that a number of urban functions are required to support the successful implementation of rural development measures.

Thus, the principal objective of urbanization in Malawi was revised in the seventies. The major aim is now to distribute urban functions (and, hence, urban places) in such a way that the rural areas can make maximum use of them. This harmonizes the seemingly emerging conflict between the present urbanization and the priority given to Malawi's agricultural sector, and actually combines the two issues to the benefit of both rural and urban development.

### 3.2.2. Role of Urban Functions in Rural Development

When agricultural practices are improved and additional available resources are brought into productive use, a subsistence economy becomes, partially, a cash economy. However, apart from these elements, the social economic promotion of an area has considerably more consequences: commercial functions need to develop, social behaviour and attitudes gradually change, the demand structure for all types of services is altered, migration patterns of the resident population may be modified, and the need for improved political and administrative functions will arise. In other words, the subsistence economy requires considerably fewer services and other types of socioeconomic functions than the cash economy which is being developed.

Consequently, in addition to the proper agricultural development measures, a meaningful rural development needs the provision of appropriate access to all types of required complementary facilities. If this provision is not made, the incentives for modernization and cash crop production become redundant and the rural economy remains isolated in the long run.



Most of the required services and functions can be termed typically "urban". Instead of spreading these functions over many isolated locations, it is necessary to group the services at specific places; that is, in towns. The following are the advantages of concentrating different types of facilities at central places:

- (1) Users of one facility can take the advantage to use another available facility during the same trip: in this way, considerable travel costs can be reduced and time can be saved by the users.
- (2) The existence of various types of services and functions at one place encourages people to make use of other services/facilities which might not have been used otherwise.
- (3) The infrastructure provided to enhance access from the hinterland to an important facility will serve other services and functions as well, if they are clustered in the centre. Thus the efficiency of the infrastructure is considerably higher.
- (4) Places of multi-functional use are far more attractive for private investment than places providing a single service. The concentration of public, social and administrative facilities together with public economic facilities therefore promotes complementary private developments.
- (5) Management of centres becomes easier and more efficient.

Centres with a multitude of services and facilities therefore act as nodal points for the diffusion of functional linkages into their respective hinterland. In this respect the creation or development of such centres is of very considerable value for the success of rural development.

To enhance rural development, it is therefore necessary to provide the missing urban functions at an appropriate scale by improving and consolidating the existing decentralized pattern of centres.

3.3 DECENTRALIZED URBAN DEVELOPMENT STRATEGY: CONSOLIDATION  
OF THE ESTABLISHED CONCEPT

3.3.1 The Hierarchical Pattern

The Plan consolidates the established concept of hierarchy of Service Centres. On the basis of the preceding Government policies, propositions, and an analysis of existing settlements and Service Centres, the NPDP hereby establishes a future system of Service Centres consisting of :

National Centres	2
Regional Centres	1
Sub-Regional Centres	7
District and/or Main Market Centres	22
Rural Market Centres	80
Village Centres	(Number to be determined at the level of District Planning)

Table 3.2 shows the proposed distribution of Service Centres by district (with the exception of the Village Centres, which will be defined in detail during the preparation of the District Plans). For the geographical location of the designated centres see Figures 3-0, 3-1, 3-2 and 3-3.

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The following Table 3.3 summarizes the empirically determined criteria for the delineation of the influence area for each level of centre designated by the NPDP. It shows the sphere or area of influence of each level of centre, the travel/time distance to the centre, the approximate population within the centre, and the population range within the centre's area of influence both in the Plan's base year 1985 and in the target year 2000. The population range to some extent and incomes to a great extent, constitute the economically viable threshold figure for the corresponding level of service at each centre. It should be pointed out that the service centre approach to rural development does not require a centre to have minimum population. The valid criteria are only defined with reference to the available services and influence areas. However, a well populated centre is more attractive to visitors, suppliers of services and investors alike. Therefore locating services in places without a residential population should be avoided.

### **3.3.2 Designated (Urban and Rural) Service Centres**

The following subsections elaborate on the distribution of the various levels of centres except the Village Centres, which are to be dealt with in District Plans. For three levels, i.e. Sub-Regional Centres, District and/or Main Market Centres and Rural Market Centres, Figures 3-1, 3-2, and 3-3 show the influence areas for each of the designated centres. For the first two levels, the influence areas are approximately delineated by means of isochrones. In this case, it is taken into account that the time requirement for a certain distance on a tarred road is less than on a gravel or earth road. For the Rural Market Centres, influence areas have been drawn as a standard radius (See Table 3.3.).



-  NATIONAL CENTRE
-  REGIONAL CENTRE
-  SUB-REGIONAL CENTRE
-  DISTRICT AND/OR MAIN MARKET CENTRE
-  RURAL MARKET CENTRE
-  NATIONAL BOUNDARY
-  DISTRICT BOUNDARY

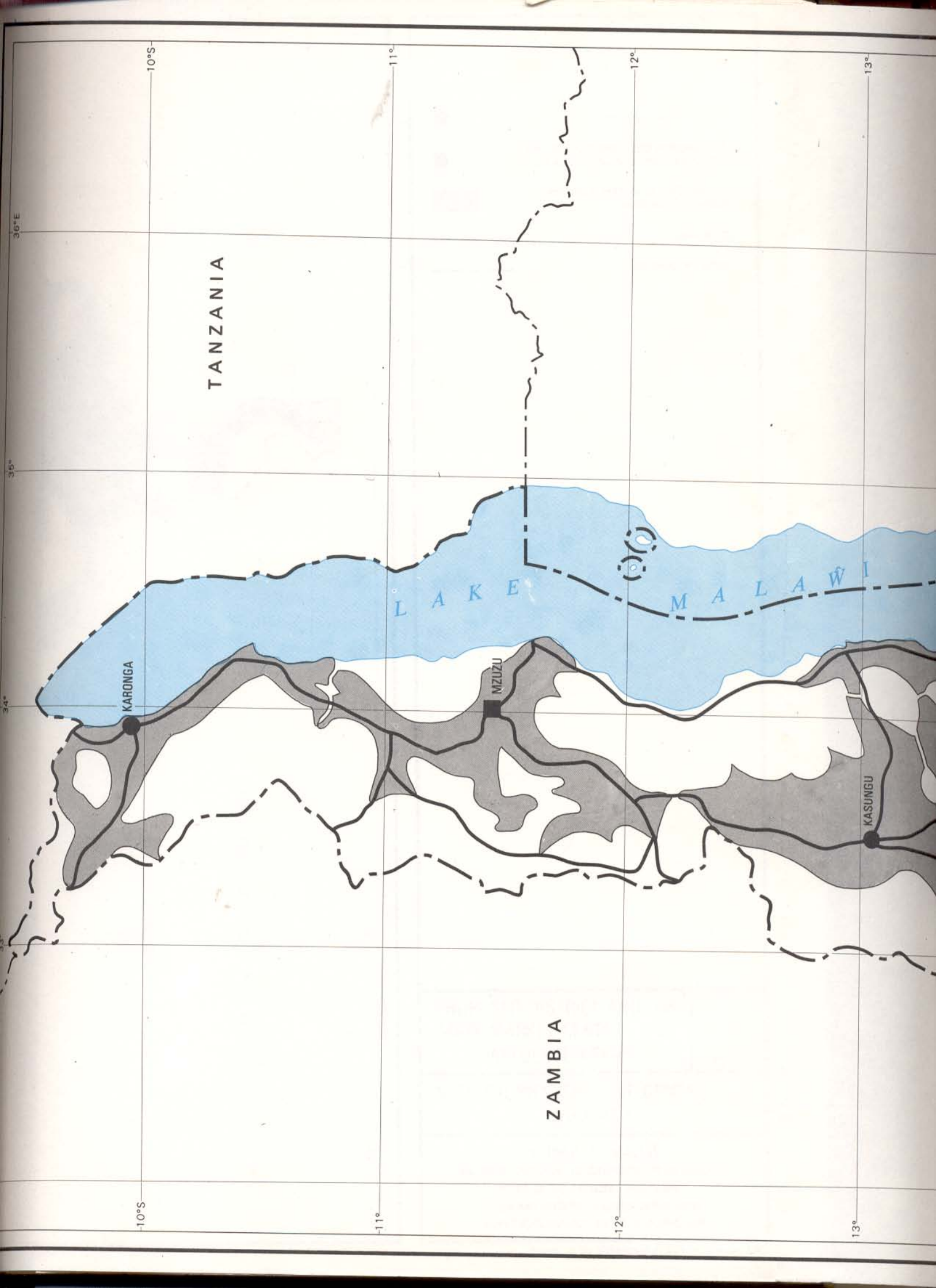


Km 20 0 20 40 60 80 100 Km

**PROPOSED URBAN AND RURAL SERVICE CENTRES** **FIG 3-0**

**NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME I**

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986



TANZANIA

ZAMBIA

KARONGA

MZUZU

KASUNGU

LAKE

MALAWI

10°S

11°

12°

13°

10°S

11°

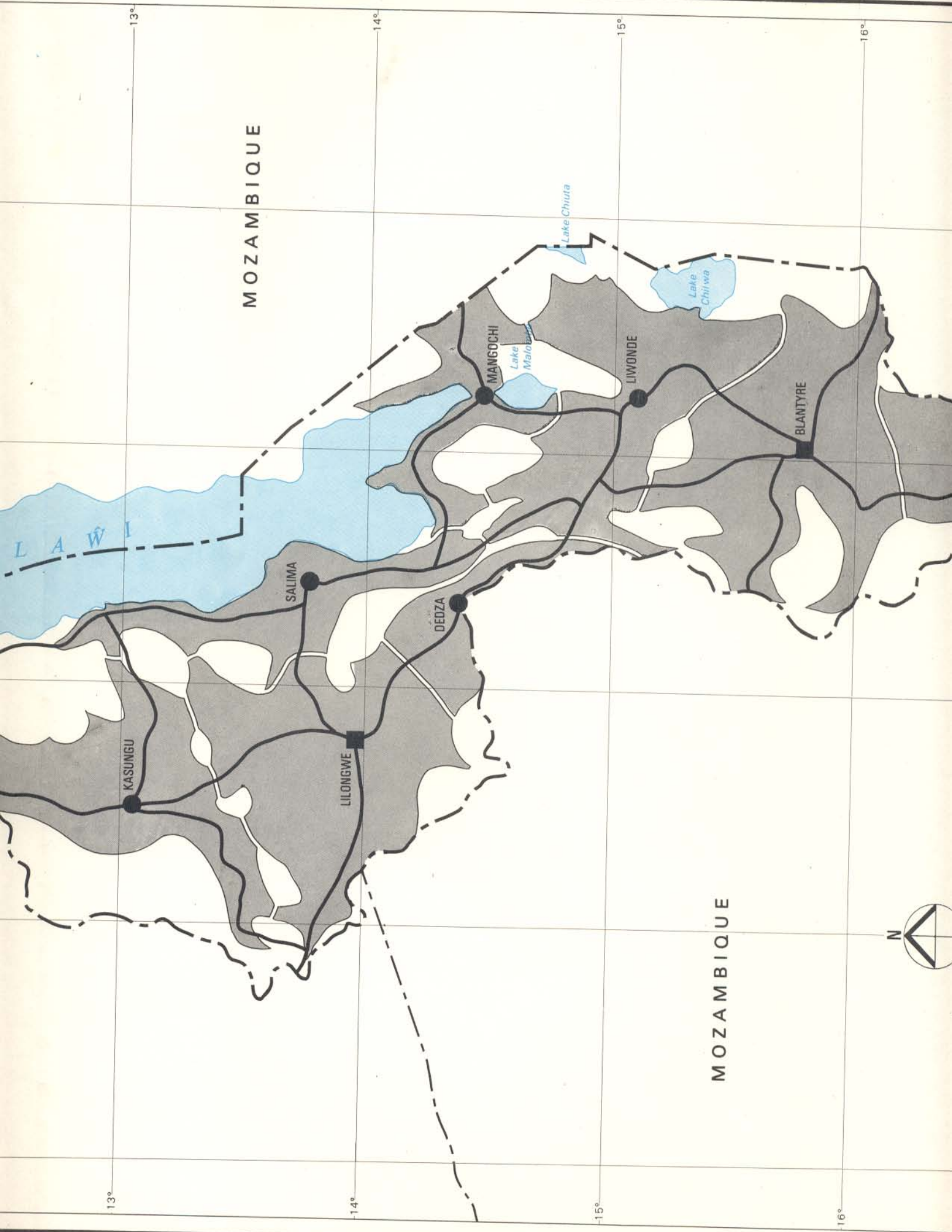
12°

13°

36°E

35°

34°



MOZAMBIQUE

MOZAMBIQUE

LAWI

13°

14°

15°

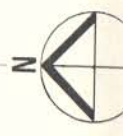
16°

13°

14°

15°

16°



SALIMA

DEDZA

MANGOCHI

LIWONDE

BLANTYRE

KASUNGU

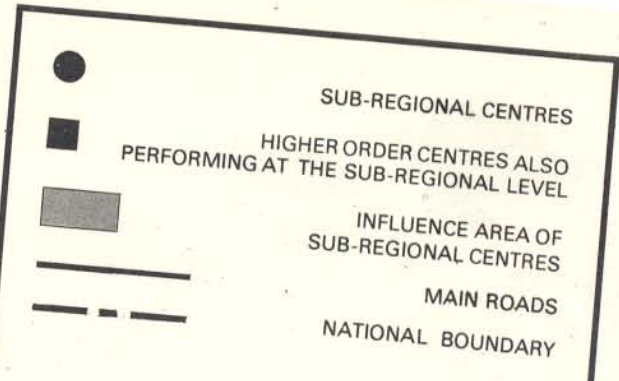
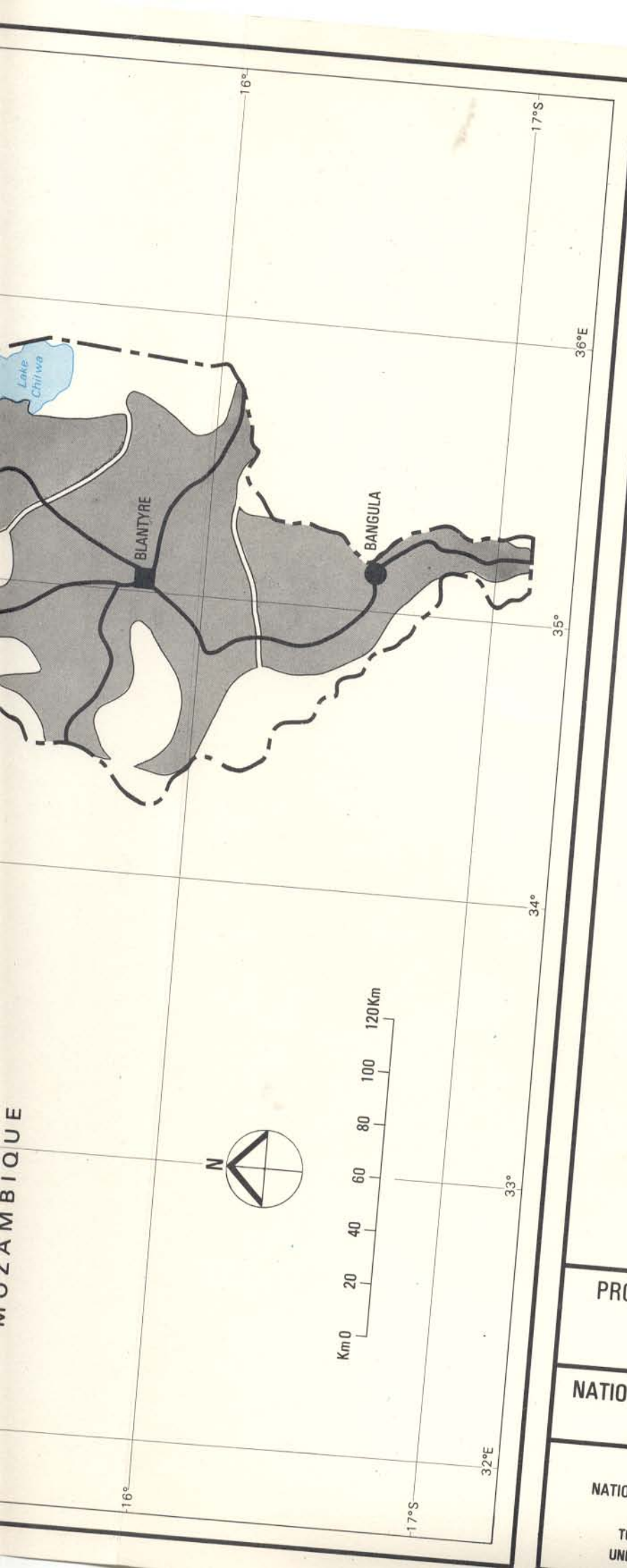
LILONGWE

Lake Malawi

Lake Chiuta

Lake Chiwa



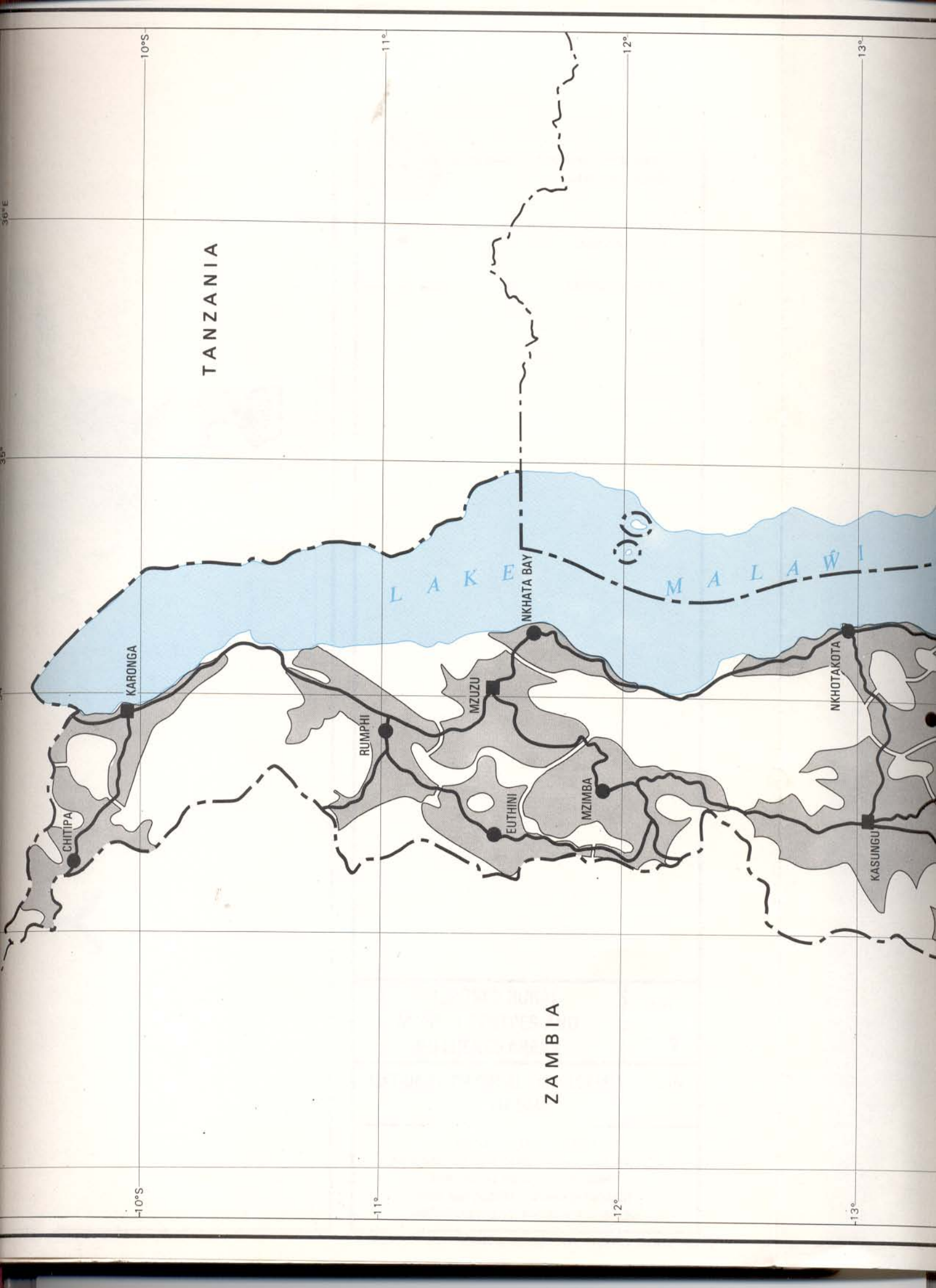


PROPOSED SUB-REGIONAL CENTRES AND INFLUENCE AREAS

FIG 3-1

NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME 1

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/70/001



TANZANIA

ZAMBIA

L A K E M A L A W I

CHITIPA

KARONGA

RUMPHI

MZUZU

EUTHINI

MZIMBA

NKHATA BAY

NKHOTAKOTA

KASUNGU

10°S

11°

12°

13°

10°S

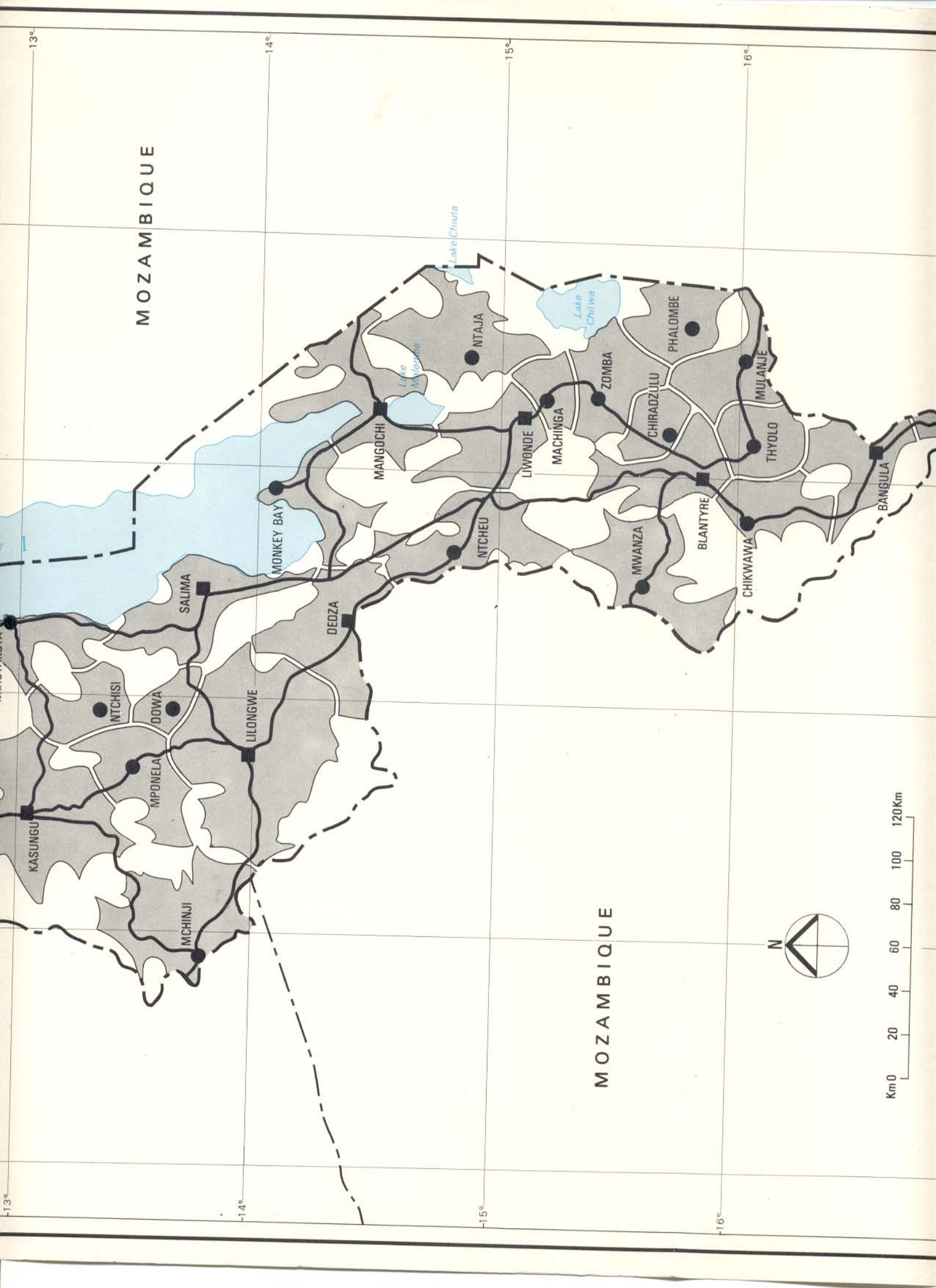
11°

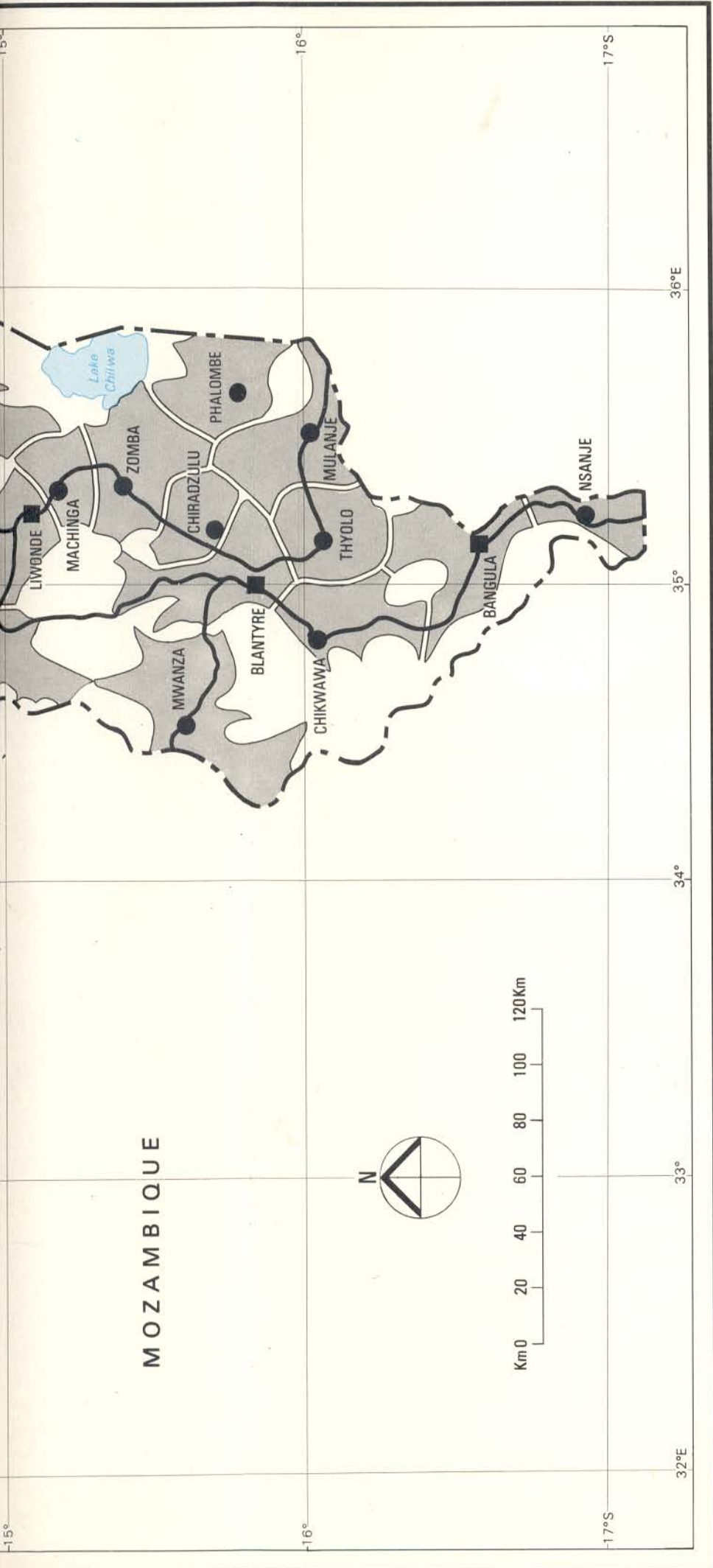
12°

13°

36°E

35°





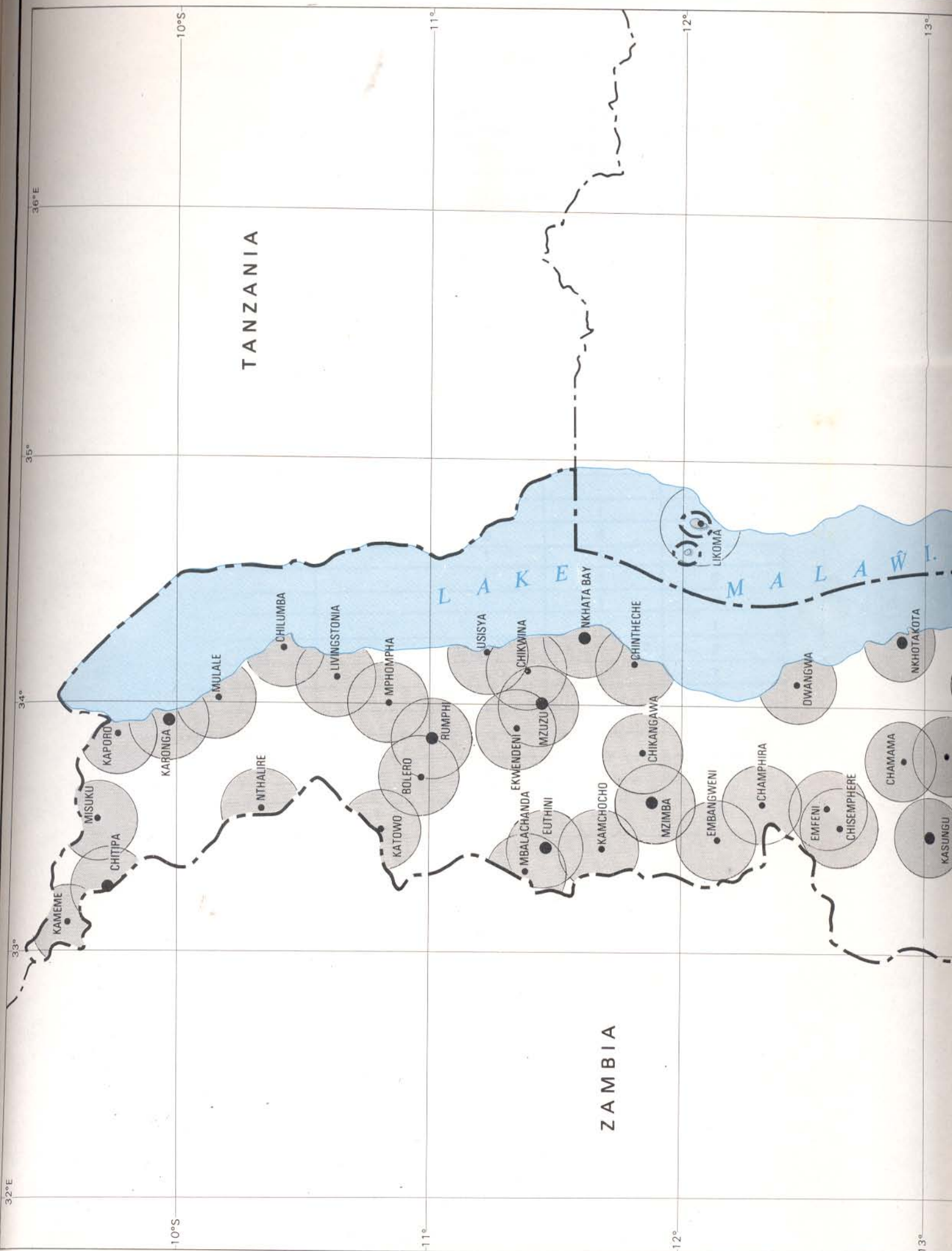
- DISTRICT AND / OR MAIN MARKET CENTRES
- HIGHER ORDER CENTRES ALSO PERFORMING AT DISTRICT AND / OR MAIN MARKET CENTRE LEVEL
- ▭ INFLUENCE AREA OF DISTRICT AND / OR MAIN MARKET CENTRES
- MAIN ROADS
- - - NATIONAL BOUNDARY

PROPOSED DISTRICT AND / OR MAIN MARKET CENTRES AND INFLUENCE AREAS

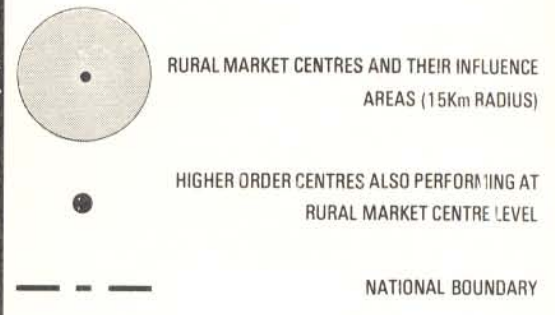
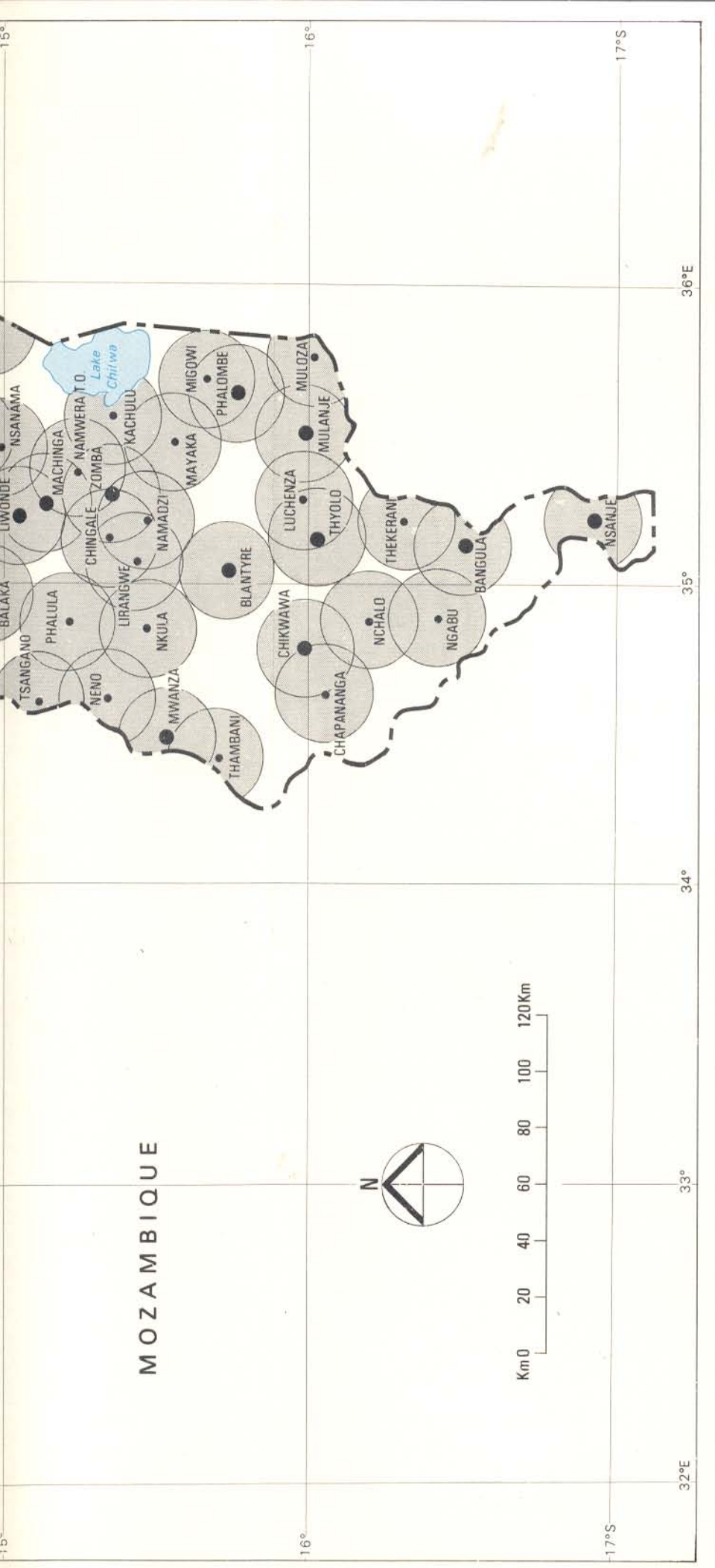
FIG 3-2

NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME 1

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986







<p><b>PROPOSED RURAL MARKET CENTRES AND INFLUENCE AREAS</b></p>	<p><b>FIG 3-3</b></p>
<p><b>NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME 1</b></p>	
<p><b>REPUBLIC OF MALAWI</b>          NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT          OFFICE OF THE PRESIDENT AND CABINET          TOWN AND COUNTRY PLANNING DEPARTMENT          UNDP/UNCHS PROJECT MW/79/012 APRIL 1986</p>	

**Table 3.2**  
**Distribution of Designated Service Centre by District**

District	National Centre	Regional Centre	Sub-regional Centre	District/ Main Market Centre	Rural Market Centre
Chitipa	-	-	-	1	3
Karonga	-	-	1	-	3
Nkhata Bay	-	-	-	1	4
Rumphi	-	-	-	1	4
Mzimba	-	1	-	2	8
<b>Northern Region</b>	-	1	1	5	22
Kasungu	-	-	1	-	3
Nkhotakota	-	-	-	1	2
Ntchisi	-	-	-	1	1
Dowa	-	-	-	2	3
Salima	-	-	1	-	2
Lilongwe	1	-	-	-	8
Mchinji	-	-	-	1	3
Dedza	-	-	1	-	5
Ntcheu	-	-	-	1	4
<b>Central Region</b>	1	-	3	6	31
Mangochi	-	-	1	1	5
Machinga	-	-	1	2	6
Zomba	-	-	-	1	4
Chiradzulu	-	-	-	1	1
Blantyre	1	-	-	-	2
Mwanza	-	-	-	1	2
Thyolo	-	-	-	1	2
Mulanje	-	-	-	2	2
Chikwawa	-	-	-	1	3
Nsanje	-	-	1	1	-
<b>Southern Region</b>	1	-	3	11	27
<b>All Malawi</b>	2	1	7	22	80



**Table 3.3:  
Recommended Accessibility Standards and Threshold Population**

Level of Centre	Size of Service Area (Sphere of Influence)	Accessibility: Distance/Time Factor	Approximate Population within Centre		Population Range within Sphere of Influence	
			1985	2000	1985	2000
National Centre	Nation-wide	Maximum 12 hours	> 200,000	> 700,000	All Malawi	
Regional Centre	(approx. 30,000 Km <sup>2</sup> )	5-6 hours	> 45,000	> 120,000	750,000 to 3,500,000	1,100,000 to 5,500,000
Sub-Regional Centre	(10,000 -12,000 Km <sup>2</sup> )	Maximum distance 80-100 Km on tarred road. Transport mode: motor vehicle	> 10,000	> 30,000	200,000 to 1,200,000	400,000 to 2,000,000
District and/or Main Market Centre	(2,000 -6,000 Km <sup>2</sup> )	Maximum distance 40-50 Km on tarred road Transport mode: motor vehicle, bicycle.	> 5,000	>13,000	60,000 to 250,000	90,000 to 400,000
Rural Market Centre	(approx. 700 Km <sup>2</sup> )	Accessible within 3-4 hours walking time, i.e. 15 km or 1 hour by bicycle	> 1,500	> 4,500	25,000 to 50,000	40,000 to 80,000
Village Centre	(approx. 200 Km <sup>2</sup> ) sq. km)	Accessible within 1-2 hours walking time or 1/2 hour by bicycle	> 500	> 1,400	10,000 to 20,000	16,000 to 33,000

### 3.3.2.1. National Centres

Two centres are designated as National Centres: Lilongwe and Blantyre. Lilongwe qualifies mainly due to its political-administrative functions and Blantyre due to its commercial and industrial establishments. It is expected, however, that within the next ten years Lilongwe will considerably improve its position in commerce and industry. Whilst it may appear justified to designate Zomba as a National Centre at present, it is expected that its importance will decline considerably. All political-administrative functions are expected to be transferred to Lilongwe soon. The only remaining important national function will be the University of Malawi. Secondly, Zomba itself is within the sphere of influence of Blantyre. Zomba, therefore, is designated as a District and/or Main Market Centre.

### 3.3.2.2. Regional Centre <sup>(1)</sup>

The Northern Region needs its own centre in order to satisfactorily provide the necessary functions at this level. Mzuzu is designated as a Regional Centre. Its influence area covers all the northern Districts of Chitipa, Karonga, Rumphi, Nkhata Bay and Mzimba. Although its existing facilities and services are not yet fully adequate for it to serve as a Regional Centre, it is the only urban place in the Northern Region which can play this role. It is expected that considerable progress will be made within the next ten years so that Mzuzu can fully perform the required functions.

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(1) The term "Regional Centre", in the nomenclature of Service Centres, refers to the centre of functional region not the existing administrative region.

The two National Centres of Lilongwe and Blantyre will also provide the functions required at the regional level<sup>(1)</sup>, covering the central part (ie., the Districts of Kasungu, Nkhotakota, Salima, Lilongwe, Mchinji, Dedza and parts of Ntcheu and Machinga) and the southern part of the country, respectively.

The service areas of the three centres cover the entire national territory fairly well. From any place in the country a Regional Centre can be reached within five to six hours. From the far ends of a region it could, however, take two days to make a return trip to the centre.

### **3.3.2.3 Sub-Regional Centres**

Seven centres have been designated as Sub-Regional Centres: Karonga, Kasungu, Salima, Mangochi, Liwonde, Dedza and Bangula.

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(1) National Centres such as Lilongwe and Blantyre provide all functions of Regional Centres and all lower level functions. At each hierarchical level it is therefore necessary to include the higher level centres in order to get a correct picture of the overall area coverage.

Karonga covers the northern end of the country, serving the Districts of Chitipa, Karonga, and partly Rumphu. It serves a population of about 210,000 - 220,000 in 1985 terms (330,000 in 2000). The other parts of the Northern Region and part of the District of Kasungu are served by Mzuzu in its role as a Sub-Regional Centre<sup>(1)</sup>

Kasungu will serve an area stretching as far up as the southern tip of the Northern Region. Considering both Primary and Secondary Roads as well as District Roads (which are currently being improved to reasonable weatherproof standard under DRIMP), the influence area satisfactorily covers all populated areas north, north-east and northwest of Kasungu. In the southeast the

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(1) However, in the west of the region along the Zambian border, a large number of people (about 90,000 in 1985 and 140,000 in 2000) have to travel longer distances to obtain the services and functions typically found at this level. The problem could partly be solved (for presently about 65,000 people) if Mzimba were to be designated as Sub-Regional centre. On the other hand, as can be seen from Table 3.2 the threshold population for commercially viable services at this level is at least 250,000 people (in 1985 terms) in the influence area. Hence, the location of Sub-Regional Centre at Mzimba is far from being viable at this point in time. Up to the year 2000 its service area population would only grow to little more than 100,000 inhabitants, which would still not support a viable centre.

catchment area extends as far as Ntchisi and in the southwest it practically reaches Mkanda. To the south it overlaps with the influence area of Lilongwe, the real division between the two being at about the level of Mponela. Kasungu has a service area population of about 320,000 in 1985 which will grow to about 500,000 in the year 2000.

Salima is designated as a Sub-Regional centre to service a catchment population of about 240,000 in 1985, growing to about 370,000 in 2000. Salima's maximum influence area to the north is more than 100Km; i.e. up to Dwangwa. To the south it extends only as far down as Mtakataka, since it overlaps slightly with Mangochi's influence area.

Mangochi serves the entire eastern lakeshore up to the Mozambican border. Along the western lakeshore it serves Monkey Bay and further west towards Mtakataka. To the south it almost reaches Liwonde. The population size of the influence area is, similar to Salima's, about 240,000 inhabitants in 1985, which will grow to about 370,000 in 2000. The centre is commercially viable and will perform the necessary functions of this level.

Liwonde was designated by the Government in the seventies to become a more important urban centre. Industrial development is being promoted and also the Machinga District Boma is expected to be transferred to Liwonde soon. It is further expected that commercial developers will act on incentives from industry and administration and will grow accordingly. The neighbouring centres of Zomba in the south and Balaka in the north are expected to decline somewhat in the long run, thus giving Liwonde a considerable overall development potential.

The influence area of Liwonde is expected to extend over Ntaja in the north, Ntcheu in the northwest, and halfway to Blantyre on the southern route. It will entirely cover Zomba and its hinterland towards Lake Malombe. Total population in the influence area is about 350,000 in 1985 and will grow to approximately 550,000 in 2000.

Dedza is one of the 'candidate' towns for an additional Sub-Regional Centre which is being proposed between Liwonde and Lilongwe. Other possible candidates are Balaka and Ntcheu but both these centres are placed too near to Liwonde and would therefore only cover a very small influence area. Dedza, on the other hand, is located within a densely populated area and, despite its proximity to Lilongwe and the resulting overlap of catchment areas, it covers an influence area population of about 190,000 in 1985 terms. However, of this population a very substantial part presently has only very poor access to Dedza. About 50,000 inhabitants west of Dedza and 40,000 located north of Dedza need the provision of all-weather district roads in order to come within the reach of the centre. Given these improvements the total population coverage will be about 300,000 by the year 2000. According to the threshold population considered for commercial viability of Sub-Regional Centres, this implies that Dedza will become a full-grown centre soon after 1990.

Bangula is proposed as an additional Sub-Regional Centre in order to cater to the needs of the people in the south. Bangula is strategically well located within the transportation networks and, in 1985 terms, covers an influence area population of close to 200,000. This population is expected to grow to about 310,000 by the year 2000. Accordingly, commercial viability of Bangula as a Sub-Regional Centre can therefore be expected by about 1990.

The two National Centres of Lilongwe and Blantyre will also perform the function of Sub-Regional Centres.

Lilongwe's influence area, in this respect, is fairly large due to the star-shaped road system converging on it from several directions and due to its excellent central position. At this level it will serve a total rural hinterland population of about 750,000 inhabitants in 1985 and about 1.2 million in the year 2000. In the northeast it covers the entire Dowa District population and parts of Ntchisi. In a directly eastern direction it overlaps with the influence area of Salima. West of Lilongwe there exists some population pockets of considerable size which are serviced by neither Lilongwe nor Kasungu. About 30,000 inhabitants (1985) situated between Mkanda and Mchinji as well as about 20,000 people southwest of Kasiya are outside the normally acceptable maximum distance to services at this level. The given deficit, however, does not warrant designating Mchinji as a Sub-Regional Centre, as it will not be viable, commercially, within the next fifteen years.

Blantyre's excellent road network and the services/facilities available make its Sub-Regional Centre influence area far greater than that of other centres. Tarred roads lead in almost all directions thus the influence area covers places such as Mwanza, Chiradzulu, Thyolo, Luchenza, and Mulanje. Although it could cover also Chikwawa, Nchalo, Ngabu and possibly Bangula, the extreme south of the country could not be served at this service level.

In summary, the present Sub-Regional Centre's level is made up by the town of Karonga, Kasungu, Salima, Mangochi and one centre north of Blantyre, i.e. Zomba. The system is complemented by the cities of Blantyre, Lilongwe and Mzuzu in their role as Sub-Regional Centres. However, in order to achieve an overall satisfactory area and population coverage it is necessary to designate three additional centres: Liwonde (replacing Zomba, which in the future will fulfil the role of a District and/or Main Market Centre), Dedza and Bangula.

#### 3.3.2.4 District and/or Main Market Centres <sup>(1)</sup>

Apart from all Sub-Regional Centres and the higher level centres which fulfil the functions of District and/or Main Market Centres as well, there is a total of twenty-two centres designated at this level. In Appendix 3.1 a brief description of the individual centres and their influence areas is given and the corresponding area coverage is discussed. The threshold population, i.e. the minimum required population in the influence area, which makes a District and/or Main Market Centre viable as a service centre, is around 65,000 inhabitants in 1985 terms. Figure 3-2 shows the geographical distribution of the centres and their respective influence areas.

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(1) Districts Centres perform a specific task within the administrative system of the country. They are not necessarily part of one level of the "functional" Service Centre hierarchy which is presented here. However, most of them pertain to Main Market Centre level, so that this type is called District and/or Main Market Centres. Nevertheless, some of the District Centres pertain to higher functional levels.



In summary, thirty-two centres are needed to cater for the population and area coverage requirements at this level. Ten of them are centres of a higher hierarchical level, and thus do not need further elaboration in this section. Out of the remaining twenty-two centres there are seventeen District Centres with important administrative functions. The other five centres are urban places which have developed commercial functions on a reasonable scale and which are located in a strategically good position, thus justifying their designation as Main Market Centres. The latter are Euthini, Mponela, Monkey Bay, Ntaja and Phalombe.

Nevertheless, about 300,000 Malawians are outside the influence areas of the designated Centres. Although this is recognised as an unsatisfactory situation, it cannot be resolved by assigning more centres as they would most probably not be viable. A great many of the disadvantaged population can be brought into the reach of an adjacent Main Market Centre through an improvement of the district road network. The uncovered areas as shown in Figure 3-2 indicate where new roads should urgently be built. Further elaboration on this matter will be done in the preparation of the District Plans. In addition, it has to be ensured that the existing district roads are in a good state of repair and in motorable condition throughout the year.

The following Table 3.4 lists the District and/or Main Market Centres and summarizes the corresponding influence area population as well as the required improvements in road development.

**Table 3.4:**  
**Designated District and/or Main Market Centres**

Centre	Influence Area Population		Required Improvements in Influence Area
	(1985)	(2000)	
Chitipa	65,000	107,000	
Rumphi	70,000	115,000	Distr. Rd. Network
Euthini	50,000	82,000	Distr. Rd. Network
Nkhata Bay	65,000	107,000	Second. Rd. Network
Mzimba	75,000	124,000	
Nkhotakota	65,000	107,000	Distr. Rd. Network
Mponela	160,000	263,000	
Mchinji	100,000	165,000	
Monkey Bay	45,000	74,000	
Zomba	120,000	197,000	
Ntaja	110,000	181,000	
Mwanza	50,000	82,000	Distr. Rd. Network
Mulanje	120,000	197,000	
Ntcheu	75,000	124,000	
Phalombe	80,000	132,000	Distr. Rd. Network
Ntchisi	150,000	247,000	Distr. Rd. Network
Dowa	105,000	173,000	
Chikwawa	186,000	306,000	
Thyolo	330,000	542,000	
Nsanje	83,000	137,000	
Chiradzulu	195,000	321,000	
Machinga	129,000	212,000	

### 3.3.2.5 Rural Market Centres

Figure 3-3 shows the geographical distribution of designated Rural Market Centres and their respective influence areas, each having a radius of 15 Km, approximately. A service radius assumes that people will travel along a straight route to a Rural Market Centre despite minor natural barriers such as rivers, mountains escarpments, etc. At the level of national planning it is necessary to generalize the service radius, but the final designation of centres at this level will be done at the level of district planning. The designation of the centres is therefore tentative.

Table 3.5 provides a list of designated Rural Market Centres. The average population served by a Rural Market Centre is between 20,000 and 35,000 inhabitants. In areas of low population density a threshold population of about 15,000 inhabitants may be justified. As the population threshold is an extremely important planning parameter it is recommended that further investigations into this matter be made. Any possible alterations to the presently used criterion, as mentioned above, can then be rectified in the corresponding District Plans. Out of the total number of 80 Rural Market Centres as designated by this Plan there are 21 situated in the Northern Region, 31 in the Central Region and 27 in the Southern Region (1)

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(1) The Rural Market Centres shown as "existing" in the list provided in Table 3.4 were identified in the Background Study. They already provide a certain range of services typically found at this level. The centres marked as "proposed" in Table 3.4 are those centres which have been newly identified for this level of centre. Due to their poor supply of services at present they were classified only as Village Centres in the Background Study.

**Table 3.5:  
Designated Rural Market Centres**

Centre	Status	Centre	Status
<b>Northern Region</b>			
Kameme	proposed	Misuku	proposed
Kaporo	proposed	Mulale	proposed
Nthalire	proposed	Chilumba	existing
Livingstonia	existing	Katowo	existing
Mphophwa	proposed	Bolero (RGC)	existing
Chikwina (RGC)	existing	Usisya	proposed
Mbalachanda (RGC)	existing	Ekwendeni	existing
Kamchocho	proposed	Chikangawa	existing
Chintheche	existing	Embangweni	existing
Edingeni	proposed	Champhira	existing
Emfeni	proposed	Likoma (RGC)	existing
<b>Central Region</b>			
Chisemphere	proposed	Dwangwa	existing
Chamama	proposed	Malomo	existing
Mkanda	existing	Kapiri	existing
Santhe	existing	Madisi	existing
Mwansambo (RGC)	proposed	Kamwendo	existing
Nambuma	existing	Kasiya	existing
Khombedza	proposed	Namitete	existing
Nsaru	existing	Lumbadzi	proposed
Mvera	proposed	Chimutu	proposed
Sinyala	existing	Linthipe	proposed
Mayani	proposed	Chipoka	existing
Lobi (RGC)	existing	Mtakataka	existing
Lizulu	existing	Golomoti	proposed
Bwanje	proposed	Bilila	proposed
Tsangano (RGC)	existing	Nathenje	existing
Mitundu	existing		
<b>Southern Region</b>			
Chikweo (RGC)	proposed	Phalula (RGC)	proposed
Balaka	existing	Neno (RGC)	existing
Nsanama	existing	Nayuchi	proposed
Namwera Turn-off	existing	Thambani	proposed
Nankumba	proposed	Makanjila (RGC)	existing
Chilipa	existing	Malindi	existing
Nkula	proposed	Lirangwe	existing
Chingale	existing	Kachulu	existing
Chapananga	existing	Luchenza	existing
Muloza	existing	Migowi	existing
Namadzi	existing	Mayaka	proposed
Ngabu	existing	Nchalo	existing
Thekerani (RGC)	existing	Namwera	existing
Ulongwe	existing		

### 3.3.3 Guidelines for the Location of Service Facilities by Hierarchy of Service Centre

An economy which has evolved from pure subsistence into a higher stage of development needs public and private services. These services are the links between the higher level urban centres and the rural hinterland. The more effectively these linkages function, the more efficiently the socioeconomic system will work. For instance, the public health standard in the rural areas can be raised to a desired standard only if people have access to the necessary medical facilities. Equally, farmers can enter into the cash economy only if they can sell their produce; ie. if marketing and storage facilities are available. Communication among people both in their social and in their economic roles takes place only if postal facilities, telephone, broadcasting services, distribution of newspapers, bus services, etc., exist and are accessible to all people.

It is an accepted practice for the services and functions to be grouped together in centres rather than scattered in isolated places over the country. In this way users of one facility can take the opportunity to use another available facility at the centre during the same trip. Considerable travel costs and time can be saved by the users.

National Centres contain those functions and services which have a nationwide influence area. In this respect Malawi is somewhat different from other countries because the national administrative functions are concentrated in Lilongwe whereas many of the commercial functions are still concentrated in Blantyre. Typical public service facilities are the Central Government functions, specialized health care facilities, tertiary education facilities, etc. On the private side, there are business, professional and personal services; international transport and telecommunications links. The trade sector provides department stores and highly specialized retailing.

Regional Centres have an influence area which extends over five or more districts. Their service functions include such important facilities as large scale wholesale distribution and warehousing, the regional ADMARC office, highly specialized retail shops, etc.

Sub-Regional Centres extend their influence area over 2 - 5 districts. Their functions include manufacturing, agro-processing, some commercial business, professional and personal services, banking, for example. Public services include vocational training establishments, community centre, etc.

District and/or Main Market Centres have an influence area of a least one district. Their functions include rooted industries, small-scale industries, some banking facilities, agro-input warehousing, some specialized retailing and wholesaling of day to day goods. See footnote on Section 3.3.2.4.

Rural Market Centres are the basic economic activities

'nodes' at which rural inhabitants sell their agricultural produce and buy the goods and services they need. Their sphere of influence extends over about 700 sq.km. The services include small retail shops, post office, health centre, mobile bank services, multipurpose community halls; ADMARC facilities for agricultural input and output, marketing, etc.

Village Centres have an influence area of about 200 sq. km. They provide the very basic services, such as elementary education, a health post, agricultural extension service, a grocery for daily shopping, etc.

The following Table 3.6 provides a guide as to typical functions and facilities which should be available in each centre at the difference levels<sup>(1)</sup>. It should be emphasized, however, that this guide can serve only as an indication for planning purposes. The standards described in the list especially those referring to supplementary public utilities may, in many cases, be realised only during the second half of this Plan period or even later

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(1) The guidelines were first conceptualized when the functions of centres under the Secondary Centres Development Programme were defined in 1980 (see TCPD/GITEC: 1980 p.117 - 120). They have now been revised in accordance with broader NPDP strategies. Further more, a number of functions have now been given a more precise definition through the use of Malawian terminology.

**Table 3.6**  
**Guidelines for the Location of Services & Facilities by Hierarchy of Settlements**

Hierarchical Level of Centre	Services and Facilities					FUNCTIONAL AREAS
	National Centres	Regional Centre	Sub-Regional Centres	District and/or Main Market Centres	Rural Market Centres	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>1. GOVERNMENT FUNCTIONS</b>
<b>Central Government</b>						
Government Administration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Distr./Sub-Distr. Admin. (where applicable)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Local Authority</b>						
City Council	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Municipality Council	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Town Council	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Rural Centre Council	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Village Centre Council	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Justice</b>						
Supreme Court	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
High Court and Branches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Magistrate Court	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Traditional Courts (Dist., Appeal or other)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Police</b>						
Police Hqs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regional Police Hqs.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Police Station	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Police Unit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Police Post	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Political Party</b>						
Party Hqs.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Regional Chairman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
District Party Chairman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Local Party Chairman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Road Networks</b>						
Main Road Connection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Secondary Road Connection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
District Road Connection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Airways</b>						
International and Domestic Airport	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Domestic Airport	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Airstrip	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
						<b>2. TRANSPORTATION NETWORKS</b>



**Table 3.6 (contd.)  
Guidelines for the Location of Services & Facilities by Hierarchy  
of Settlements**

Village Centres	Rural Market Centres	Main Market District and/or Centres	Sub-Regional Centres	Regional Centre	National Centres	Hier- archical Level of Centre	Services and Facilities	FUNCTIONAL AREAS
								3. ECONOMY
							<b>Marketing</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Highly Specialized Retailing	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Department Stores	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Specialized Retailing	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Supermarkets	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Superette	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Large General Stores	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Small General Stores	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Groceries	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Large Wholesale/Specialized Goods Wholesale	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Wholesale, Distributor and Warehousing	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Wholesale of high-level Goods	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Wholesale of day-to-day Goods	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Permanent Produce and Consumer Market	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Periodic Produce and Consumer Market	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		ADMARC Depot	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Permanent ADMARC Market	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Seasonal ADMARC Market (perm. structure)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Temporary ADMARC Market	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Cold Storage	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Slaughter House	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Slaughter Slab	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Import/export Agency	
							<b>Production Inputs</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Large-scale Warehousing for Industry	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Large Warehousing Agricultural Inputs (ADMARC)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Warehousing for Agro-Inputs (ADMARC)	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Agro-Inputs Stores (ADMARC)	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Seasonal Agro-Input Stores	
							<b>Industry</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		High Specialized Footloose Industry	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Medium Resources-based/Footloose Industry	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Agro-based and Small Footloose Industry	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Artisans, Crafts	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Cottage Industry	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Large-scale Construction Firms	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Building Contractors	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Small-scale Contractors	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Bricklayers & Construction-Related Crafts	

**Table 3.6 (contd.)**  
**Guidelines for the Location of Services & Facilities by Hierarchy of Settlements**

Services and Facilities						Hierarchical Level of Centre	FUNCTIONAL AREAS				
							3. ECONOMY (contd.)				
National Centres	Regional Centre	Sub-Regional Centres	District and/or Main Market Centres	Rural Market Centres	Village Centres						
<b>Banking &amp; Finance</b>							<b>3. ECONOMY (contd.)</b>				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reserve Bank					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bank Headquarters					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bank Branch					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Static Bank Agency					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mobile Bank					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Post Office Savings Bank					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Insurance Headquarters					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Insurance Agency or Representative					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Housing Finance Headquarters					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Housing Finance Branch					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Housing Finance Representative					
<b>Health</b>											
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	General Hospital					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	District Hospital					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Health Centre					
<b>Education</b>											
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	University					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Colleges (Teachers and Other Professionals)					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Secondary School					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Malawi Correspondence College Centre					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Full Primary School					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	National Research Institutes					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	High Level Vocational Training					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Technical School Grade I					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Technical School Grade II					
<b>Post &amp; Telecommunications</b>											
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Post Office (M.T.O.)					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Post Office (M.P.S.)					
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Postal Agency (P.C.O)					
<b>Accommodation (Non-Tourism)</b>											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	First Class Hotel					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Inn/Motel					
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Resthouse					

**Table 3.6**  
**Guidelines for the Location of Services & Facilities by Hierarchy of Settlements**

Hierarchical Level of Centre	Services and Facilities					FUNCTIONAL AREAS	
	National Centres	Regional Centre	Sub-Regional Centres	District and/or Main Market Centres	Rural Market Centres		Village Centres
						<b>4. SERVICE DELIVERY (contd.)</b>	
<b>Transportation Services</b>							
	■						International Freight Terminal
	■	■					Freight Terminal
	■	■	■				Freight Agency
	■	■	■				Long-distance High-class Bus Service
	■	■	■				Express Bus Service
	■	■	■		■		Year round Local Bus Service
<b>Maintenance and Repair</b>							
	■	■					Specialized Repairs (High Tech. Equipment etc.)
	□	□	■				General Repair (motor vehicle, farm equip.)
	□	□	■				Repair Workshops (household appliances)
<b>Extension Services</b>							
	■	□	□				Chamber of Commerce and Industry
	□	■	■				DEMATT Branches
	□	■	■				DEMATT Agents
	□	□	□				SEDOM Hqs.
	□	□	■				SEDOM Branch Offices
	■	■	■				SEDOM Industrial Extension Officers
	■	■	■				N.R.D.P Regional Office
	■	■	■			EPA Centre	
	■	■	■			Agricultural Extension Worker	
<b>Energy Supply</b>							
	■	■	■			Regular Electricity Supply	
	■	□	□			Institutional generators	
	□	□	□			Central Fuel Reserve Depot	
	□	□	■			Fuel Depot	
	□	□	■			Service Station	
	□	■	■			Filling Station	
	□	■	■			Parafin Pump	
<b>Culture</b>							
	■	□	□			National Cultural Centre	
	□	■	□			Cultural Centre	
	□	□	■			Community Centre	
	□	□	□			Multipurpose Community Hall	
	□	■	□			Community Centre (Combined with MCC)	
	□	□	□			National Library and Documentation Centre	
	□	□	■			Library	
	■	■	□			Mobile Library Service	
						<b>5. COMMUNITY FACILITIES</b>	

**Table 3.6 (contd.)**  
**Guidelines for the Location of Services & Facilities by Hierarchy of Settlements**

Hierarchical Level of Centre		Services and Facilities		FUNCTIONAL AREAS			
National Centres	Regional Centre	Sub-Regional Centres	District and/or Main Market Centres	Rural Market Centres	Village Centres	5. COMMUNITY FACILITIES (Cont'd)	
							<b>Sports &amp; Recreation</b> <input checked="" type="checkbox"/> National Sports Stadium <input type="checkbox"/> Sports Stadium <input checked="" type="checkbox"/> Sports Field <input checked="" type="checkbox"/> Playing field (Combined with School) <input checked="" type="checkbox"/> Public Park
							<b>Urban Roads</b> <input type="checkbox"/> Street Lighting <input type="checkbox"/> Security Street Lighting <input checked="" type="checkbox"/> Main Road Surfaced <input checked="" type="checkbox"/> All weather Standard Urban Roads
							<b>Water Supply</b> <input type="checkbox"/> Piped Water Supply <input checked="" type="checkbox"/> Piped Water Supply or Boreholes/Wells
							<b>Waste Water &amp; Sewerage</b> <input type="checkbox"/> Sewer System and/or Septic Tanks <input checked="" type="checkbox"/> Septic Tanks/Pit latrines
						<b>Solid Waste Disposal</b> <input type="checkbox"/> Motorized Refuse Collection <input checked="" type="checkbox"/> Refuse Collection (Ox-carts) <input checked="" type="checkbox"/> Sanitary land Filling	
						<b>Urban Transport</b> <input type="checkbox"/> Urban Bus Service <input type="checkbox"/> Mini-Bus Service <input type="checkbox"/> Taxis	
						<b>Fire Protection</b> <input type="checkbox"/> Fire Brigade <input type="checkbox"/> Fire Fighting Equipment (voluntary service)	
						6. SUPPLEMENTARY PUBLIC UTILITIES	

### 3.4 PRIORITIES FOR THE PROMOTION OF CENTRES

#### 3.4.1 Criteria for Development Priorities

In principle, the priorities for any investment in Malawi are set in accordance with the expected socioeconomic impact. Those projects which will have the greatest impact per investment unit are being given preference. A certain exception is made when it comes to very basic social services such as health and education.

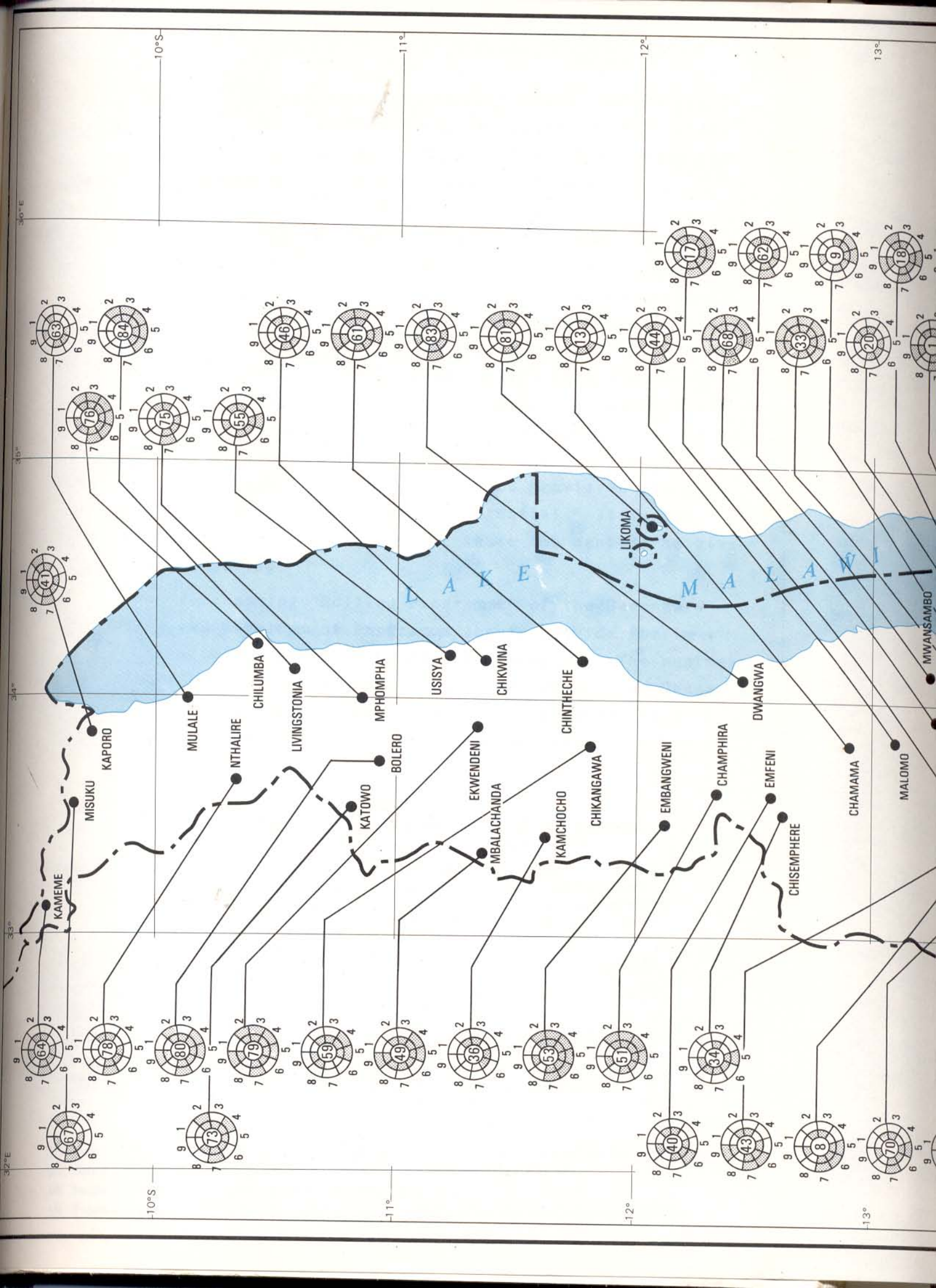
For the promotion of centres within the proposed distribution and development of service centres, all promotion of higher level centres must primarily follow the efficiency criterion whereas the lower level centres, which are more oriented towards basic need provision, would follow a priority pattern according to social criteria.

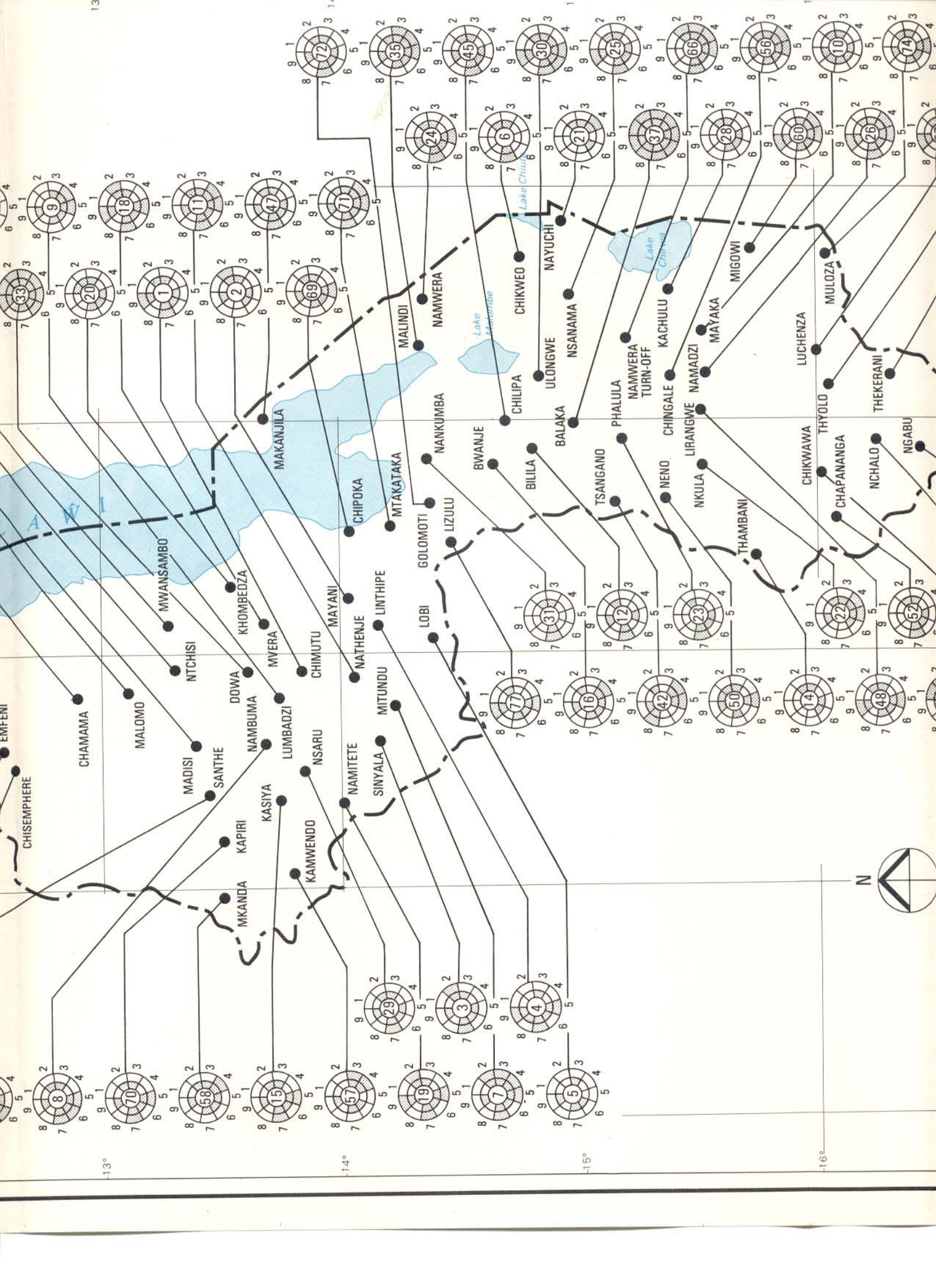
In consequence, for each hierarchical level a separate priority pattern has to be set up and, in principle, promotion measures have to be carried out simultaneously at all levels.

The priorities in the development of service centres, other than National and Regional Centres are based on the following criteria;

- (a) Present level/deficit of service provision
- (b) Catchment or influence area population currently served
- (c) Population carrying capacity of the land in the influence area, that is the population increase capacity.
- (d) Job creation potential up to the year 2000 in non-agricultural activities.

In the following tables, separated for each level, a priority index according to which promotion should take place is presented. An assessment of the investment needs in each centre should be made during the preparation of district plans.



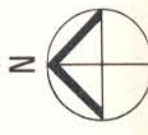


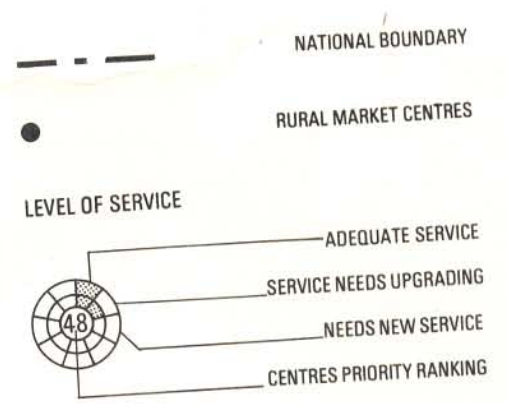
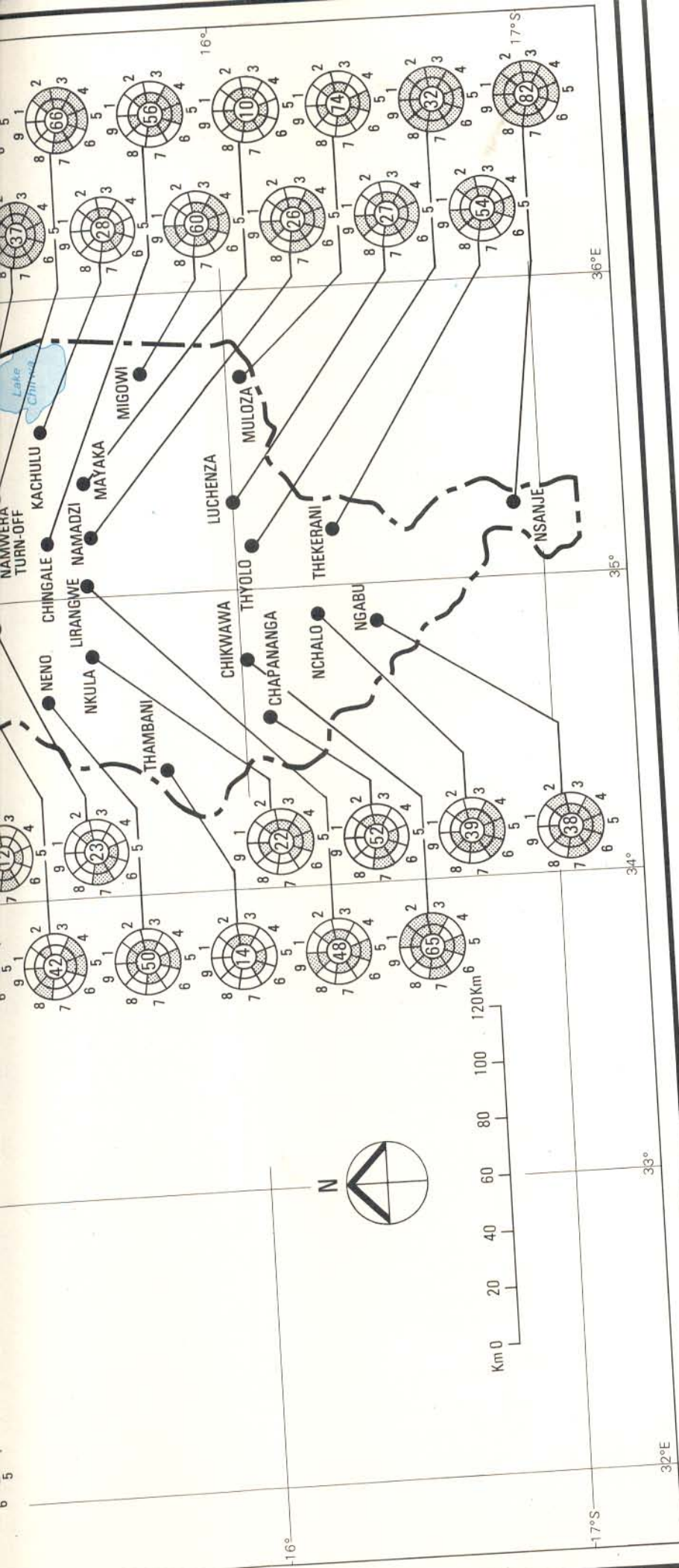
-13°

-14°

-15°

-16°





**SCHEDULE OF SERVICES AND CODE**

1	ADMINISTRATION
2	HEALTH
3	EDUCATION
4	WATER
5	POST AND TELECOMMUNICATION
6	COMMERCE
7	AGRICULTURE SERVICES
8	COMMUNITY FACILITIES
9	PRODUCE MARKETS

**PRIORITY RANKING OF RURAL MARKET CENTRES AND DEFICITS IN SERVICE PROVISION**

**FIG 3-4**

**NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME 1**

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986



The geographical distribution of Village Centres has not been dealt with in this Plan; therefore, no priorities can be spelled out here. This will be done during the preparation of the respective district plans.

### 3.4.2. Priorities for the Promotion of Sub-Regional Centres

Table 3.7 shows the above mentioned indices applied to the centres which have been designated as Sub-Regional Centres. Of the seven centres, two have a clear leading position. These are Liwonde and Bangula. Liwonde has a high current service provision deficit and a very notable present catchment area population, as well as considerable additional population carrying capacity in its hinterland. Bangula, coming second in the ranking list, has a high deficit in service provision and good non-agricultural job creation potential. It is recommended that the promotion of these two centres be given high priority.

The forthcoming "Rolling Programme" of the Secondary Centres Development Programme should provide for immediate improvements in Liwonde and Bangula. The centres following in the ranking list, namely Mangochi, Dedza, Karonga and Salima should come under a later stage of the rolling programme. The programme already covers Kasungu.

**Table 3.7:**  
**Priority Index for the Promotion of Sub-Regional Centres**

Centre	Rank	Present Service Provision Deficit Index (1)	Present Catchment Area Population Index (2)	Carrying Capacity Per Influence Area Index (3)	Non-Agricultural Job Creation Index (4)	Composite Priority Index
Liwonde	1.	129	139	237	119	155
Bangula	2.	155	80	57	126	105
Mangochi	3.	78	95	161	57	98
Kasungu	4.	78	127	35	151	98
Dedza	5.	91	76	112	10	86
Karonga	6.	82	88	33	126	83
Salima	7.	87	95	67	63	78

- (1) Based on Central Service Score derived from 1982 Central Place Survey (For details See NPDP Volume 2)
- (2) Based on estimated 1985 population in catchment area (See Appendix 3.2)
- (3) Based on NPDP land suitability analysis (See NPDP Volume 2)
- (4) Based on projections for non-agricultural job opportunities in 2000 (For details See Appendix 2.2)

### 3.4.3 Priorities for the Promotion of District and/or Main Market Centres

Table 3.8 shows the priority indices for all District and/or Main Market Centres and the resulting priority ranking.

**Table 3.8**  
**Priority Index for the Promotion of District and/or Main Market Centres**

Centre	Rank	Present Service Provision Deficit Index (1)	Present Catchment Area Population Index (2)	Additional Carrying Capacity Index (3)	Non-agricultural job Creation Index (4)	Composite Priority Index (5)
		(1)	(2)	(3)	(4)	(5)
Zomba	1.	60	107	590	462	305
Thyolo	2.	83	293	0	275	163
Ntaja	3.	178	98	206	75	140
Mponela	4.	100	142	152	100	124
Phalombe	5.	105	71	239	63	120
Chikwawa	6.	75	165	61	125	107
Mwanza	7.	95	45	177	88	102
Mulanje	8.	73	107	78	150	102
Ntcheu	9.	95	67	134	88	96
Euthini	10.	166	45	100	50	91
Mzimba	11.	75	67	129	75	87
Monkey Bay	12.	158	40	89	38	82
Chiradzulu	13.	133	173	0	13	80
Machinga	14.	133	115	36	25	78
Ntchisi	15.	83	133	21	63	75
Mchinji	16.	83	89	36	75	71
Nsanje	17.	75	74	7	112	68
Rumphi	18.	80	62	58	63	66
Nkhata Bay	19.	83	58	12	100	64
Dowa	20.	93	93	16	38	60
Chitipa	21.	80	58	43	38	55
Nkhotakota	22.	68	58	28	38	48
Average		100	100	100	100	100

(1). Based on Central Service Score derived from 1982 Central Place Survey (For details See NPDP Volume 2)

(2). Based on estimated 1985 population in catchment area (See Appendix 3.2)

(3). Based on NPDP land suitability analysis (See Volume 2)

(4). Based on projections for non-agricultural job opportunities in 2000 (For details See Appendix 2.2)

The top five centres, which need urgent attention, are Zomba, Thyolo, Ntaja, Mponela, and Phalombe. While Zomba has high potential in all respects, it is mostly the high population in Thyolo's hinterlands, high population carrying capacity in hinterland of Phalombe and Ntcheu and high deficits in the present level of service provision in Ntaja or a combination of all factors (Mponela) which make their promotion important.

Currently, there is no specific programme which caters to the needs of District and/or Main Market Centres. At present the District and/or Main Market Centres are given very low priority within the Secondary Centres Development Programme, so that actual promotion could not be expected to commence before 1990.

#### 3.4.4 Priorities for the Promotion of Rural Market Centres

The priority ranking for the Rural Market Centre level is based on an index different from that for the higher level centres. As the details of Rural Market Centre location (as well as Village Centre location) have to be worked out in the district plans, the priorities spelled out in this Plan can only be tentative. The index system which was used for the higher levels is therefore somewhat simplified. Instead of an estimation of the number of possible additional population in the influence area up to the year 2000, the index only distinguishes between high, medium and low additional carrying capacity level. The fourth index concerning non-agricultural jobs is omitted.

Table 3.9 gives a list of priorities for the promotion of the 80 Rural Market Centres. The highest priority is given to centres where the population density is quite high and land reserves are still available. This is mainly the case in the Southern and Central Region. Examples are all Rural Market Centres located in Lilongwe District.

**Table 3.9**  
**Priority Index for the Promotion of Rural Market Centres**

Rank	Centre	Present Service Provision Deficit Index (1)	Present Catchment Area Population Index (2)	Carrying Capacity Index (3)	Composite Priority Index
1.	Mayaka	112	218	208	179
2.	Bilila	141	109	235	162
3.	Namadzi	87	218	179	162
4.	Sinyala	93	200	177	157
5.	Luchenza	51	218	193	154
6.	Linthipe	93	200	158	151
7.	Nathenje	87	164	191	148
8.	Khombedza	160	127	150	146
9.	Mitundu	66	218	150	145
10.	Lobi	160	127	146	145
11.	Bwanje	141	91	197	143
12.	Chikweo	160	127	133	140
13.	Migowi	93	127	192	138
14.	Kasiya	87	145	180	138
15.	Kachulu	141	127	145	138
16.	Lirangwe	93	164	150	136
17.	Nambuma	87	182	125	132
18.	Lumbadzi	87	182	122	131
19.	Balaka	35	145	202	128
20.	Ngabu	51	127	193	124
21.	Nankumba	141	47	175	121
22.	Mayani	160	164	36	120
23.	Chilipa	93	73	185	117
24.	Thambani	160	73	118	117
25.	Embangweni	70	73	200	115
26.	Madisi	74	156	111	114
27.	Ulongwe	66	127	145	113
28.	Golomoti	102	55	176	111
29.	Malomo	93	73	166	111
30.	Nkula	160	55	115	110
31.	Chisemphe	112	73	141	109
32.	Emfeni	112	65	146	108
33.	Kamchocho	125	55	142	108
34.	Kamwendo	87	109	126	108
35.	Chimutu	160	164	0	108
36.	Mkanda	93	102	124	107
37.	Namitete	56	164	90	104
38.	Chingale	70	127	111	103
39.	Chamama	160	73	76	103
40.	Phalula	112	98	92	101

**Table 3.9: (cont)**  
**Priority Index for the Promotion of Rural Market Centres**

Rank	Centre	Present Service Provision Deficit Index (1)	Present Catchment Area Population Index (2)	Carrying Capacity Index (3)	Composite Priority Index
41.	Nsaru	93	102	105	100
42.	Kaporo	160	84	52	99
43.	Chipoka	87	84	120	97
44.	Nsanama	80	127	83	97
45.	Ekwendeni	70	62	156	96
46.	Mbalachanda	112	44	130	96
47.	Namwera T.O.	66	109	107	94
48.	Champhira	93	55	128	92
49.	Nchalo	51	127	96	92
50.	Namwera	71	138	67	92
51.	Malindi	80	102	88	90
52.	Mwansambo	112	105	52	90
53.	Bolero	93	44	120	86
54.	Mtakataka	66	98	87	84
55.	Kameme	160	55	31	82
56.	Mphompha	141	36	58	79
57.	Makanjila	125	36	69	77
58.	Mvera	112	109	8	77
59.	Edingeni	102	36	90	76
60.	Neno	112	36	78	76
61.	Nayuchi	160	55	10	75
62.	Santhe	87	80	53	74
63.	Thekerani	93	109	17	73
64.	Chapananga	93	55	66	72
65.	Mulale	141	44	27	71
66.	Misuku	141	65	0	69
67.	Katowo	160	18	23	67
68.	Kapiri	93	73	25	64
69.	Muloza	87	91	11	63
70.	Lizulu	87	44	50	61
71.	Chikwina	141	25	15	61
72.	Tsangano	102	65	14	61
73.	Dwangwa	87	36	42	55
74.	Chilumba	56	69	29	52
75.	Nthalire	112	44	0	52
76.	Usisya	112	29	0	47
77.	Chintheche	74	44	19	46
78.	Likoma	112	22	0	45
79.	Chikangawa	93	29	8	44
80.	Livingstonia	74	44	0	40
	Average	100	100	100	100

(1) Based on Central Service Score derived from Central PLace Survey (For details See NPDP Volume 2)

(2) Based on estimated 1985 population in catchment area (See Appendix 3.2)

(3) Based on NPDP land suitability analysis (See Volume 2)

Due to their low influence area, population and, to a great extent, to limited land reserves for smallholders, the centres in the north are at a fairly low priority level, with the exception of some centres located in Mzimba District, where the land potential is still high.

Figure 3-4 illustrates the priorities for Rural Market Centre promotion. It shows the rank of each centre together with symbols referring to the current service provision level. In general, it should be noted that almost all centres at this level lack local administrative structures. This is due to the fact that under the present system of local government there is no single corporate body which is responsible for the administration of services and facilities at the Rural Market Centre level.

### 3.5

#### RECOMMENDATIONS

The following recommendations are based on (a) the analysis of the existing system of human settlements and hierarchy of service centres; (b) disparities in the geographical distribution of service and facilities; (c) inter-settlement functional linkages; (d) the distance factor in the accessibility of service centres; (e) propositions presented in this section; and (f) the NPDP Background Study Report.

## RECOMMENDED POLICIES

### OBJECTIVES

#### 3a

To promote the development of a system of urban and rural settlements and hierarchy of service centres that will be (i) in conformity with the location of natural and human resources; and (ii) permit the provision of infrastructure and other facilities on an economic basis.

### STRATEGIES/ACTIONS

#### 3a

The Plan hereby establishes a future system of Service Centres consisting of:

<u>Hierarchy Level</u>	<u>Number</u>
National Centre	2
Regional Centre	1
Sub-Regional Centre	7
District and/or Main Market Centres	22
Rural Market Centre	80
Village Centre	

Table 3.2 in Section 3.3.1 shows the proposed distribution of Service Centres by district with the exception of Village Centre which will be defined as explained above.

Section 3.3.2 gives the place names and descriptions for the designated centres. The geographical location of the specific centres is shown in Figures 3-1, 3-2 and 3-3 (The rationale for and an elaboration of the various levels of centres are also given in Section 3.3.2).

With the exception of National and Regional Centres, the Plan recommends priorities for the promotion/development of service centres as in Table 3.7 (Sub-Regional Centres); Table 3.8 District and/or Main Market Centres; and Table 3.9 and Figure 3-4 (Rural Market Centres). Promotional measures should be carried out simultaneously at all hierarchical levels.

At the district and/or Main Market Centres level, priority should be given to Zomba, Ntcheu, Mponela, Ntaja and Euthini.

The Secondary Centres Development Programme (SCDP) should put some emphasis simultaneously on the top priority District and/or Main Market Centres and on the Sub-Regional Centres, or a separate programme should be launched as soon as possible. The latter proposal is preferably in order to avoid unnecessary competition among the centres at the different Levels.

At the Sub-Regional Centre level, priority should be given to the following three centres: Liwonde, Kasungu, Bangula. The forthcoming "Rolling Programme" of the SCDP which already covers Kasungu, should provide for immediate development in Liwonde and Bangula. The Centres following in the ranking list, namely, Mangochi, Karonga, Salima, and Dedza, should come under a latter stage of the Rolling Programme.



In accordance with the system of settlements and hierarchy of service centres, the TCPD will prepare District Physical Development Plans to designate appropriate locations for Rural Growth Centres. The designated places shall be promoted/developed under the National Rural Centre Programme.

**3b**

To ensure reasonable access for the entire population, to service centres

**3b**

The empirically determined parameters for the average 'access quality' to be achieved in the short and medium term are provided in Table 3.3. After the achievement of the minimum accessibility standard for the essential services for all Malawians, it will be necessary to revise the target and to aim at a general improvement of the current average access quality.

**3a and 3b**

To ensure accessibility from catchment areas to centres all-weather standard road network should be improved especially in the case of access to centres of Chitipa, Rumphi, Euthini, Mzimba, Ntaja, Ntcheu and Phalombe.

As Rural Market Centres contain or are to provide a substantial number of facilities serving basic needs, road access to these centres should be given emphasis in road development programmes.

**3c**

To achieve the greatest impact in the provision of services and facilities.

**3d**

To enhance inter-settlement functional linkages especially between urban and rural areas

**3e**

To promote local participation in the development of service centres which do not have local administrative structures.

**3f**

Promotion of Mzuzu City.

**3b, 3c and 3d**

Services should be grouped in the selected centres in accordance with the Guidelines for the Location of Services and Facilities rather than scattered in isolated places over the country. (In this way (i) user of one facility can benefit from other available facilities at a centre during the same travel or trip; and (ii) considerable travel time and cost can be saved by users).

Table 3.6 provides a comprehensive guide as to typical functions and facilities which should be provided by sectoral ministries in each level of service centre. The rationale, level of service functions and service catchment areas of the various centres are described in Section 3.3.3.

**3e**

Local committees or Rural Centre Councils should be formed in each Rural Market Centre to discuss local issues and present views to District Councils. New promotion programme for Village Centre Councils should also be explored and initiated.

**3f**

Considerable efforts should be made to promote the City of Mzuzu for it to properly perform its designated role as a Regional Centre.

#### 4. PHYSICAL INFRASTRUCTURE

##### 4.1 TRANSPORTATION LINKS

###### 4.1.1 SUMMARY OF BACKGROUND INFORMATION

The importance of the transportation sector has been recognised since the early days of independence. Between 1974 and 1979 almost 50% of development expenditure went into transportation projects. The proportion dropped to below 40% between 1979 and 1982 but was still a larger share than that received by any other sector.

Despite the high priority given to the development of the transport sector there is no overall plan for transportation. The 1964 'National Transportation Plan for Nyasaland<sup>(1)</sup>', is the only comprehensive transportation plan that has ever been produced, and it was an advisory document.

###### Institutional Framework

No single Ministry is responsible for integrated planning in the transportation sector. The Ministry of Transport and Communications may appear to be the responsible Ministry as its name implies, but it is not responsible for all aspects of transportation. Ministry of Works and Supplies is responsible for main and secondary roads and bridges outside the municipalities and townships. Municipal and Town Councils are the highway authorities for all roads in their areas and they receive a Government grant for the construction and maintenance of main and secondary roads.

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(1) National Transportation Plan for Nyasaland, Surveys and Research Corporation, Washington D.C. June, 1964.

In the case of district roads the District Councils are responsible and they are eligible for a Government grant towards the cost of construction and maintenance. Some branch and estate roads are maintained by the Ministry of Works and Supplies and others by estate owners or other major users.

The Ministry of Transport and Communications is responsible for road traffic regulations and general policy on public passenger and transport and freight transport, including Air Malawi and Malawi Railways, although in practice Air Malawi and Malawi Railways have considerable autonomy. The Transport Planning Unit of DEPD is expected to co-ordinate all planning activities but they do not have the necessary staff capacity.

The Town and Country Planning Department, which is responsible for the preparation of physical development plans, now has expertise in land use-transportation relationship and the transportation system in particular as it relates to the development of rural and urban areas. The Department, however, has not been involved effectively in the transportation sector.

Recently the Malawi International Transport Company (MITCO) and a National Transport Committee were established. The National Transport Committee, with a small permanent secretariat, is responsible for monitoring international freight traffic (road, rail and sea) and giving advice on choice of route, availability of back-hauls, etc., in the interest of improved speed and efficiency.

MITCO, on the other hand, has been established to promote Malawi transporters, "support their financial viability and endeavour to increase their capacity to carry reliably their fair share of available traffic".

### Existing Road Network

Malawi's road network has a total length of 11,000 Km consisting of 2,659km of main roads (67% bituminised) and 2,857 Km of secondary roads (10% bituminised).

The remainder , consisting of district, branch and estate roads, are built to earth or gravel standard. Extensive efforts are being made to improve the rural road network through the NRDP, DRIMP and the Village Access Roads and Bridges Project.

### Airports

There is a regular air transport service between four main urban places: Lilongwe, Blantyre, Mzuzu and Karonga. Kamuzu International Airport (Lilongwe), one of the most modern airports in Africa, is the main airport for all scheduled international flights. There are plans for a second shorter runway for light aircraft. Chileka Airport (Blantyre) accommodates only medium-sized aircraft while the airports of Mzuzu and Karonga handle small aircraft and have no facilities for night-time flights.

Mzuzu Airport, presently located near the centre of the City, has been the subject of a feasibility study to relocate it. A site, about 5 Km outside the city, has been identified and there is a proposal to build a runway of 2,700m (initially 2,200m) to accommodate medium-sized aircrafts on international flights. There is also a recommendation to build a new airport 15 Km north of Mangochi to accommodate future international tourist traffic. In addition there are 16 government aerodromes and 6 semiprivate and private aerodromes in use throughout the country. Nearly all have short grass runways less than 1000m long.

### Lake Transport

The Lake Service, operated by Malawi Railways, uses a fleet of seven vessels and a number of tugs and barges. The vessels are based at Monkey Bay. The other main ports are Nkhata Bay, Chipoka and Chilumba. The last two named have limited craning facilities. Twice a week two vessels, the Ilala and the Mtendere, operate round trips from Monkey Bay to the north calling at Nkhatakota, Likoma Island, Kambwe and other ports. Nkhata Bay is the busiest port for passenger traffic, while Chipoka handles most of the freight. The lake ports are now being developed as part of the Northern Transportation Corridor to Dar-es Salaam for all types of cargo. The port of Dwangwa has been developed for sugar to be shipped north to Chilumba and the Viphya tug and barge is carrying the containers between Chilumba and Chipoka. There is, however, a SADCC project to study integrated services on Lake Malawi, which in due course could lead to the development of local cross-lake traffic.

Other possible projects which could have an impact on the Lake Service are (a) the exploitation of the Ngana coal reserves in the north of Karonga District; (b) exploitation of the lake for oil; and (c) the development of road container services between Malawi and Dar-es-Salaam, which envisages lift-on lift-off facilities in Chipoka and Chilumba. (d) The large scale production of charcoal in the Northern Region for markets in the Central and Southern Regions.

## Railways

Until recently more than 90% of Malawi's import and export goods and virtually all overseas goods were shipped by rail via the ports of Beira and Nacala in Mozambique. The Beira line has effectively been closed since December, 1983 while the traffic volume to and from Nacala has become negligible since April, 1984. In contrast to goods traffic, the volume of rail passenger traffic within Malawi has been increasing in recent years following the opening of new lines. 1982 was the first year of operation of the Mchinji extension. Possible long-term proposals for the extension of the rail network are a rail link from Malawi border near Mchinji to Chipata and a new rail line between Lilongwe and a proposed cement work at Chamama in Kasungu District. The line would also serve Kamuzu International Airport and the town of Kasungu. A dry-port project will be initiated as soon as rail services with Mozambique resume.

## Import/Export Routes

As a result of the situation in Mozambique, the Government has explored an alternative route, the Blantyre - Dar-es-Salaam route, for which a study was made by consultants (GITEC) in July, 1985. The following are some of the recommendations of the consultants' study:

- (a). Malawi Railways maintenance efforts should be concentrated on the Balaka-Salima line.
- (b). The port of Monkey Bay should be rehabilitated
- (c). The Karonga-Ibanda road paving project should be implemented as a matter of urgency
- (d). Studies should be undertaken on the engineering of dry goods/handling and storage facilities at Chilumba and Chipoka

#### 4.1b

To facilitate the functional efficiency of commodity flows  
(a) between productive areas and markets and  
(b) between rural and urban settlements

#### 4.1a-4.1f

##### ROADS

A proposal for National Road Network in support of objectives 4.1 a - 4.1 f is presented in Figure 4-1 and described in Table 4.1. It incorporates the MOWS's proposed National Road Network system.

The preceding recommendations are based on the existing and future  
(a) Location of major productive activities (b) The geographical distribution of human settlements (c) Population densities and (d) Other strategies formulated in the Plan.

The MOWS, Road Planning Unit, has agreed to analyse/evaluate the individual road segments presented in the Road Development Proposals (See Table 4.1). Based on the results of the analysis/evaluation of each individual road segments, MOWS will make recommendations for consideration in the preparation of its 'Annual Highway/Reconstruction Budget.

#### 4.1c

To improve the mobility of people and their access to rural and urban service centres.

#### 4.1c

The Government should promote the use of bicycles, consider cycle paths in urban planning and development and consider appropriate ways and means of reducing the cost of bicycles. The Government should also consider and promote the use of low/cost transport similar to the motorised rural transport scheme under discussion with the Federal Republic of Germany.



4.1d

To strengthen other inter-settlement functional links; generally promote the spatial strategies formulated in the Plan

4.1e

To improve the accessibility of tourist destinations

4.1f

To promote the spatial strategies directed towards decentralization of productive activities and employment.

4.1d to 4.1f

AIRWAYS

The MOTC should consider building new aerodromes or airstrips/airfields in the Sub-Regional centre of Liwonde and the main market centres of  
Rumphi            Mponela    Mwanza  
Euthini          Ntcheu     Mulanje  
Nkhata Bay    Ntaja      Phalombe

The airstrips/airfields will, among other things, be used for emergency landings and relief operations, for example, in times of natural disaster or other emergency situations.

The Plan supports the proposal to build new airports at Mzuzu and Mangochi, for which feasibility studies have been carried out.

#### 4.1g

To integrate transportation planning (covering the various modes of transport) and relate it more closely to land use and physical planning.

#### 4.1g

##### Comprehensive Transportation Planning

Comprehensive or integrated transportation planning studies should be initiated by the Government to deal with the civil engineering, economic and land use aspects of transportation. It is further recommended that private consultants (engineers, economists and physical planners) be engaged by the Government through technical assistance to (a) undertake a comprehensive transportation/land use study of the country and its three major cities of Lilongwe, Blantyre and Mzuzu and (b) propose an organizational structure for integrated transport planning. (MOWS recently established the Road Planning Unit and will coordinate its efforts in road planning with MOTC).

##### Environmental Impact Studies

It is recommended that environmental impact assessments become part of the feasibility studies for the planning of roads, airports, aerodromes, railways and other transportation facilities.

##### RAILWAYS

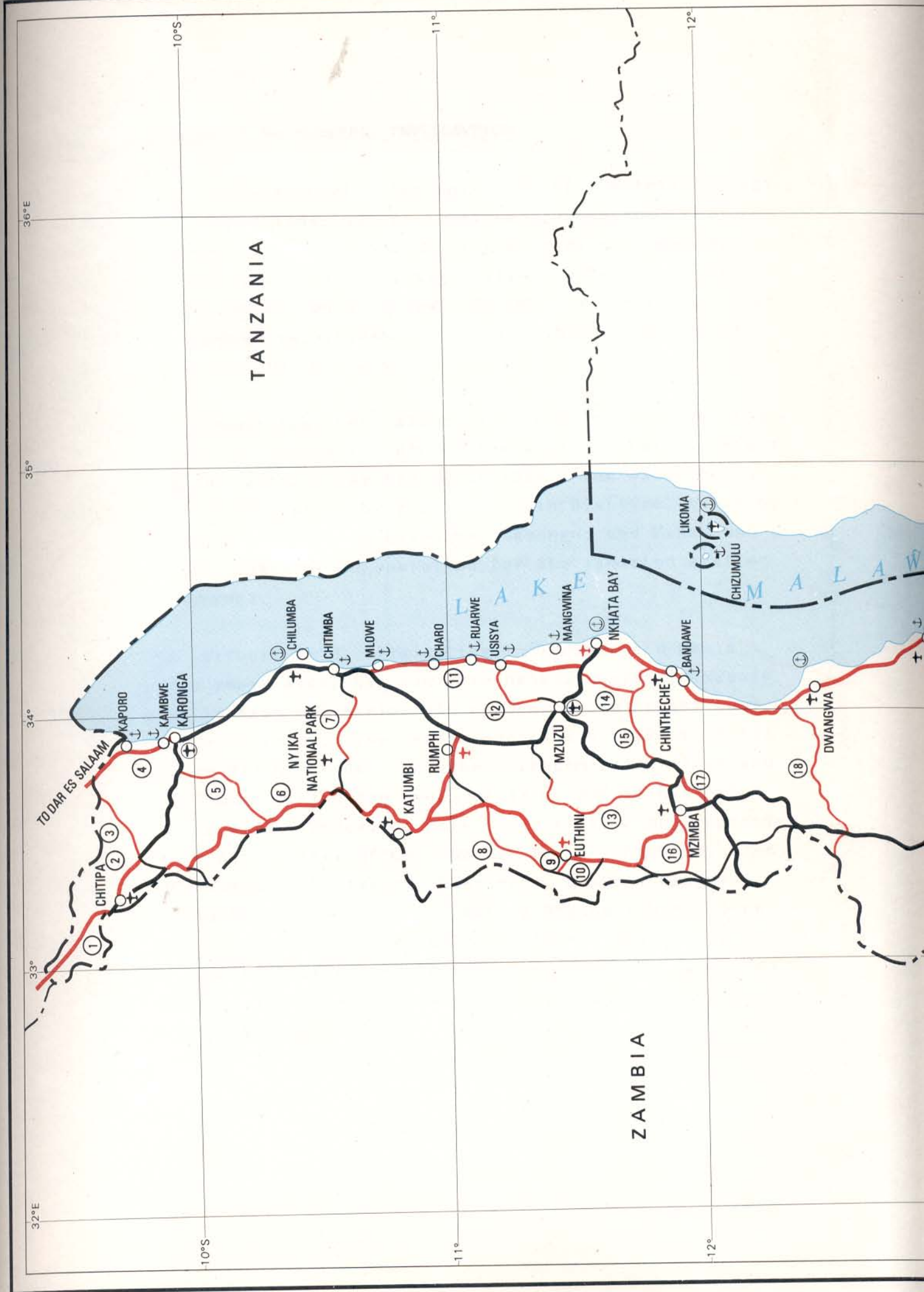
There are no immediate projects to extend the national railways.

**Table 4.1:**  
**Road Development Proposal**

Location/Section	Plan Ref.	Class of Road	Proposal
From Tanzania border to Chitipa	1	District, Secondary and no road	To upgrade to a Main road and provide a new main link
From Chitipa to Kapoka	2	Secondary	To upgrade to a Main road
From Kapoka to Tanzanian border	3	District and no road	To upgrade to Secondary and to provide a new Secondary link
From Tanzanian border to Karonga	4	Secondary	To upgrade to a Main road
From Kapirikonde to North Rukuru River	5	No road	To provide a new Secondary link
From Mwenechendo to Rumphi	6	Secondary and District	To upgrade to a Main road
From S10 to Haniniya	7	No road	To provide a new Secondary road
From Mbalachanda to Eneya Kumwenda	8	Track	To upgrade to a Secondary road
From Euthini to S89	9	No road	To provide a new Secondary road
Mzimba to Mwanzisi	10	Track and Secondary	To upgrade to a Main road
From M12 to Chiweta	11	Secondary, Track and no road	To upgrade to a Main road and to provide new main link
S46 Jct. to Usisya	12	Track	To upgrade to a Secondary road
From Ezondweni to M12 Jct.	13	Main	To reclassify to Secondary road
From Chiswamphira to Lwazi on M12	14	District	To upgrade to a Secondary road
From Chikangawa to Chintheche	15	Track and no road	To upgrade to Secondary and provide a new Secondary road
From Manyamula to near Mzimba	16	No road and District road	To construct a new Secondary link and upgrade to Secondary from District
S44 (from M1-M12)	17	Secondary	To upgrade to a Main road
From Zambian border to the Lakeshore road	18	No road, Track and District	To provide a Secondary link
From Mtonga to Nkhata Bay	19	Secondary	To upgrade to a Main road
From Kasungu to Lifupa Lodge	20	District	To upgrade to a Secondary Road
Mkanda to Kasungu	21	Track	To upgrade to a Secondary road
From Kasungu to M10	22	Secondary	To upgrade to a Main road
From Kamsenga to Malomo	23	District	To upgrade to Secondary link
From S67 near Santhe to M10	24	District and no road	To provide a Secondary link
From Santhe to S16	25	Track and no road	To provide a Secondary link
From Mchinji to S16	26	District	To upgrade to a Secondary link
From Dowa to the Lakeshore road	27	No road	To provide a new Secondary road
D27	28	District	To upgrade to a Secondary road

TABLE 4.1.4 (Continued)

Location/Section	Plan Ref.	Class of Road	Proposal
From M10 S41 Jct. to M10 S32 Junction	29	Main	Reclassify to a Secondary road
From Mtenthela to Mvera	30	District and no road	To provide a Secondary link
From Lobi to Lilongwe	31	District	To upgrade to a Secondary road
D32 (from M4 to Likuni)	32	District	To upgrade to a Secondary road
From S58 to Makanjira	33	District	To upgrade to a Secondary road
From Golomoti to M18	34	District	To upgrade to a Secondary road
From Lakeview to Kasinje	35	District and no road	To provide a Secondary link
From S56 to Liwonde National Park	36	Track and no road	To provide a Secondary link
From M2 to Ntcheu	37	Track and district	To upgrade to a Secondary road
From M6 to M2	38	District and no road	To provide a Secondary link
From Lirangwe to Zomba	39	District	To upgrade to a Secondary road
From Walkers Ferry to the new Mwanza road	40	No road	To establish a new Secondary link
From S62 to Matite	41	No road and Track	To provide a Secondary link
From S41 to Kalinde	42	No road	To establish a new Secondary link
From Phalombe to Nambazo	43	Track and district	To upgrade to a Secondary road
From M6 to M2 D123 Junction	44	Main	To reclassify to a Secondary road
From Chikwawa to Mwanza	45	District	To upgrade to a Secondary road
From M7 to S59 (i.e. D243)	46	District	To upgrade to a Secondary road
From Thyolo to Chiromo	47	Main	To reclassify to a Secondary road.

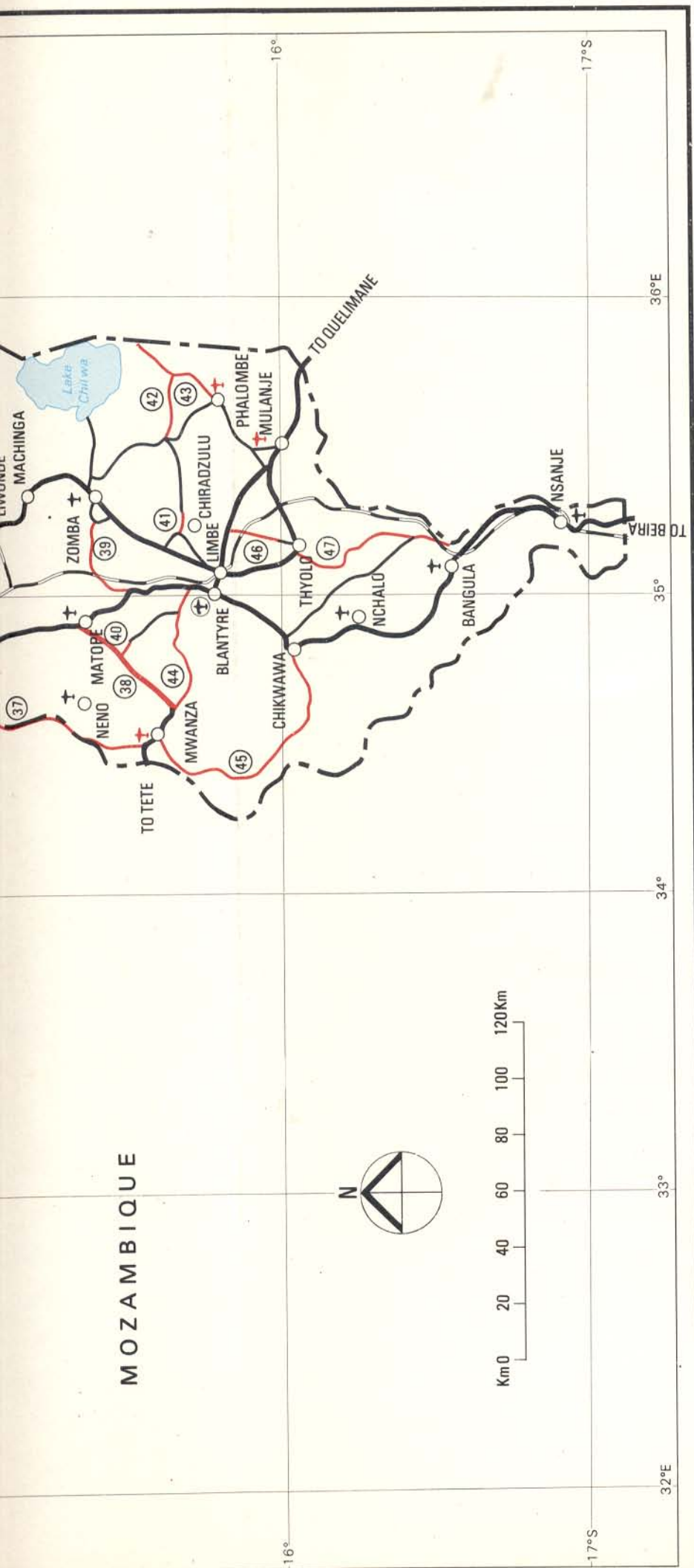




MOZAMBIQUE

MOZAMBIQUE





EXISTING



MAIN ROAD



SECONDARY ROAD



AIRPORT



AERODROME/AIRSTRIP/AIRFIELD



MAJOR PORT



MINOR PORT



TEXT REFERENCE NUMBERS

PROPOSED



MAIN ROAD



SECONDARY ROAD



AERODROME/AIRSTRIP/AIRFIELD

PROPOSED  
TRANSPORTATION NETWORK

FIG  
4-1

NATIONAL PHYSICAL DEVELOPMENT PLAN  
VOLUME 1

REPUBLIC OF MALAWI  
NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
OFFICE OF THE PRESIDENT AND CABINET  
TOWN AND COUNTRY PLANNING DEPARTMENT  
UNDP/UNCHS PROJECT MW/79/012 APRIL 1986

## 4.2 ELECTRICITY

### 4.2.1. SUMMARY OF BACKGROUND INFORMATION

Electricity accounted for only 2.8% of the total energy consumed in 1980; but as a main energy source for industry, the contribution of electricity to Malawi's economic performance is significant. The Electricity Supply Commission of Malawi (ESCOM) is responsible for its generation, transmission, distribution and sales throughout the country.

Hydro power stations, all using the Shire River as their source, accounted for 83% of the total installed generating capacity of 149,020 Kw in 1984. The balance was made up of a stand-by gas turbine in Blantyre, stand-by diesel generators in Lilongwe, Kasungu, and Mzuzu and a diesel generator in operation for the isolated station of Karonga.

The national grid, originating in Tedzani and Nkula hydro power stations, now extends southwards to Nsanje Boma in Nsanje District and northwards to Rumphi Boma in Rumphi District. The system consists of 229 Km of 132 Kv and 972 Km of 66 Kv overhead transmission lines and 2,340 Km distribution lines of 33 Kv and 11 Kv. (See Figure 4-2). Under the Rural Electrification Programme the urban centres of Chiradzulu, Malindi/Namwera, Mten-dere Campus, Nkhotakota, Ekwendeni, Rumphi, Bangula/-Fatima/Nsanje, Mchinji and Nkhata Bay have been connected to the grid. The centres of Dowa, Mzimba and Chitipa will be connected in due course. It is estimated that the existing installed capacity will be sufficient until 1987.

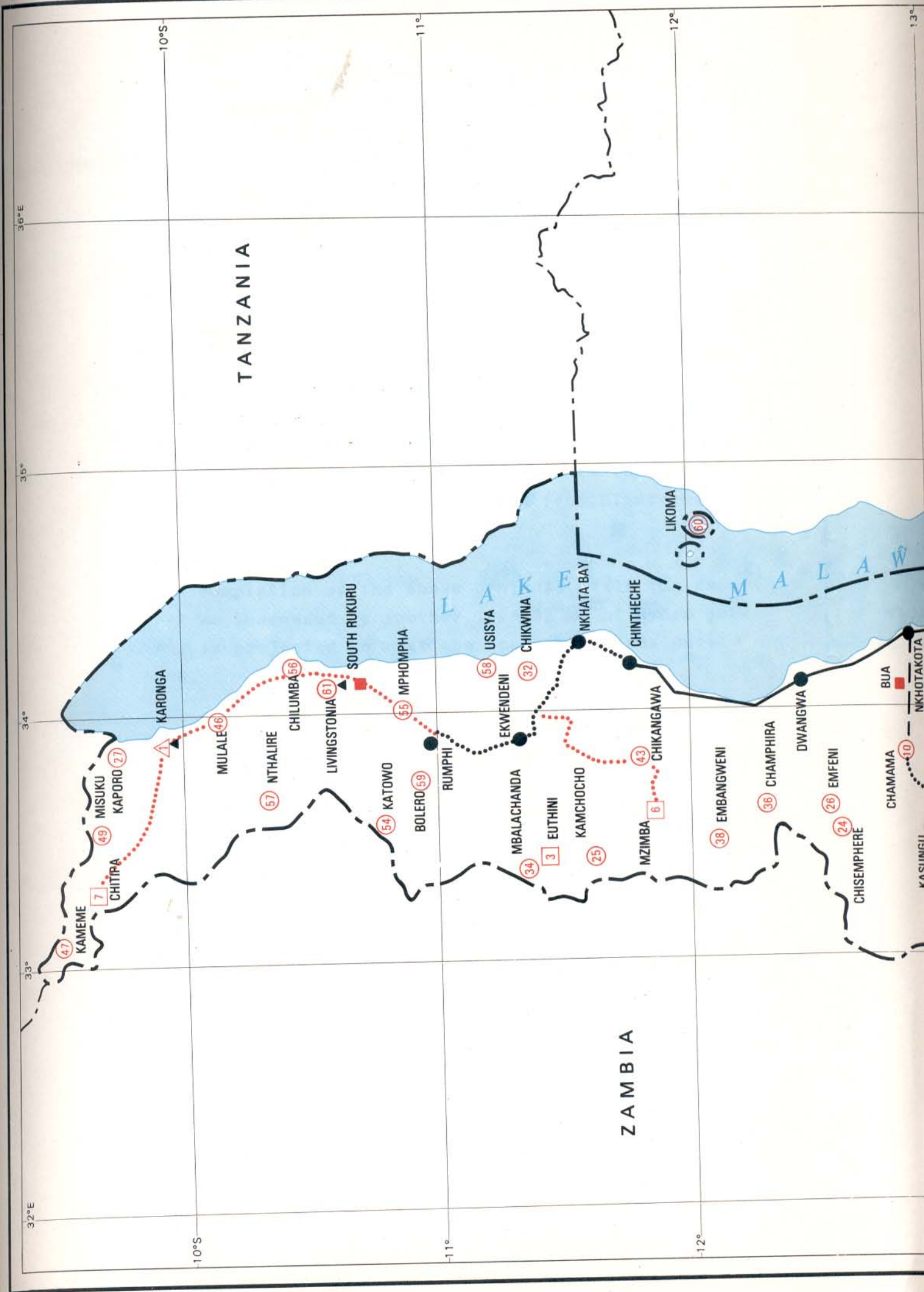


A recent study carried out for the next least cost hydro power station for ESCOM compared two proposed power development schemes; one at Kapichira and the other at Kholombidzo, both located on the Shire River. The possible environmental impacts of these two alternative schemes are of physical planning interest. In the case of the Kapichira project it appears the environmental impact would be minimal, but the environmental impact of the Kholombidzo site could be very disruptive. In the case of a low dam, inundation and flooding could extend up to the Kamuzu Barage. Agricultural lands would be flooded; proposed development in Liwonde would be affected and therefore people and land uses would have to be relocated. In the case of a high dam, the flooding/inundation would extend up to Lake Malombe, and have a disruptive impact on the entire lakeshore. ESCOM is already concerned about the environmental impacts of the power development schemes.

The existing and proposed hydro plans will be able to meet increasing demands up to the year 1996, but the introduction of a large industrial consumer (for example, the proposed fertilizer plan) would increase demand substantially and require additional investments.

#### Current and Proposed Developments by ESCOM

At present the significant programme being carried out is to increase the capacity through the installation of two additional generators at Nkula "B" site of 20 MW each, scheduled to be completed by 1989.



TANZANIA

ZAMBIA

L A K E M A L A W I

10°S

11°

12°

13°

36°E

35°

34°

33°

10°S

11°

12°

32°E

KARONGA

KAMEME

CHITIPA

MISUKU

KAPORO

MULALE

NTHALIRE

CHILUMBA

LIVINGSTONIA

KATOWO

BOLERO

RUMPHU

MPHOMPHA

EKWENDENI

USISYA

CHIKWINA

NKHATA BAY

KAMCHOCHO

EUTHINI

MZIMBA

CHIKANGAWA

CHINTHECHE

LIKOMA

DWANGWA

CHAMPHIRA

EMBANGWENI

EMFENI

CHAMAMA

BUA

NKHOTAKOTA

KASUNGU

13°

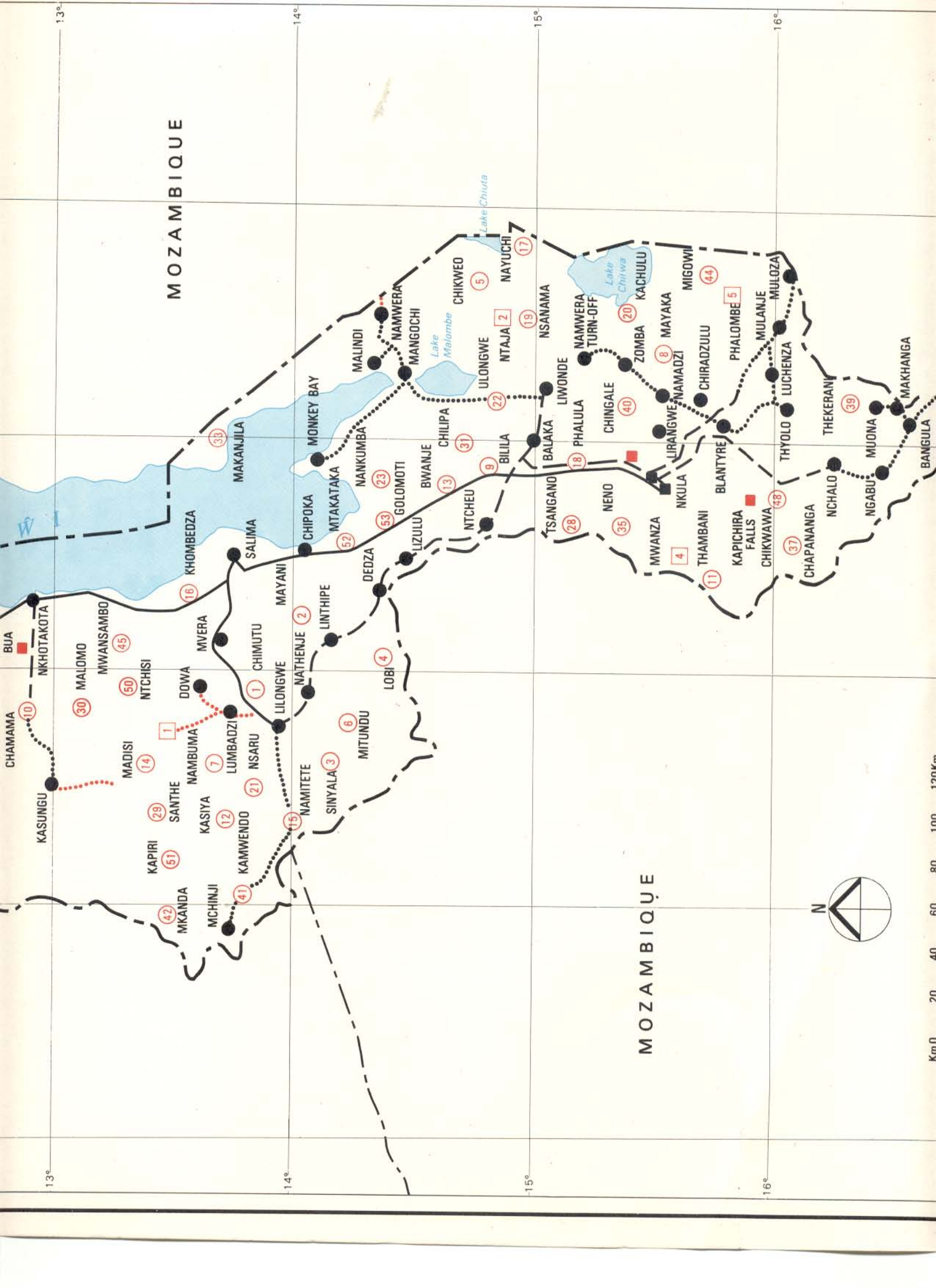
14°

15°

16°

MOZAMBIQUE

MOZAMBIQUE



120km

100

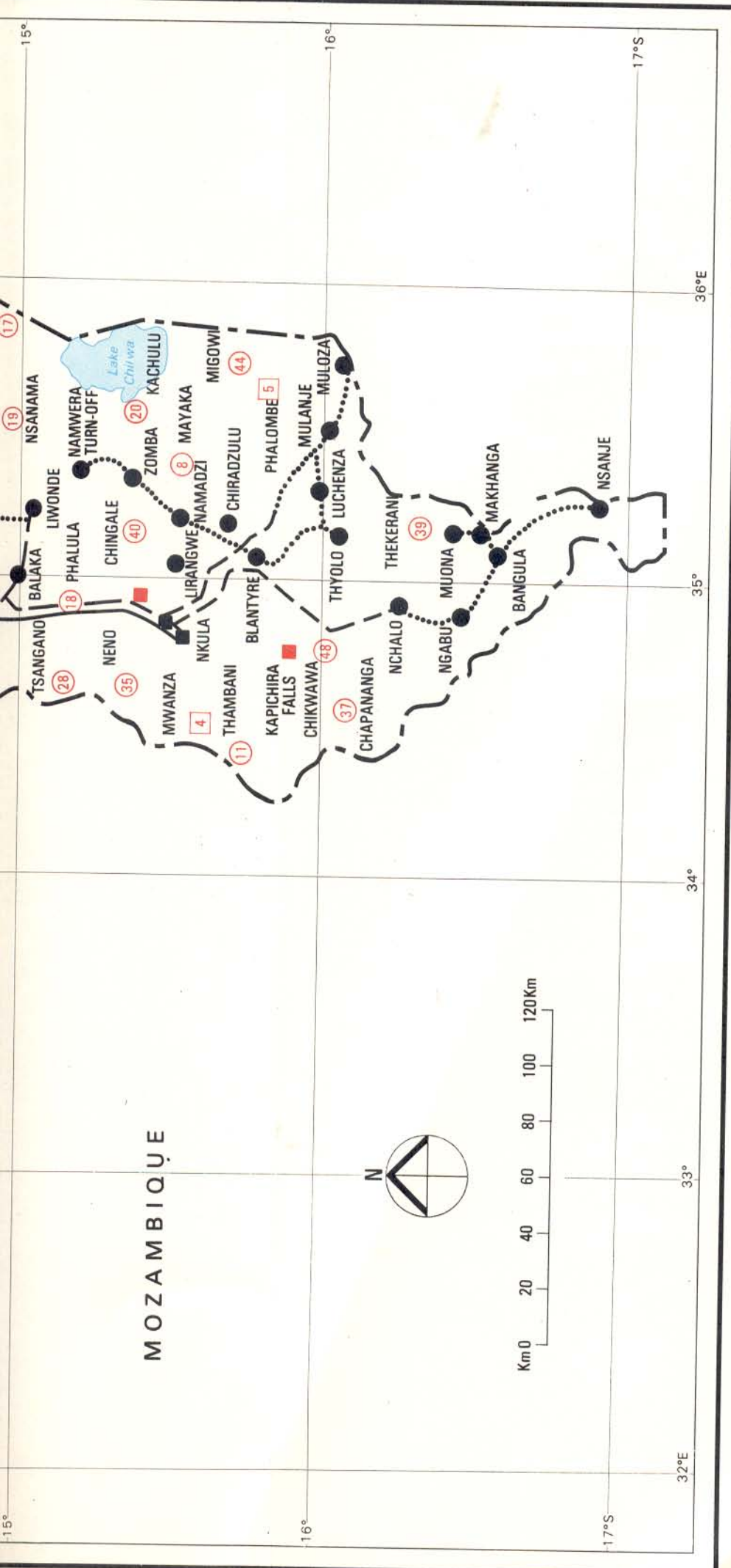
80

60

40

20

Km 0



- 132kV OVERHEAD TRANSMISSION LINE
- - - 66kV OVERHEAD TRANSMISSION LINE
- ..... 33kV OVERHEAD TRANSMISSION LINE
- ..... RURAL ELECTRIFICATION PLAN 33kV
- HYDROPOWER STATION
- CENTRES CONNECTED TO THE GRID
- ▲ CENTRES WITH GENERATOR
- PLANNED HYDROPOWER STATIONS
- ▲ PRIORITY SUB-REGIONAL CENTRE
- 12 PRIORITIES DISTRICT AND /OR MAIN MARKET CENTRES
- 3 PRIORITIES RURAL MARKET CENTRES

<b>PROPOSED ELECTRICITY SUPPLY</b>	<b>FIG 4-2</b>
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**NATIONAL PHYSICAL DEVELOPMENT PLAN  
VOLUME 1**

**REPUBLIC OF MALAWI**  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986

Printed by the Department of Surveys, Blantyre 1987

The Rural Electrification Programme has been initiated to promote economic development at centres which as yet do not have sufficient demand to justify connection to the grid but which have growth potential and will develop rapidly once electricity is available. Electrification of Mzimba Boma and Chitipa Boma will complete Phase One of the Rural Electrification Programme.

Other planned developments anticipated by ESCOM are;

- (a) development of the first stage of Kapichira 100 - 125 MW hydroelectric station by 1991 to 1993 and
- (b) reinforcement of the 132 Kv transmission system plant from Nkula to Blantyre and to the Capital City, Lilongwe; and extension from Blantyre to Kapichira.

Upon completion of the above projects, existing capacity will be increased by another 100-135 MW of hydro power. This is projected to meet the country's needs until 1996.

In addition to these proposals various alternative sites have been identified for the development of small-scale hydro-power plants. The possible sites identified are near Fufu, on the South Rukuru River, and Bua on the Bua River (See Figure 4-2 for the location of these sites).

#### 4.2.2 RECOMMENDATIONS

Current and proposed developments by ESCOM (outlined above) and the following NPDP recommendations are illustrated in Figure 4-2.

## RECOMMENDED POLICIES

### OBJECTIVES

#### 4.2a

To supply electricity to centres where there is an effective demand for power for industrial, commercial and domestic use.

#### 4.2b

To provide electricity to rural areas having a large number of residents

#### 4.2c

To fulfil the need for electricity as a social utility.

### STRATEGIES/ACTION

#### 4.2a, 4.2b and 4.2c

In determining and prioritizing centres to be connected to the existing hydro system, or supplied by an other source of power MOTIT/ ESCOM should consider the following criteria among other factors:

- (i) Existing and proposed productive activities.
- (ii) a settlement function as a service centre and its level in the hierarchy of service centres.
- (iii) the size/density of the population to be served.

Current and proposed developments by ESCOM, outlined in Section 4.2, are illustrated in Figure 4-2.

#### 4.2b and 4.2c

ESCOM should consider the settlement centres listed in Table 4.2 in its future plans for electricity supply perhaps under an extended Rural electrification Programme. The recommended centres are shown in Figure 4.2.

## CENTRES RECOMMENDED FOR ELECTRICITY

### SUPPLY

**Table 4.2**

#### District and/or Main Market Centres:

1. Ntaja
2. Euthini
3. Mwanza
4. Phalombe

#### Rural Market Centres

- |                |                 |                |
|----------------|-----------------|----------------|
| 1. Mayaka      | 20. Malomo      | 39. Kameme     |
| 2. Bilila      | 21. Chisemphe   | 40. Mphompho   |
| 3. Sinyala     | 22. Enfeni      | 41. Makanjila  |
| 4. Khombedza   | 23. Kamchocho   | 42. Neno       |
| 5. Mitundu     | 24. Kamwendo    | 43. Nayuchi    |
| 6. Lobi        | 25. Chimutu     | 44. Santhe     |
| 7. Bwanje      | 26. Mkanda      | 45. Thekerani  |
| 8. Chikweo     | 27. Namitete    | 46. Chapananga |
| 9. Migowi      | 28. Chingale    | 47. Mulale     |
| 10. Kasiya     | 29. Chamama     | 48. Misuku     |
| 11. Kachulu    | 30. Phalula     | 49. Katowo     |
| 12. Nambuma    | 31. Nsaru       | 50. Kapiri     |
| 13. Namkumba   | 32. Kaporo      | 51. Chikwina   |
| 14. Mayani     | 33. Nsanama     | 52. Tsangano   |
| 15. Thambani   | 34. Mbalachanda | 53. Chilumba   |
| 16. Embangweni | 35. Champhira   | 54. Nthalire   |
| 17. Madisi     | 36. Mwansambo   | 55. Usisya     |
| 18. Ulongwe    | 37. Bolero      | 56. Chikangawa |
| 19. Golomoti   | 38. Mtakataka   |                |

## 4.3 WATER SUPPLY

### 4.3.2 Summary of Background Information

Access to an adequate supply of clean potable water is fundamental to the development of the country and the Government attaches great importance to the supply of water. This section of the Plan deals with water supply in relation to human settlements.

The Department of Water, Ministry of Works and Supplies, is responsible for the supply of (a) treated water to all urban centres in the country with the exception of Blantyre and Lilongwe, which have independent Water Boards, and (b) piped water supply, boreholes and shallow wells to the rural areas; (c) irrigation schemes; and (d) the development of water resources generally.

#### Urban Supply

The urban distribution system supplies water through private house connections and communal standpipes. In the high density and traditional housing areas, water is made available mainly at communal standpipes. Hand-boreholes provide water to most of the smaller settlements. In the Central Region, 48% of the urban population has access to piped water. In the Southern Region, 30% of the urban population has access to piped water respectively. Thus, by 1980, 70% of the urban population had access to piped water, according to NWRMP estimates. Other water supply schemes in



### 4.3 WATER SUPPLY

#### 4.3.2 Summary of Background Information

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#### Urban Supply

The urban distribution system supplies water through private house connections and communal standpipes. In the high density and traditional housing areas, water is made available mainly at communal standpipes. Hand-pumped boreholes provide water to most of the smaller urban areas. In the Central Region, 48% of the urban population had access to potable water. In the Southern and Northern Regions, the proportions of urban population served were 46% and 45% respectively. Thus 46% of urban dwellers in the country had access to potable water in 1982 according to NWRMP estimates. There are at present 57 urban water supply schemes in the country.

## Rural Supply

About 37% of the total rural population are served by the main sources of rural water supply, which are (a) piped gravity water systems which draw water from forest catchments of communal taps; and (b) boreholes and protected shallow wells.

## Current Development Projects

The following are the ongoing development projects:

1. The NWRMP, a UNDP/UNDTTC Project, is currently preparing a water resources master plan based on the following objectives:
  - (a) to appraise water resources and the potential of major river basins.
  - (b) to assess water balances, and recommend solutions.
  - (c) to analyse priority projects which require water resources development, and
  - (d) to outline an overall strategy for phased and progressive water resources development.
  
2. The "Secondary Centres Development Programme" is preparing detailed engineering studies with a view to supplying water to the following centres: Mzuzu, Kasungu, and Luchenza, while the following centres are also included : Kasungu, Ntcheu, Zomba and Liwonde.

## Rural Supply

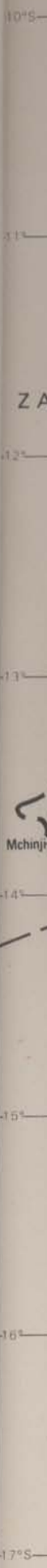
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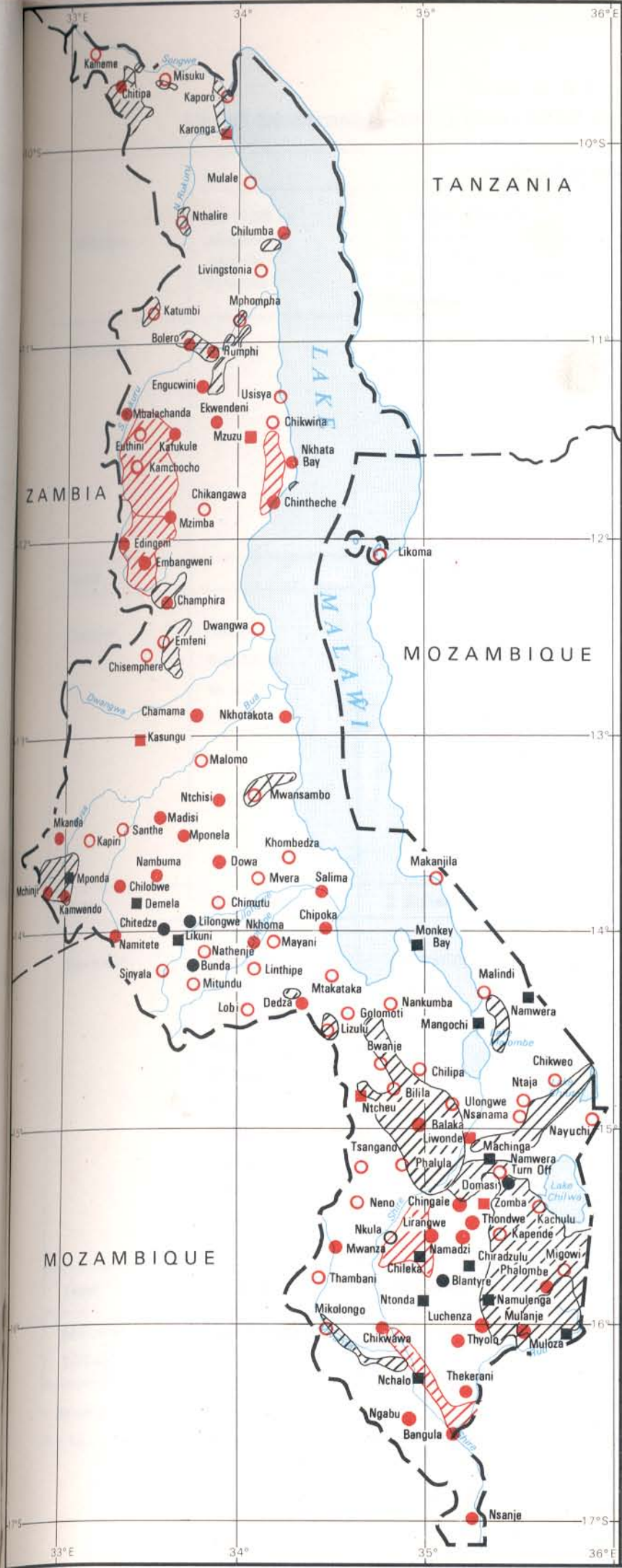
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  - (c) to analyse priority projects which require water resources development, and
  - (d) to outline an overall strategy for phased and progressive water resources development.
  
2. The "Secondary Centres Development Programme" is preparing detailed engineering studies with a view to supplying water to the following centres: Mzuzu, Kasungu, and Luchenza, while the following centres are also included : Kasungu, Ntcheu, Zomba and Liwonde.

3. Further improvements in urban water supply schemes are being considered under a Swiss Government grant and an African Development Bank loan. Feasibility studies are being carried out for the 44 centres (ranging from Sub Regional Centres to Village Centres) which have been listed for funding under the scheme. (Table 4.3.1).
4. The Water Supply Branch of Ministry of Works and Supply selected 13 centres to be considered for water supply schemes (See Table 4.3.1).
5. Rural water supply schemes are being carried out in Mpira/Balaka, Chapananga, Zomba South and West Mwansambo extension, Chimaliro South, Mthalire and Chitipa projects; and other schemes are being planned for Chikwawa East, Blantyre West, Mzimba West and Nkhata Bay.
6. The Borehole and Shallow Well Project operates in areas where Rural Water Supply Schemes are not feasible.










**RURAL WATER SUPPLY SCHEMES**

-  COMPLETED
-  PROPOSED BY W.S.B.

**URBAN WATER SUPPLY SCHEMES**

-  EXISTING
-  EXISTING BUT PROPOSED FOR AUGMENTATION BY W.S.B.
-  EXISTING, BEING AUGMENTED UNDER THE "SECONDARY CENTRES PROJECT"
-  EXISTING, BUT PROPOSED FOR AUGMENTATION UNDER THE "44 SEMI-URBAN CENTRES PROJECT"
-  NEW SCHEMES PROPOSED BY THE NPDP



Km 20 0 20 40 60 80 100 Km

**URBAN AND RURAL WATER SUPPLIES**

**FIG 4-3**

**NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME I**

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986

**Table 4.3.1**  
**List of Settlements being considered for Water Supply Schemes**

REGION	Selected Centres		
	By WSB or additional external funding	By WSB through Government grant: "Secondary Centres Development Programme"	By Consultant through ADB Phase II loan and Swiss Government Grant
Northern		Mzuzu Karonga	Nkhata Bay Rumphu Chitipa Mzimba Chilumba Bolero + Chintheche Ekwendeni Embangweni + Champhira + Engucwini + Kafukule + Edingeni + Mbalachanda +
<b>Total</b>	-	<b>2 Schemes</b>	<b>14 Schemes</b>
Central	Likuni Kabudula Kochilira	Kasungu Ntcheu	Salima Nkhotakota Mponela Ntchisi Dowa Mchinji Dedza Namitete + Madisi + Nambuma + Mkanda + Kasiya + Chipoka + Nkhoma Chamama +
<b>Total</b>	<b>3 Schemes</b>	<b>2 Schemes</b>	<b>15 Schemes</b>
Southern	Mangochi Machinga Chiradzulu Nchalo Monkey Bay Namwera Chileka Muloza Mpemba Mikolongwe	Luchenza ++ Zomba Liwonde	Thyolo Luchenza + Ngabu Balaka Mwanza Mulanje Chikwawa Nsanje Phalombe Bangula + Chingale + Lirangwe + Namadzi Thekerani + Thondwe +
<b>Total</b>	<b>10 Schemes</b>	<b>3 Schemes</b>	<b>15 Schemes</b>
<b>MALAWI TOTAL</b>	<b>13 Schemes</b>	<b>7 Schemes</b>	<b>44 Schemes</b>

+ Denotes new Schemes

++ Luchenza also is being considered under the Secondary Centres Development Programme

#### 4.3.2 RECOMMENDATIONS

Water supply is a major factor in an individual's choice of a house plot and farm location. It also plays a significant role not only in supporting socio-economic activities but also in influencing the direction of growth, the pattern of settlements and the density of population. Water supply, therefore, can and should be used as an effective tool in promoting the human settlements development strategies formulated in the Plan and, particularly, in encouraging the development of nucleated settlements as opposed to scattered settlements. Figure 4-3 shows existing and proposed water supply schemes.

#### RECOMMENDED POLICIES

##### OBJECTIVES

##### 4.3a

To promote the development of human settlements and productive activities.

##### 4.3b

To improve access to communal stand pipes, boreholes and wells in the rural areas and minimize the disparities in the distribution of these facilities.

##### STRATEGIES/ACTIONS

##### 4.3a to 4.3d

Consultations<sup>(1)</sup> between the MOWS and the TCPD should be maintained in order to:

(a) determine the priorities

for the schemes/projects listed in Table 4.3.1 and

(b) consider other projects, particularly boreholes and shallow wells, outside the designated service centres.

The following should be considered by the Water Department, MOWS, as part of the augmentation and development of water schemes:

(1) The Water Supply Branch of Water Department, MOWS has already consulted the TCPD regarding the selection of new water supply schemes for 44 urban and rural centres which are to be carried under a Swiss Government grant and African Development Bank loan.

#### **4.3.2 RECOMMENDATIONS**

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#### **RECOMMENDED POLICIES**

##### **OBJECTIVES**

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##### **4.3b**

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##### **STRATEGIES/ACTIONS**

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### Rural Market Centres

- |              |                 |                  |
|--------------|-----------------|------------------|
| 1. Mayaka    | 20. ChisempHERE | 39. Santhe       |
| 2. Bilila    | 21. Enfeni      | 40. Chapananga   |
| 3. Sinyala   | 22. Chilipa     | 41. Mulale       |
| 4. Linthipe  | 23. Kamchocho   | 42. Misuku       |
| 5. Nathenje  | 24. Kamwendo    | 43. Katowo       |
| 6. Khombedza | 25. Chimutu     | 44. Kapiri       |
| 7. Mitundu   | 26. Phalula     | 45. Lizulu       |
| 8. Lobi      | 27. Kaporo      | 46. Chikwina     |
| 9. Bwanje    | 28. Nsanama     | 47. Tsangano     |
| 10. Chikweo  | 29. Namwera     | 48. Dwangwa      |
| 11. Migowi   | 30. Malindi     | 49. Nthalire     |
| 12. Kachulu  | 31. Mwansambo   | 50. Usisya       |
| 13. Namkumba | 32. Mtakataka   | 51. Likoma       |
| 14. Mayani   | 33. Kameme      | 52. Chikangawa   |
| 15. Thambani | 34. Mphompha    | 53. Livingstonia |
| 16. Ulongwe  | 35. Makanjila   |                  |
| 17. Golomoti | 36. Mvera       |                  |
| 18. Malomo   | 37. Neno        |                  |
| 19. Nkula    | 38. Nayuchi     |                  |

#### 4.4 HEALTH FACILITIES

##### 4.4.1 Summary of Background Information

This Section of the Plan deals with the demographic and spatial (locational) aspect of the health delivery system. That is, (a) the provision of health facilities in relation to the density/distribution of the population served; (b) the distance factor of the accessibility of the facilities; and (c) the implications of future population growth for the provision of health facilities.

The existing health services are provided by the Ministry of Health; local authorities (District Councils); church missions combined under the Private Hospital Association of Malawi (PHAM); and other private organisations. The existing facilities consist of health posts (manned or unmanned); health sub-centres (dispensaries or maternity wards); primary health centres; rural hospitals; district hospitals; central and general hospitals; and special hospitals.

Under the National Plan of Malawi 1986-1995, the MOH has revised the facility-based health system as follows:

Health Centres consisting of dispensaries and maternity wards generally offer curative services, pre-natal care, natal care, post-natal care and infant care. One health centre serves a population of 10,000 persons and a catchment area with a service radius of 8 Km (5 miles). For planning purposes, the latter is the standard mainly used.

District Hospitals, one for every district, are the referral centres for the health centres in a district.

Central Hospitals provide a full range of curative and preventive services and specialised referral care for their respective regions. Such facilities exist only in Blantyre and Lilongwe.

In addition to those facilities Special Hospitals provide services relating to mental illness, leprosy and tuberculosis. There are also twenty PHAM hospitals operating at the district level.

### Accessibility of Health Centres

This section deals with the distance factor in the accessibility of health facilities. As mentioned earlier in this study report, one of the important objectives of the Ministry's health plan is to improve access to modern health services. Accessibility, in this report, is seen mainly in terms of walking distance as walking is the most common means of movement for at least 90% of the total population.

In an NPDP sample survey of settlements, carried out in various parts of Malawi, 89% of people who reported visiting under-five clinics travelled by foot; in the case of visits to dispensaries and hospitals 82% and 36% respectively went by foot. For those visiting hospitals the most common mode of transport was travel by bus, which accounted for 39%. Those walking to health facilities tended to travel considerably longer distances beyond 5 Km although generally not beyond 50 Km. Of the respondents travelling by foot to under-five clinics, 34% walked beyond 5 Km to reach the clinics, thus they were not within easy access of the facility according to the standards.

The corresponding figures for dispensaries and hospitals were 44% and 67% respectively.

In Section 6 of the NPDP Background Study Report an issue has been raised regarding the low density of residential development in urban areas and the scattered pattern of rural settlements. The densities in both rural and urban areas are directly related to the distance factor in accessibility of health facilities, where they exist.

As discussed in Section 5.1.9 37% of the nation's population live in scattered settlements and there is a lack of threshold population considered adequate to support services.

These conditions make it difficult, financially, to improve access to health facilities by building new facilities. In addition to the density distribution of population, the actual service delivery points or location of facilities in relation to the population served is also an important factor in accessibility of the facilities.

#### 4.4.2 RECOMMENDATIONS (1)

The following recommendations are based on (a) the distance factor in the accessibility of health facilities and (b) the demographic and spatial aspects of the provision of health facilities presented in the NPDP Background Study Report. Whether or not the various health facilities and services can be provided as required depends, of course, on the availability of funds. The recommendations presented here at least reflect the disparities in the delivery of health services which must be addressed in spatial terms mainly in accordance with the objectives of the National Health Plan of Malawi.

---

(1) In this document it is neither possible nor appropriate to present proposals relating to individual health facilities which need repairs.

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---

(1) In this document it is neither possible nor appropriate to present proposals relating to individual health facilities which need repairs.

Figure 4-4 shows existing and proposed Health Facilities.

## RECOMMENDED POLICIES

### OBJECTIVES

#### 4.4a

To improve the health delivery service through a network of available and acceptable facilities and services, capable of promoting health and general well being and increased productivity.

### STRATEGIES/ACTIONS

#### 4.4a

In addition to the existing distribution of District Hospitals, the Plan recommends the provision of district-level hospitals at the following Main Market Centres in order to provide better coverage at or improve access to this level of facility:

Euthini	Ntaja
Mponela	
Monkey Bay	Bangula

Between 1985 and 2000 the MOH should seek funds from the Treasury or external sources to upgrade centres with emphasis on village centres and rural market centres taking into consideration the priorities recommended in section 3 of the Plan.

The provision of hospital beds should meet the minimum standard of 15 beds per 10,000 persons in the 19 districts listed below. The recommended priorities (indicated in the numbering) are based on the existing disparities in the distribution of hospital beds:

Figure 4-4 shows existing and proposed Health Facilities.

## RECOMMENDED POLICIES

### OBJECTIVES

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The provision of hospital beds should meet the minimum standard of 15 beds per 10,000 persons in the 19 districts listed below. The recommended priorities (indicated in the numbering) are based on the existing disparities in the distribution of hospital beds:

- |             |                |
|-------------|----------------|
| 1. Salima   | 11. Chitipa    |
| 2. Ntchisi  | 12. Thyolo     |
| 3. Ntcheu   | 13. Chiradzulu |
| 4. Mulanje  | 14. Lilongwe   |
| 5. Machinga | 15. Mangochi   |
| 6. Kasungu  | 16. Blantyre   |
| 7. Mchinji  | 17. Karonga    |
| 8. Chikwawa | 18. Nkhata Bay |
| 9. Dowa     | 19. Nkhotakota |
| 10. Dedza   |                |

**4.4b**

To improve access to health facilities and, in particular minimize walking distance.

**4.4b and 4.4a**

The service delivery points or the lower-level facilities such as health centres should be closely related to the accessibility factor (8 km service radius) and the density distribution of population and trends in the development of human settlements. Demographic and spatial analysis required for the preceding should be obtained from the NPDP Background Study Report and from the NSO.

**4.4c**

To locate health facilities in strategic locations so as to support the idea of integrated development and at the same time maximize the use of the facilities

**4.4.c and 4.4b**

Health Services should be located in rural Market Centres and Village centres designated in Section 3 of the plan, where such facility does not exist. Health authorities should also follow the Guidelines for the location of Services/facilities given in Section 3 of the Plan.



4.4c and 4.4a

During the preparation of district plans locational and accessibility analysis for health centres should be carried out by the MOH in cooperation with the TCPD. The accessibility standard of 8 Km (service radius) will be applied. This could result in fewer centres required and generally higher population coverage per centre.

A study should also be made of the location of District hospitals in relation to the population served and desirable accessibility standards.

## 4.5 EDUCATION

### 4.5.1 SUMMARY OF BACKGROUND INFORMATION

#### The School System

Prior to independence, Malawi did not have a comprehensive educational system. Various church missions had built a few schools, mostly at the primary level, and the Government provided some support. Since independence, however, there has been an acceleration of educational development. Although a large number of schools are still operated by missions, most schools are under government control and supervision.

The Ministry of Education and Culture (MOEC) has overall responsibility for primary, secondary, technical and teacher training schools, and other institutions. These institutions are either Government financed and controlled, or Government aided/assisted, or unassisted. Under delegated authority, district councils participate in the administration of primary schools. The University of Malawi is an autonomous institution that falls under the MOEC. Other Ministries administer education/training programmes in health, agriculture, community development and other fields.

Primary education takes eight years to complete, from standards one to eight, terminating with the Primary School Leaving Certificate. The official Primary School entry age is six years. Secondary education takes, two, four or six years, depending on the level of completion.

The Junior Certificate level takes two years; the Malawi Certificate of Education (MCE) level takes four years; and beyond that, forms five and six for the (Cambridge) Higher School Certificate or the equivalent of Advanced Level of the General Certificate of Education require an additional two years.

For the purpose of further education, the MCE Certificate gives access to Diploma and Degree course of the University of Malawi and Teacher Training Colleges.

Estimates from "Expenditure on Development Account" indicate that over the period of 1968-1979/80, primary education received 8.4% of the total development resources allocated to the educational sector. 29.3% went to Secondary education and 13.8% to other educational services/facilities. Almost all of the funds for primary education were spent on urban and special facilities.

#### Participation Rates

In 1981 there were 1,346,700 million children in the primary school age group (6-13 years), 809,900 of whom were enrolled: a participation rate<sup>(1)</sup> of 0.6 (60%).

The Northern Region had a primary school participation rate of 1.0 (100%), the highest in the nation. The Central Region had 0.5 (51%) and the Southern Region had 0.58 (58%).

(1)

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Participation rate is the ratio of the number of children enrolled compared to the total school age population (6-13 years).

Three factors may explain this significant participation rate in the Northern Region: (a) substantial missionary activities in school development in the Northern Region since the beginning of the century; (b) greater number of schools and (c) easy access.

The District Participation Rate varied substantially from 0.29 in Mangochi (29%) to 1.00 in Rumphi, Mzimba and Chitipa (100% enrolment). The lowest participation rates in the nation existed in Mangochi (0.29), Dedza (0.4), Machinga (0.42), and Nsanje (0.42)

### Pupil/Classroom Ratio

On the national average there were about 75 pupils for each classroom in the 1980-1981 school year. This was below the MOEC standard of 50 pupils per classroom. The Southern Region with 81 pupils/classroom had the lowest standard compared with 78 and 60 in the Central and Northern Regions respectively. The District of Nsanje with 121 pupils/classroom had the lowest standard among the districts while Mangochi with 48 pupils/classroom had the highest standard. The majority of the districts had pupils/classroom ratios ranging between 50 and 70.

At the national level there were 5.0 classrooms per primary school in 1981. Nsanje District with 2.0 classroom per school had the lowest ratio while Zomba and Mulanje with 7.8 and 7.6 respectively were the highest.

### Pupil/Teacher Ratio

12,540 teachers were employed in 1980/81 (of whom 7,898 were qualified) resulting in a student/teacher ratio of 65 for the whole country. The Northern Region again had the best ratio with 56 compared to 64 and 69 for the Central and Southern Region respectively. The MOEC standard or objective is one to 50 as stated in the Education Plan. Ntchisi District had 45, the best ratio, while Mulanje was the poorest with 95 pupils per teacher.

Taking into account the enrolment figure, students per classroom ratio and the students per teacher ratio, the Northern Region had the best provision of primary educational facilities followed by the Central and Southern Regions. At district level Rumphu had the best facilities while Nsanje was the least well served.

### Secondary Education

In 1981 there were 66 secondary schools existing in the country: 16 in the Northern Region, 22 in the Central Region and 28 in the Southern Region. Almost half of the 66 schools were located in four districts, as follows: there were 10 schools in Blantyre District, 7 each in Lilongwe and Mzimba Districts, and 6 in Zomba District. In 1981 there were 18,006 students attending secondary schools, representing 3.36% of the secondary school-age population (14-17 years) of 535,570 persons.

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### Secondary Education

In 1981 there were 66 secondary schools existing in the country: 16 in the Northern Region, 22 in the Central Region and 28 in the Southern Region. Almost half of the 66 schools were located in four districts, as follows: there were 10 schools in Blantyre District, 7 each in Lilongwe and Mzimba Districts, and 6 in Zomba District. In 1981 there were 18,006 students attending secondary schools, representing 3.36% of the secondary school-age population (14-17 years) of 535,570 persons.

As students are enrolled across district and regional boundaries, a comparison between districts and regions could be misleading in terms of participation rates. Also, as the locational aspects of secondary schools and post-secondary education facilities are at present not guided by physical planning criteria the plan will address the locational aspects of only primary education facilities. Tentative guidelines for the location of secondary and post-secondary education facilities, however, are given in Section 3 of the Plan, under "Guidelines for the location of Services".

### Concluding Observations

The Government's ability to provide educational facilities in some of the rural areas is limited by several basic constraints including (a) the nature of the scattered settlements; and (b) low population densities of zero to 50 persons per square kilometre. As a result of the combined effects of (a) and (b) above, there is a lack of the adequate population threshold required to support school facilities and services and to do so in a way which will enable the Government to achieve the greatest cost-effectiveness of expenditure.

The geographical disparities and deficiencies in the provision of educational facilities and the preceding issues, as discussed in the NPDP Background Study Report, have implications for physical planning. The Plan is concerned only with the spatial aspects of educational facilities, but it deals predominantly with primary school facilities and to a lesser extent with secondary school facilities, because the location of secondary schools in Malawi is not related to the geographical distribution of the secondary-school-age population. As mentioned above, students are enrolled across district and regional boundaries and this is likely to continue for a long time.

The crucial questions involved in the demographic and spatial planning aspects of the primary education objectives in Malawi are :

- (a) What is the aggregate size of the school-age population to be served?
- (b) what is the geographical distribution of the school-age population by district and how is the location of schools related to their distribution?
- (c) What are the disparities in the distribution of existing educational facilities? and
- (d) How many classrooms should be provided in the future and how should they be distributed within the districts?

The following spatial strategies, which are related to the MOEC's objectives are recommended. They do not cover secondary schools because the planning of secondary school locations is not related to attendance area policies or catchment areas. The current practice of 'cross country secondary school attendance' is expected to remain during the Plan period.



## RECOMMENDED POLICIES

### OBJECTIVES

#### 4.5a

To secure a more equitable distribution of educational facilities and resources. To realise the greatest cost effectiveness expenditure.

### STRATEGIES/ACTIONS

#### 4.5a

On the basis of the comparative analysis of enrolments, classrooms and qualified teachers and in order to address the deficiencies/disparities in the provision and level of facilities, the Government's financial allocation should reflect the greatest needs as prioritised below and in Table 4.5.1.

- |               |                |              |
|---------------|----------------|--------------|
| 1. Nsanje     | 9. Ntcheu      | 17. Kasungu  |
| 2. Lilongwe   | 10. Dowa       | 18. Ntchisi  |
| 3. Dedza      | 11. Mchinji    | 19. Chikwawa |
| 4. Machinga   | 12. Chiradzulu | 20. Karonga  |
| 5. Nkhata Bay | 13. Mwanza     | 21. Salima   |
| 6. Mulanje    | 14. Nkhotakota | 22. Mzimba   |
| 7. Zomba      | 15. Blantyre   | 23. Chitipa  |
| 8. Thyolo     | 16. Mangochi   | 24. Rumphu   |

Locating new schools outside designated village centres and other service centres (See Section 3) should be guided by strategies recommended in Section 3 of the Plan. To ensure the greatest cost effectiveness of expenditure, schools should be located only after proper analysis of population distribution and of the population threshold required.

4.5. b

To provide one classroom per 50 pupils.

4.5. b

On the basis of the projected enrolment of 2,644,900 children of school age (6-13 Years) by year 2000\* the MOEC should provide 39,813 additional classrooms throughout the country distributed as follows: Northern Region 2,768; Central Region 17,930; and Southern Region 19,107.

New additional classrooms per year (from the base year 1985 to year 2000 by District) should be provided as follows (See Table 4.5.1. for details and analytical basis):

Chitipa	14	Kasungu	100
Karonga	32	Nkhotakota	49
Nkhata Bay	37	Ntchisi	45
Rumphu	11	Dowa	141
Mzimba	92	Salima	76
		Lilongwe	404
		Mchinji	87
		Dedza	174
		Ntcheu	121
		Mangochi	144
		Machinga	163
		Zomba	165
		Chiradzulu	71
		Blantyre	184
		Mwanza	30
		Thyolo	149
		Mulanje	231
		Chikwawa	90
		Nsanje	50

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\* NPDP Background Study Report

The MOEC should translate the recommended classroom requirements into a school building programme and budget, (This does not imply that enough funds are available to build all the classrooms required) It defines the magnitude of desirable requirement.

4.5. c

To improve the distance factor in the accessibility of educational facilities and ensure that no pupil walks more than 5 Km to the nearest primary school

4.5. a and 4.5.c

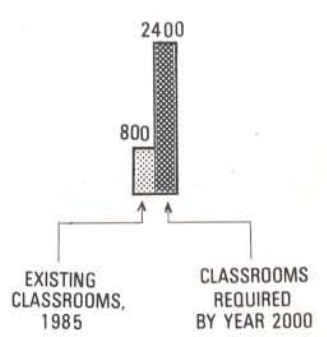
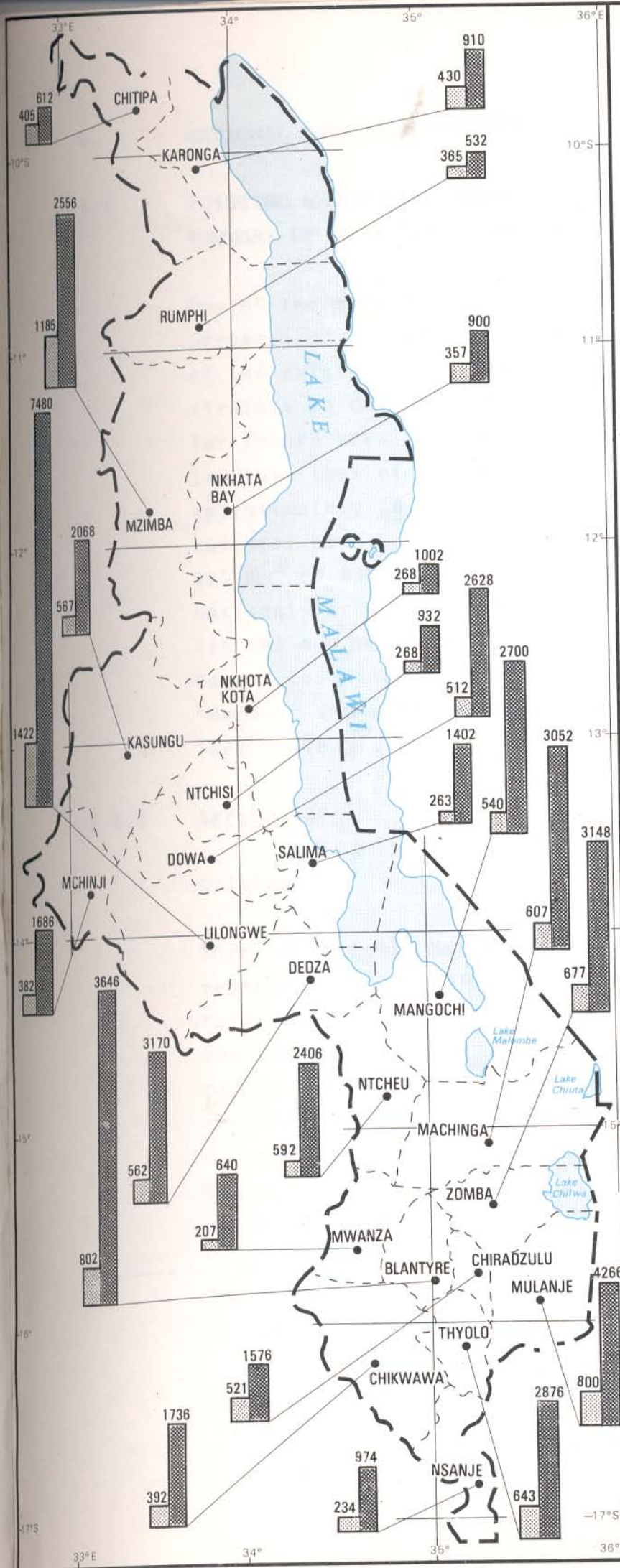
The TCPD will seek to coordinate the school locational planning efforts of the MOEC and (DDC's) with its own district and local physical planning efforts in order to solve or minimize the locational problems relating to equal opportunity or access to education, and ensure the realisation of the greatest cost effectiveness of expenditure.

Figure 4-5 shows the future requirements for primary educational facilities.

Table 4.5.1:

## Recommended Provision/Distribution of Classrooms by the Year 2000

District	Existing No. of Classrooms 1985	Projected enrolment by the Year 2000	Additional classrooms required 1985/2000	Total No. of classrooms required by 2000	Annual increase of new classrooms 1986/2000
	(1)	(2)	(3)	(4) = (1) + (3)	(5)
Chitipa	405	30,600	207	612	14
Karonga	430	45,500	480	910	32
Nkhata Bay	357	45,000	543	900	37
Rumphi	365	26,600	167	532	11
Mzimba	1,185	127,800	1,371	2,556	92
<b>Northern Region</b>	<b>2,742</b>	<b>275,500</b>	<b>2,768</b>	<b>5,510</b>	<b>186</b>
Kasungu	567	103,400	1,501	2,068	100
Nkhotakota	268	50,100	734	1,002	49
Ntchisi	268	46,600	664	932	45
Dowa	512	131,400	2,116	2,628	141
Salima	263	70,100	1,139	1,402	76
Lilongwe	1,422	374,000	6,058	7,480	404
Mchinji	382	84,300	1,304	1,686	87
Dedza	562	158,500	2,608	3,170	174
Ntcheu	592	120,300	1,814	2,406	121
<b>Central Region</b>	<b>4,836</b>	<b>1,138,700</b>	<b>17,938</b>	<b>22,774</b>	<b>1,197</b>
Mangochi	540	135,000	2,160	2,700	144
Machinga	607	152,600	2,445	3,052	163
Zomba	677	157,400	2,471	3,148	165
Chiradzulu	521	78,800	1,055	1,576	71
Blantyre	892	182,300	12,754	3,646	184
Mwanza	201	32,000	439	640	30
Thyolo	643	143,800	2,233	2,876	149
Mulanje	800	213,300	3,466	4,266	231
Chikwawa	392	86,800	1,344	1,736	90
Nsanje	234	48,700	740	974	50
<b>Southern Region</b>	<b>5,507</b>	<b>1,230,300</b>	<b>19,107</b>	<b>24,614</b>	<b>1,277</b>
<b>MALAWI</b>	<b>13,085</b>	<b>2,644,500</b>	<b>39,813</b>	<b>52,898</b>	<b>2,660</b>



——— NATIONAL BOUNDARY  
 - - - DISTRICT BOUNDARY



Km 20 0 20 40 60 80 100 Km

**PROPOSED  
 PRIMARY EDUCATION  
 FACILITIES**

**FIG  
 4-5**

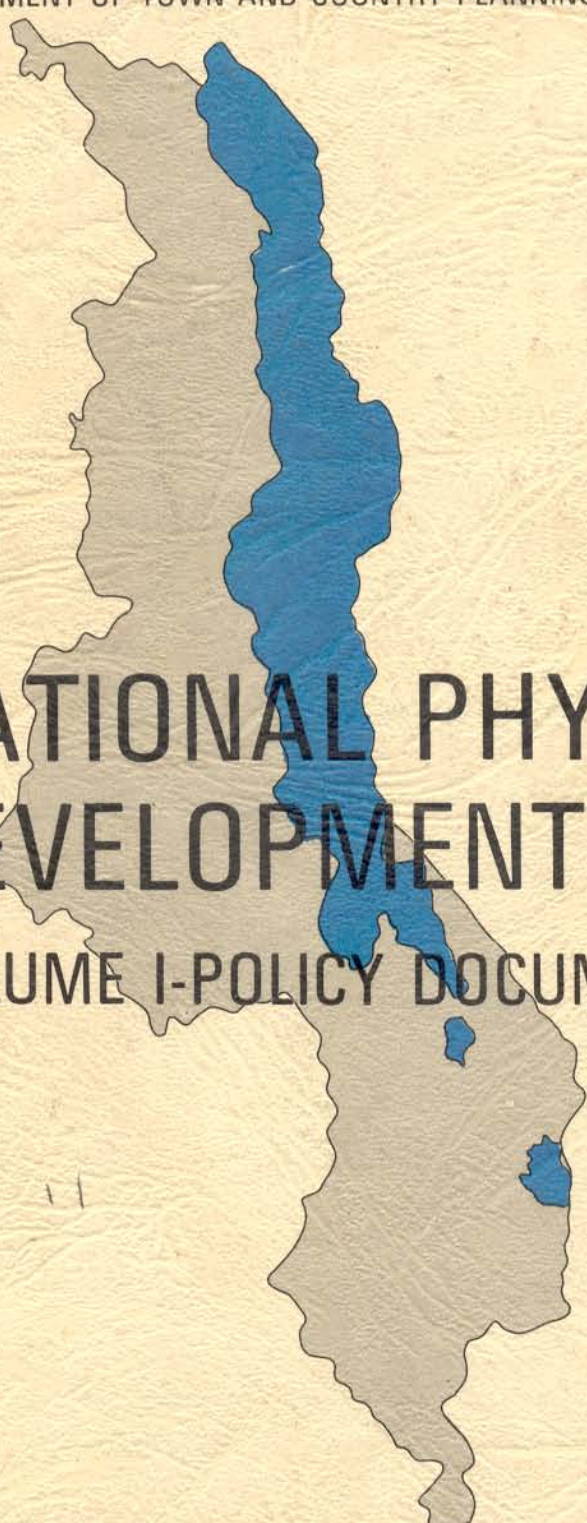
**NATIONAL PHYSICAL DEVELOPMENT PLAN  
 VOLUME I**

REPUBLIC OF MALAWI  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986



REPUBLIC OF MALAWI

OFFICE OF THE PRESIDENT AND CABINET  
DEPARTMENT OF TOWN AND COUNTRY PLANNING



**NATIONAL PHYSICAL  
DEVELOPMENT PLAN**  
VOLUME I-POLICY DOCUMENT

NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
UNDP/UNCHS (HABITAT) PROJECT MLW/79/012

## 5. NATIONAL LAND USE STRUCTURE

### 5.1 EXISTING MAJOR LAND USES: SUMMARY OF BACKGROUND INFORMATION

One of the most important prerequisites for the preparation of the NPDP is a good knowledge and analysis of the existing land use trends, natural physical constraints to development, usable vacant land and land for future uses. Land use calculations<sup>(1)</sup> made in 1983 indicate that of Malawi's total land area of 94,274 Km<sup>2</sup>, approximately 20,143 km<sup>2</sup> (21.37%) were devoted to agricultural uses. Nucleated human settlements occupied 885 Km<sup>2</sup> (0.94%), Nature Conservation (forest reserves, national parks and game reserves) covered 18,151 Km<sup>2</sup> (19.3%) and major infrastructure covered 556 Km<sup>2</sup> (0.6%). Vacant land including usable but unutilised land, 'dambos' and steep slopes covered 54,539 Km<sup>2</sup> (57.84%). (See Table 5.1).

#### 5.1.1 Agriculture

##### Estates

There were 6,310 Km<sup>2</sup> of agricultural estates, representing 6.7% of Malawi's land area and 13% of the total land under cultivation. The Central Region had the largest share of the land area; that is, approximately 56%, followed by the Southern Region, 24%; and the Northern Region, 20%. The estates were mainly concentrated in the Districts of Kasungu, Mzimba, Mchinji, Mangochi, Machinga, Nkhotakota, Rumphi and Chikwawa.

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(1) The Methodology for the calculation is presented in NPDP Volume 2, Part 1.

**Table 5.1:  
Existing Major Land Uses and Natural Physical Constraints**

Land Use Category	Land Area Km <sup>2</sup>	% of Total Land Area
Agriculture (Including on-farm Scattered settlements)	20,143	21.4
Nucleated Human Settlements	885	0.9
Nature Conservation/Reservation: (Forest Reserves, National Parks and Game Reserves)	18,151	19.3
Major Infrastructure	556	0.6
Vacant land and swamps, floodplains, steep slopes	54,539	57.8
<b>TOTAL LAND AREA: MALAWI</b>	<b>94,274</b>	<b>100.0</b>

### **Smallholdings**

Smallholdings occupied 13,832 Km<sup>2</sup> or 15% of the total land area of Malawi. These consisted of nucleated settlements gardens, 7,919 Km<sup>2</sup> (8.4%); scattered settlement gardens, 5,609 Km<sup>2</sup> (6%) and smallholdings (under the Smallholder Agricultural Project) 304 Km<sup>2</sup> (0.5%). The geographical concentrations of the smallholdings followed patterns similar to those of the estates mentioned above.

#### **5.1.2 Human Settlements**

Nucleated settlements, consisting of both urban settlements and village clusters<sup>(1)</sup>, occupied 885 Km<sup>2</sup> (or about 1% of Malawi's total land area). Only the built-up areas were calculated, excluding the vacant land. The proportion of the existing built-up areas in urban and village clusters for each region is shown in Table 5.2.

In terms of distribution by district, the majority of the urban land was found in Blantyre District (45%) and Lilongwe District (24%); with small amounts in the districts of Zomba (4.5%), Mangochi (2.6%), Chikwawa (2.6%) and Dedza (2%). The largest proportion of land devoted to nucleated settlements was found in Lilongwe District (12%) followed by the Districts of Mulanje (9%), Machinga (8.7%), Ntcheu (6.7%), Dedza (6.5%) and Zomba (6%).

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(1) The term 'village cluster' is used to distinguish between nucleated villages and scattered rural settlements which consist of isolated on-farm dwelling units.



**Table 5.2:  
Built-up Land in Urban and Rural Settlements \* \***

Human Settlements	Total		Regions %		
	(Km <sup>2</sup> )	%	Southern	Central	Northern
Urban Areas	173	19.5	61.4	33.3	5.3
Village Clusters	712	80.5	50.4	38.3	11.3
<b>Total</b>	<b>885</b>	<b>100.0</b>			

\* The term 'village cluster' is used to distinguish between nucleated villages and scattered rural settlements which consist of isolated on-farm dwelling units.

\* \* Scattered settlements are not included in this calculation as they are part of agricultural holdings.

An NPDP Survey in 1983 identified 2,652 nucleated settlements in the country, consisting of 1,532 minor villages, 1,087 large villages, 26 minor towns, 4 large towns, one large sugar-estate town, and the two cities of Lilongwe and Blantyre. 744 of the settlements (28%), were concentrated in the Shire Highlands areas covering the Districts of Zomba, Blantyre, Chiradzulu, Thyolo and Mulanje; 460 (17%) were concentrated in the Lilongwe-Dedza plains, including central-southwest Dowa District; 224 (8%) were concentrated within 25-30 kilometres along the east side of Dedza-Ntcheu-Balaka-Machinga transportation corridor; and 275 (10.4%) were developed in a 'ribbon' form along the lakeshore from Karonga to Mangochi-Makanjila. Scattered settlements, on the other hand, were found in widely divergent geographical areas; from the hinterlands of nucleated settlements, in the Districts of Lilongwe, Mulanje, Zomba, Mzimba, Dowa, Thyolo, Mangochi and Dedza, to isolated and remote areas of the country.

### 5.1.3 Nature Conservation/Reservation

Gazetted Forest Reserves, National Parks and Game Reserves occupied 18,151 Km<sup>2</sup> (19.3%) of the total land area, broken down as follows: National Parks and Game Reserves, 10,913 Km<sup>2</sup> (11.6%) and gazetted Forest Reserves, 7,238 (7.7%). Of the total area of National Parks and Game Reserves, the Northern Region had 4,134 Km<sup>2</sup> (38%) and the Central and Southern Regions had 4,118 Km<sup>2</sup> (37.6%) and 2,661 Km<sup>2</sup> (24.3%), respectively. The fairly even regional distribution of Forest Reserves was as follows: Southern Region 2,909 Km<sup>2</sup> (40.2%) Central Region, 2,272 Km<sup>2</sup> (31.4%); and Northern Region, 2,057 Km<sup>2</sup> (28.4%).

#### 5.1.4 MAJOR PHYSICAL INFRASTRUCTURE

Roads, railways, power lines and airfields occupied 556 Km<sup>2</sup> or 0.6% of Malawi's land area. Roads were the predominant element, occupying 456 Km<sup>2</sup> or 80% of the land covered by infrastructure. The Central Region had the largest proportion of infrastructure, 245 Km<sup>2</sup> (44%) followed by the Southern Region, 195 Km<sup>2</sup> (35%) and the Northern Region, 116 Km<sup>2</sup> (21%).

#### 5.1.5 NATURAL PHYSICAL CONSTRAINTS

As much as 29,857 Km<sup>2</sup> (31.7%) of Malawi's total land area imposes physical constraints to development. Dambos, swamps and floodplains covered 6,190 Km<sup>2</sup> (6.6%) of the total land area of Malawi. The Central Region had the largest share of these land characteristics; that is 3,179 Km<sup>2</sup> (51.3%); followed by the Southern Region 2,122 Km<sup>2</sup> (34.3%) and the Northern Region, 889 Km<sup>2</sup> (14.4%). Steep slopes with gradients of 12% and over covered 23,666 Km<sup>2</sup> (25.1%) of Malawi's land area. The regional distribution is as follows: Northern Region, 11,887 Km<sup>2</sup> (50.2%); Central Region, 6,054 Km<sup>2</sup> (25.6%) and Southern Region, 5,725 Km<sup>2</sup> (24.2%).

#### 5.1.6 VACANT LAND

Vacant land is defined as the amount of arable/buildable land remaining unused and available for development. The total amount in the country in 1983 was 24,681 Km<sup>2</sup> or 26.2%. The Southern Region had 10,997 Km<sup>2</sup> (44.5%); the Central Region 8,823 Km<sup>2</sup> (35.7%) and the Northern Region, 4,881 Km<sup>2</sup> (20%). The largest amounts of vacant land were found in the districts of Mzimba (15%), Machi-nga (10%), Mangochi (8.2%), Kasungu (7.8%) Ntcheu (6.9%) and Chikwawa (6.5%).

### Land Tenure

There are four types of land tenure in Malawi. These are (i) customary land (registered and unregistered), (ii) leasehold land, (iii) absolute or freehold (private) land and (iv) public land. Annual records kept by the Lands Department indicate that in 1984 the total amount of customary land was approximately 79% of the total land area of Malawi while public land represented 17.3%, freehold land 0.6% and leasehold land 3.1%.

Under the system of customary land tenure all land is owned by the society and apportioned to individuals by the village headman or chief, who is trustee of the land.

Under leasehold title, land is leased to an individual, subject to conditions set out in an agreement between the owner and the lessee. Where land being leased is customary, the lease is issued subject to the consent of the village chief (Traditional authority or sub-traditional authority). Leasehold title can be granted initially only by (a) Government in the case of customary land or (b) by a freeholder granting a leasehold interest in his land. A leaseholder under (a) above cannot grant leasehold title to another party, although he/she can with the consent of Government assign or sublet the whole or part of the land.

Leasehold interest is the most important feature of land tenure for development. Generally Government grants a lease for a term of 99 years commensurate with the amount of anticipated expenditure by the lessee on the development.

In some instances, in particular within Lilongwe, Government has itself partly developed sites by providing roads and services and recovered a proportionate cost from the lessee over the first few years by way of development charges which is a separate item from ground rent. This system of granting leases rather than freehold interest, enables Government to retain a legal interest in land and provides a direct means of control over development by means of covenants in the lease.

Only a small proportion of land in Malawi is categorized as freehold. Such land tenure is generally a result of land transactions which took place during the colonial period, although in very special case freehold titles can be granted today. Such parcels of land can be held indefinitely and transferred in whole or in part by the owner.

Public land is land which has been acquired by the Government for public use. Such land is largely designated for the following uses: forest and game reserves, national parks, public facilities and urban development.

#### 5.1.8 Arable/Habitable Land Use Densities

The average land use density in the country in 1983 was 146 persons per Km<sup>2</sup> of arable/habitable land. The Northern and Central Regions were below the average, with densities of 96 and 135 persons per Km<sup>2</sup>, respectively; and the Southern Region was above the average with 178 persons per Km<sup>2</sup>. Densities in the district varied from 52 persons per Km<sup>2</sup> in Kasungu District to 438 persons per Km<sup>2</sup> in Thyolo District. The density indicators have provided a basis for identifying the extent of population pressures on land.

### 5.1.9 Major Land Use Issues

#### **Growth Pressures on Land**

There are population growth pressures on land for agriculture particularly in the Districts of Mchinji, Dedza, Dowa and Ntchisi (Central Region); the Districts of Thyolo, Mulanje, Zomba, Chiradzulu and Blantyre (Southern Region); and the Districts of Chitipa and Nkhata Bay (Northern Region). The land pressures are caused not so much by national population increase but by imbalance in the geographical distribution of the population, which is not properly related to the existing (land) resources; the extensive form of agriculture practices; and the fact that only 55% of the total land area of the country is suitable for agricultural development.

#### **Scattered Settlements**

An analytical study of land use and settlements indicates that 2,069,800 persons, representing 37.2% of the population engaged in subsistence farming, have no proper support system of markets, roads and service centres because they are isolated and scattered at very low densities of one to 50 persons per Km<sup>2</sup>. No social survey has been conducted to find out why such a large proportion of rural inhabitants live outside villages which are properly organized in spatial terms. But it is known that some prefer living in the farm to watch for the baboons and other animals which destroy crops.

The following problems related to such sporadic land settlement should be considered as some of the major constraints to agricultural and rural development in the country.:

- (a) The very low density of the human settlements makes it very difficult - almost impossible - to provide access roads and other facilities, given the limited financial resources available.
- (b) As subsistence farms are remote and isolated, farmers cannot sell their surplus food crops easily nor can farm inputs and agricultural extension services be provided without the farmers walking very long distances up to 20 or more kilometres.
- (c) There is a lack of threshold population considered adequate to justify the provision of facilities such as schools and health clinics.
- (d) In the absence of an organized village, there is neither a social support system nor a sense of community.
- (e) It is a most inefficient form of land settlement and land use as thousands of unutilized pockets of vacant customary land lie between cultivated patches and between settlements.
- (f) Fragmented gardens are also undesirable for agriculture because it is impossible to carry out proper farm planning and time is wasted in walking to the fields.

### **Customary Land Tenure System**

Under the customary land tenure system village chiefs, headmen and farmers treat land and its flora as a limitless resource. In the absence of a country-wide land registration system, there is very little or no commitment to improve and manage land properly.

### **Environmental Impact of land use**

Due to land pressure in certain districts, uncontrolled farming, fuel wood collection, land clearing and livestock grazing are carried out in environmentally sensitive areas such as dambos, swamps and floodplains, and on steep slopes without soil conservation or other proper land management. These create environmental problems such as the lowering of water tables, soil erosion, river siltation, water pollution, and the destruction of aquatic and terrestrial habitats.

### **Inventory of Land Capability**

Rational land use planning is hampered by the absence of a comprehensive and scientific national inventory of land capacity(1) which would facilitate making proper assessment of the population carrying capacity of land.

### **Land for Future Smallholder Agriculture**

As discussed in Section 2.1.1. no vacant land will be available for agriculture by the year 2000 in the Districts of Thyolo, Mulanje, Zomba, Blantyre, Chiradzulu, Dedza, Ntchisi, and Nkhata Bay.

(1)

Such an inventory is available for Salima ADD only.



By contrast, large amounts of land will be available after the year 2000 in the Districts of Mzimba, Kasungu, Salima, Ntcheu, Mangochi, Mwanza, Chikwawa and Machinga. See Section 2.

#### **Land for Future Fuelwood Plantations**

It is estimated that Malawi will face a serious shortage of fuelwood by the turn of the century, when only 2 of its 24 districts will be self-sufficient in this sector; that is, Chitipa and Nkhata Bay. Existing future demands for fuelwood have considerable land use implications, particularly in the face of competing land demands from farming and livestock grazing. Unless substantial tracts of land are set aside for fuelwood plantations, serious economic and environmental consequences will result.

#### **Land for Future Livestock Grazing**

Animal husbandry is primarily concentrated in the Central and Northern Regions. Free grazing of the national herd on customary land has created a number of land use conflicts and problems; such as, the destruction of garden plots and crops, overgrazing, traffic hazards, and difficulties in gaining access to dip tanks in heavily cultivated areas. The need to allocate land for grazing and herd management is an important issue in the formulation of a Land Use Policy.

### **Lakeshore Land Use conflicts**

Growing concern has developed over the conflict between the traditional fishing industry and other lakeshore development. In certain lakeshore areas, for example, cottages have interfered with traditional fishing access and operations and displaced fishing villages. As villages are displaced and their fishing livelihood is threatened, their inhabitants seek employment in other rural areas, where they increase the pressure on agricultural land, or in urban areas, where they may create unemployment problems.

### **Statutory Land Use Controls**

A review of the existing Town and Country Planning Act identified the following issues relating to land use controls.

- (a) the conflicting jurisdiction between the village chief who, under customary law, retains the power to allocate customary land within a Planning Area, and the authority responsible for the control of development within that area.
- (b) the application of the existing Town and Country Planning Act only to designated planning areas, although there is need for land use controls of various forms of development throughout the country;
- (c) the nucleated role of the Town and Country Planning Department in relation to physical developments undertaken by Government Ministries and Agencies;
- (d) the lack of co-ordination among a number of Ministries and Agencies which exercise various forms of land use control under separate but related legislation; and
- (e) the development of unauthorized settlements, where land has been appropriated and structures erected without the required approvals. This has created a need for policies to deal with upgrading squatter areas.

## 5.2 PROPOSED NATIONAL LAND USE PLAN

### 5.2.1 Designated Major Uses

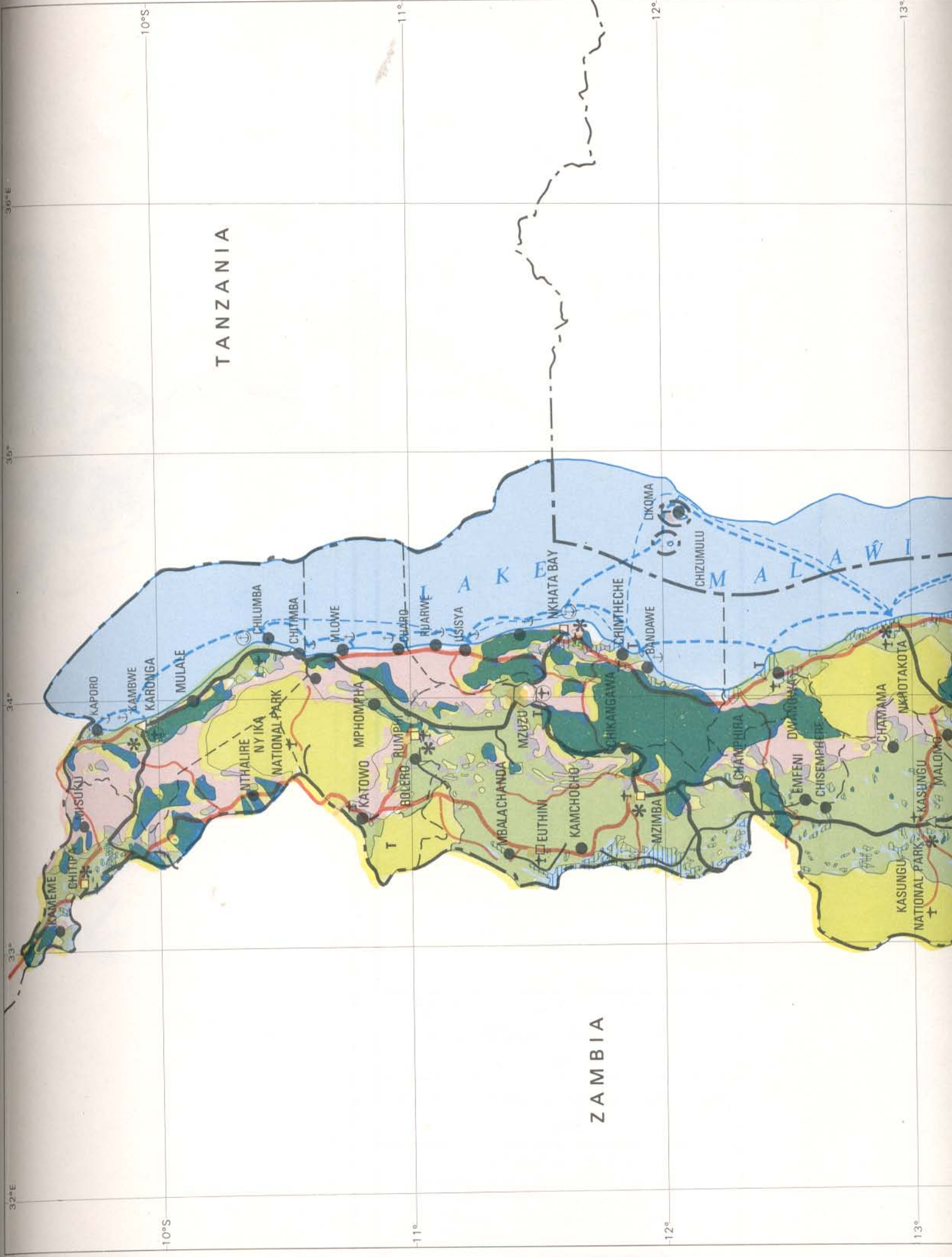
Figure 5-1 depicts the Proposed National Land Use Plan. It incorporates all the spatial development objectives and strategies formulated in the Plan; including spatial strategies for Productive Activities and Population, Urban-Rural Settlements and Service Centres, and Transportation Linkages. The Plan's allocation of land for the various major uses is summarized in Table 5-3 and described below.

#### **Agriculture**

About 49,800 Km<sup>2</sup> representing 53% of the total land areas of Malawi is allocated for agriculture and some other limited uses (See 5.3.1a). Of the 49,800 Km<sup>2</sup> allocated, 28,100 Km<sup>2</sup> (57.0%) has high agricultural potential; 13,000 Km<sup>2</sup> (26.0%) has medium potential; 8,700 Km<sup>2</sup> has low and very low potential. (See Fig. 5-2)

Designated land with high potential for agriculture amounts to 28,100 Km<sup>2</sup>. The Southern Region has 19,300 Km<sup>2</sup> (51%) mainly in the Districts of Mangochi, Machinga, Mulanje, Zomba and Chikwawa; the Central Region has 9,800 Km<sup>2</sup> (35%) concentrated in the Districts of Lilongwe, Ntcheu, Dedza, Salima and Dowa; and the Northern Region has 4,000 Km<sup>2</sup> (14%) concentrated in western Mzimba.

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35°  
34°  
33°  
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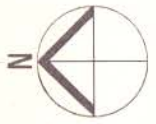
TANZANIA

ZAMBIA

MOZAMBIQUE



MOZAMBIQUE



TO NACALA

Lake Chiuta

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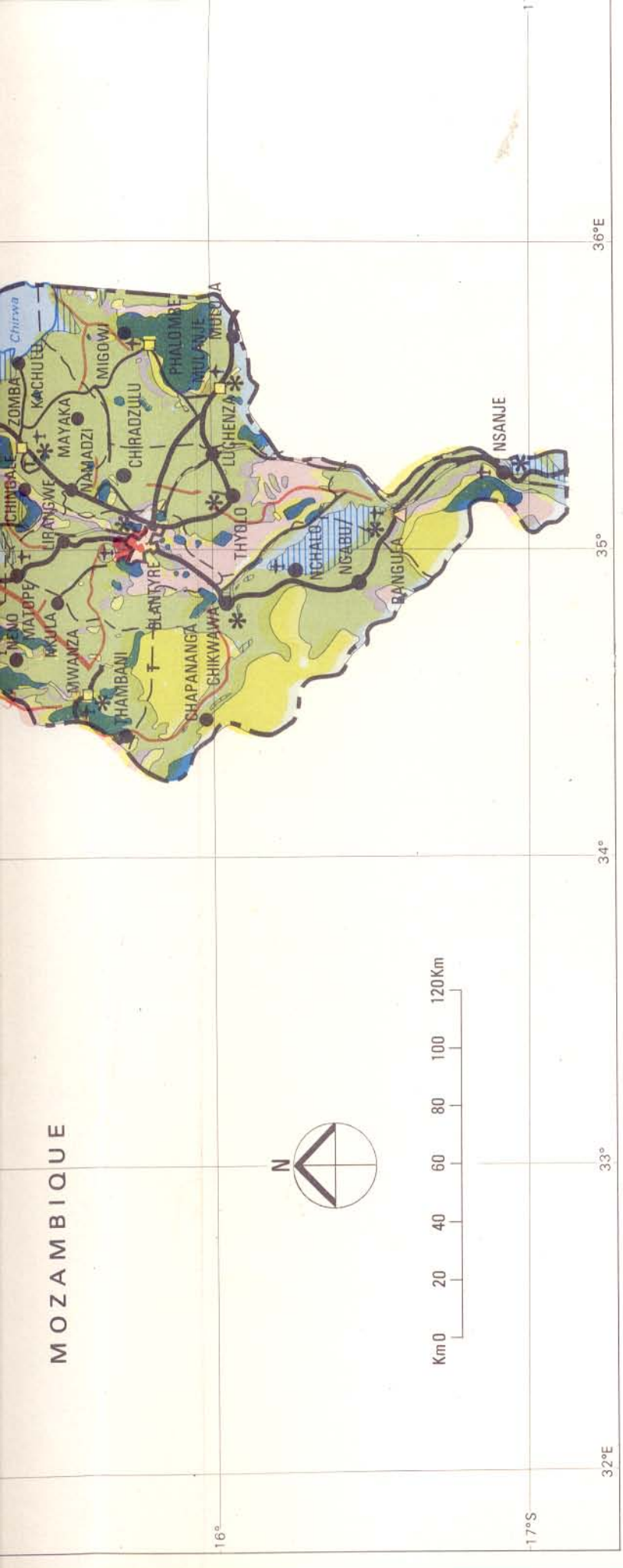
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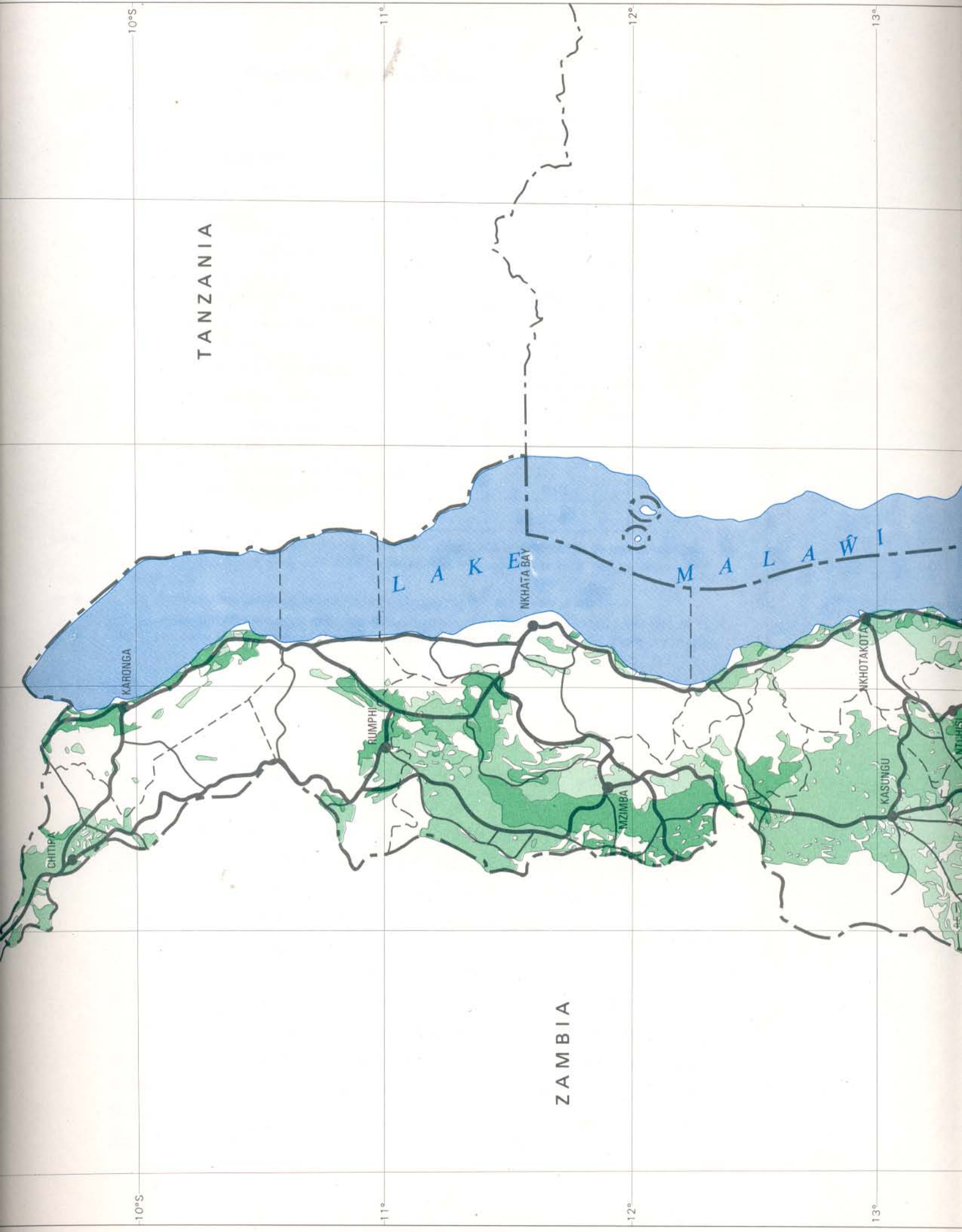


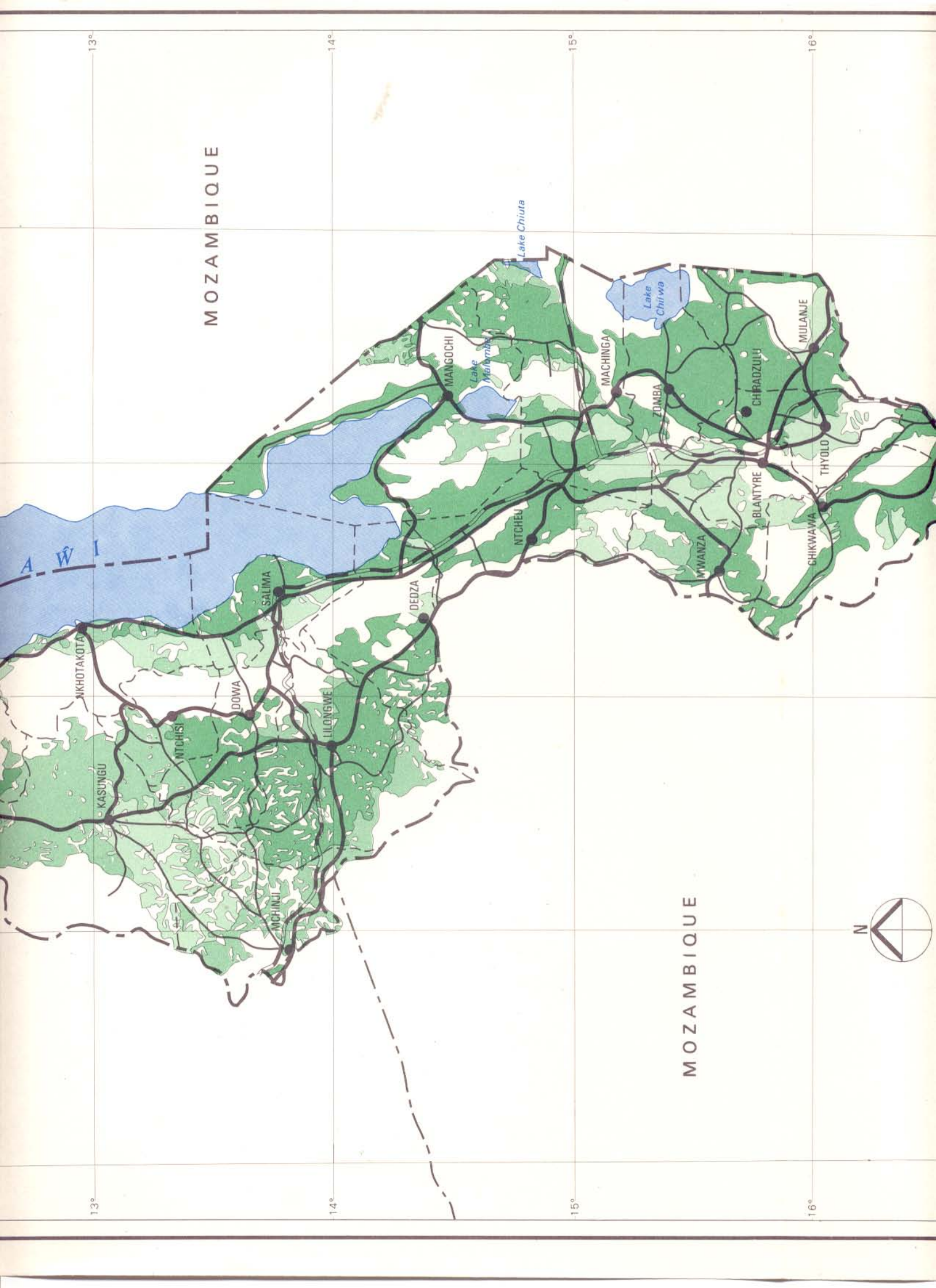
- URBAN AND RURAL SERVICE CENTRES
- NATIONAL CENTRE
- REGIONAL CENTRE
- SUB-REGIONAL CENTRE
- DISTRICT/MAIN MARKET CENTRE
- RURAL MARKET CENTRE
- AGRICULTURE
- CONSERVATION
- NATIONAL PARKS AND GAME RESERVES
- FOREST RESERVES
- OTHER CONSERVATION AREAS SUBJECT TO POLICY SEEKING STUDIES
- SWAMP/DAMBO/FLOODPLAIN
- STEEP SLOPES
- STRATEGIC INDUSTRIAL ZONES
- TOURISM
- INDUSTRY
- INFRASTRUCTURE
- MAIN ROADS
- SECONDARY ROADS
- RAILWAY
- LAKE SERVICE ROUTES
- TOURIST CRUISE ROUTES
- INTERNATIONAL AIRPORT
- AERODROME
- MAJOR PORT/MINOR PORT
- OTHER LAND USES AND FEATURES
- LAKES
- DISTRICT BOUNDARIES
- NATIONAL BOUNDARIES
- PROPOSED MAIN ROAD
- PROPOSED SECONDARY ROAD

<b>PROPOSED NATIONAL LAND USE PLAN</b>	<b>FIG. 5-1</b>
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**NATIONAL PHYSICAL DEVELOPMENT PLAN  
VOLUME 1**

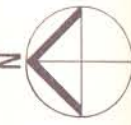
**REPUBLIC OF MALAWI**  
 NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT  
 OFFICE OF THE PRESIDENT AND CABINET  
 TOWN AND COUNTRY PLANNING DEPARTMENT  
 UNDP/UNCHS PROJECT MW/79/012 APRIL 1986





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MOZAMBIQUE



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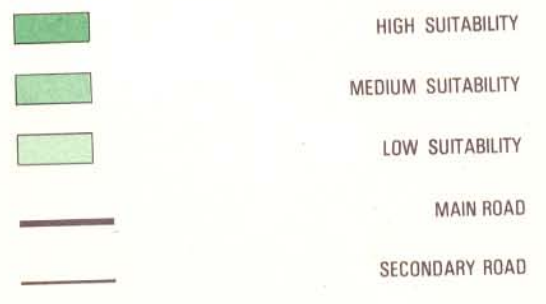
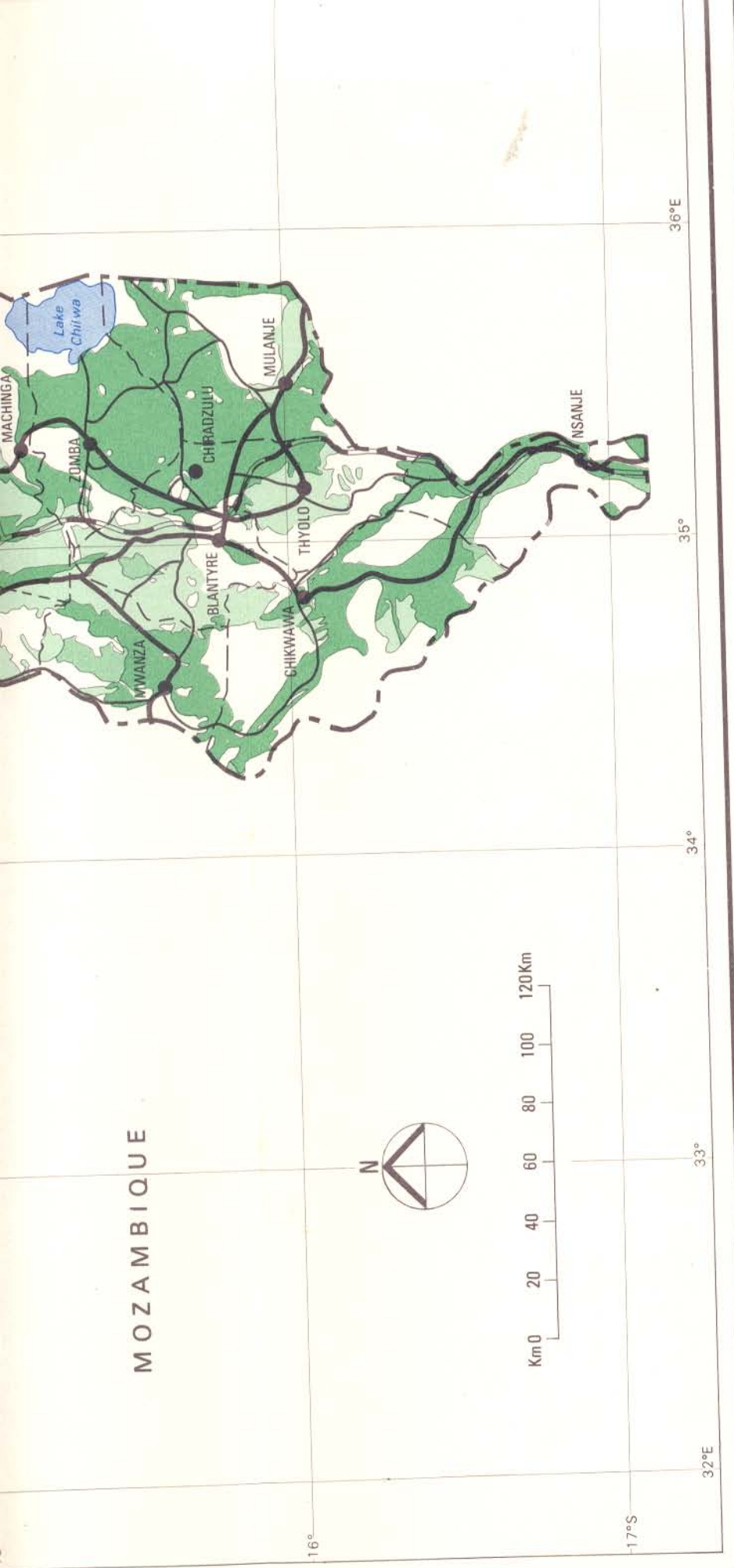
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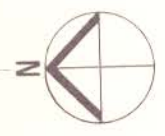
CHIRADZULU

MULANJE





MOZAMBIQUE



<p>DESIGNATED AGRICULTURAL LAND BY DEVELOPMENT POTENTIAL</p>	<p>FIG. 5-2</p>
<p>NATIONAL PHYSICAL DEVELOPMENT PLAN VOLUME 1</p>	
<p>REPUBLIC OF MALAWI NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT OFFICE OF THE PRESIDENT AND CABINET TOWN AND COUNTRY PLANNING DEPARTMENT UNDP/UNCHS PROJECT MW/79/012 APRIL 1986</p>	

**Table 5.3:  
Proposed Major Land Uses**

Land Use		Land Area (Km <sup>2</sup> ) Land Area	Percent of Total
Category	Description		
Agriculture	High Potential agricultural land	28,100	53.0
	Medium Potential agricultural land	13,000	
	Low Potential agricultural land	8,700	
Nucleated Human Settlements	Cities, towns and villages	1,700	1.8
	National Parks and Game Reserves	10,914	11.5
Conservation	Forest Reserves	12,300	13.0
	Other Nature Reserves, Swamps, Flood plains, dambos & steep slopes	18,910	20.0
Major Infrastructure	Roads, railways and electricity way-leaves and Airports	650	0.7
<b>Total Land</b>		<b>94,274</b>	<b>100</b>

1. The Agricultural land use category is so termed since the major uses are expected to be agricultural. However, other non-agricultural uses will also be permitted in accordance with the recommended policies in Section 5.3a
2. Villages exclude scattered human settlements which are part of the agricultural land.
3. The land area devoted to roads includes existing District roads although the Proposed Land Use Plan. Figure 5.2 does not show District roads. These roads will be identified at the District Planning level.

Designated land with medium agricultural potential measures approximately 13,000 Km<sup>2</sup>. The Central Region has the largest proportion, 7,280 Km<sup>2</sup> (56%) concentrated in the Districts of Kasungu, Mchinji and Lilongwe; the Northern Region has 4,290 Km<sup>2</sup> (33%) concentrated in Mzimba District and the Southern Region has 1,430 Km<sup>2</sup> (11%) concentrated in Mangochi.

Of the remaining designated agricultural land (8,700 Km<sup>2</sup>), which is in the category of low and very low suitability, the Southern Region has 3,480 (40%) concentrated in Machinga District; the Central Region has the same amount, 3,480 Km<sup>2</sup> (40%), concentrated in Nkhotakota, Ntcheu and Dedza; and the Northern Region has 1,740 Km<sup>2</sup> (20%) concentrated in Mzimba.

### **Nucleated Human Settlements**

Cities, towns and villages (excluding scattered settlements) will require 1,700 Km<sup>2</sup> representing 1.8% of the total land area.

### **National Parks and Game Reserves**

National parks and Game Reserves remain unchanged in the land area occupied (in 1983), which is 10,913 Km<sup>2</sup>, representing 11.6% of the total land area of Malawi.

### **Forest Reserves**

The area allocated for Forest Reserves is approximately 12,300 Km<sup>2</sup> (13.0%) of the total land area. The total includes 7,237 km<sup>2</sup> of gazetted forest reserves, 2,170 Km<sup>2</sup> of proposed reserves approved for gazetting; and 2,930 Km<sup>2</sup> of proposed new forest reserves. With respect to the latter category, an evaluation was made as to the agricultural potential of the areas falling within the proposed new reserves. In keeping with the overall objective of the Plan to protect the best arable lands, proposed new reserves which fall within land identified as having high, medium and, to some extent, low agricultural potential have not been incorporated in the Land Use Plan. See Appendix Table 5-1.

### **Other Nature Reserves**

Swamps, floodplains, dambos and steep slopes not falling within other designated land uses have been set aside as Other Nature Reserves, for which policy-seeking studies have been recommended below. They cover an area of 18,924 Km<sup>2</sup> or 20% of the total land area.

## **Major Infrastructure**

Roads, railways, electricity way-leaves and airports will require 650 Km<sup>2</sup>, or 0.7% of the total land area.

## **Strategic Locations for Industry**

Strategic locations for industries, identified in Section 2, have been incorporated in the Land Use Plan.

## **Strategic Locations for Tourism**

Tourism development strategies are focused on Lake Malawi, the National Parks and the 3 urban centres of Lilongwe, Blantyre and Zomba. Zones for the development of international hotels and tourist facilities have been designated at various points along the lakeshore in accordance with the recommendations of the Lakeshore Physical Development Plan<sup>(1)</sup>. Among the important provisions in the LPDP is one which stipulates that lakeshore leases for cottages and other developments should not deny access of the general public to the lakeshore.

The prime locations incorporated in the LPDP for tourism development include North Senga Bay, Cape Maclear and the Lakeshore strip between Monkey Bay and Mangochi. Additional tourist/recreational zones incorporated include Chewe Point and Ngara Point (both north of Dwangwa), the area around Chintheche, and Likoma Island. The development of these locations will be subject to the findings of site specific feasibility studies. Areas defined for smaller scale tourism development, which have not been shown in the Land Use Plan, are identified in the LPDP. A proposed lake cruise route connecting various points of interest between Monkey Bay and Chilumba and catering for the international tourist market is also shown on the Land Use Plan.

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(1) The Lakeshore Physical Development Plan is part of the outputs of NPDP.

**RECOMMENDATIONS**

Since various policy statements by the Government emphasize that agriculture is the backbone of Malawi's economy the Plan must be an instrument for the preservation of the nation's agriculture resource - land, particularly the best arable land. The Plan must also formulate land use measures to facilitate agricultural and other sectoral developments, balance space requirements for and regulate all competing uses of land, and provide a spatial framework for the co-ordination of sectoral development projects.

The following are the specific policies recommended with respect to the proposed National Land Use Plan which is depicted in Figure 5-2.

**RECOMMENDED POLICIES****OBJECTIVES****5.3.1a**

To promote the most efficient use of land and, in particular, ensure that the best arable lands are kept for agricultural uses to meet demands of the future population

**STRATEGIES/ACTIONS****5.3.1a**

The TCPD shall formulate and administer land use controls in accordance with a detailed schedule of permitted uses for land designated in the plan for agriculture and non agricultural uses. The following uses are designated for each category of agricultural land suitability:

### **Land with High Agricultural Potential**

Only the following uses shall be permitted Agriculture; productive activities and other land uses which are supportive of agriculture:

On-farm rural dwelling units related to agriculture; temporary non-agricultural uses which will permit the land to revert to agriculture when needed; small scale fuelwood plantations close to urban centres.

### **Land with Medium Agricultural Potential**

All uses permitted on land with high agricultural potential, productive activities and other uses which are closely related to and compatible with agriculture, and limited urban uses shall be permitted.

### **Land with Low Agriculture Potential**

The following uses shall be permitted, All uses permitted; on land with medium agricultural potential, urban development, afforestation and woodlot establishment.

### **Land with Very Low Agricultural Potential**

Permitted uses in this zone which has some marsh, shall include nature conservation, dry season grazing, rice cultivation where feasible, urban and other non-agricultural uses.

The TCPD will carefully assess all competing claims for land for agriculture, residential and industrial uses, conservation, infrastructure and other purposes, and will exercise the necessary land use controls under the Town and Country Planning Act.

**5.3.1b**

Where large 'pockets' or parcels of vacant land exist in an urban area, they should be developed to prevent an unnecessary expansion of the urban boundary which affects agricultural activities.

**5.3.2a**

To prevent the development of serious land-population problems in the districts of Dedza Mchinji, Dowa, Ntchisi, Thyolo, Zomba, Blantyre, Chiradzulu, Mulanje and Nkhata Bay where the population carrying capacity of land is likely to be reached by the year 2000.

**5.3.2a**

The Government should strengthen, by additional funding, manpower etc, the MOA's extension services, and other projects directed towards intensifying use of land, even to the point of achieving more yields while utilizing less land area.

**5.3.2b**

The MOA already gives priority to smallholders over the establishments of new estates. Similar policy measures should be employed in the Central and Southern Regions where population pressures on land are experienced. The DEPD, TCPD and MOA should assess the socio-economic and land use impact of proposed estates or extensions to existing ones in relation to the population carrying capacity of the land.

Consideration should be given to locating new estates in districts with surplus agricultural land or in areas where agricultural land is not suitable for smallholder farming.

#### 5.3.2c

The MOA should establish more smallholder agricultural projects in less crowded parts of the country in order to induce voluntary population in-migration from crowded parts of the country. Particular reference is made to smallholder projects, which generate employment, such as smallholder coffee or tobacco authority projects and Settlement Schemes which fall under the responsibility of the various Rural Development Projects.

#### 5.3.2d

The Government should provide incentives for the creation of non-farm employment in the districts experiencing population pressures on land in order to increase farm holdings to the desirable size per household. (See Section 2).

#### 5.3.3

To ensure that traditional fishermen have adequate access to lakeshore areas for their fishing operations

#### 5.3.3

The Department of Lands and Valuation shall seek guidance from TCPD regarding the appropriateness of granting lakeshore leases. In commenting on lease applications, the TCPD will take into Consideration the Lakeshore Development Plans prepared as part of the NPDP.



- c) define areas for limited types of development.
- d) identify those areas which should be designated as nature reserves, in which no farming or other development will be permitted and,
- e) establish environmental protection and conservation measures to protect fragile environments.

Proposed solutions to the issues of statutory land use controls, have been dealt with in the Draft Town and Country Planning Bill, which is Part II of the NPDP outputs.

## 6. IMPLEMENTATION

### 6.1 INTRODUCTION

This Section defines the responsibilities of, and actions to be taken by, Government Ministries and Departments and Statutory Organisations, and the institutional mechanisms and framework to be provided in order to implement the policies formulated in the National Physical Development Plan.

The Plan, the more detailed District Physical Development Plans and the Lakeshore Physical Development Plan related to the Plan will have a multi-sectoral impact. They are the basic instruments providing both a comprehensive spatial framework for the co-ordination and implementation of national development policy, and the optimum location of development projects of Government Ministries, Departments, Statutory Organizations and the private sector.

The Plan also serves as a guide to the development of human settlements and rural and urban service centres, and the distribution of productive activities and population. It will promote the efficient use of land, assist in the protection of the best arable lands, support conservation measures and directly enhance the physical planning functions of the Town and Country Planning Department, Office of the President and Cabinet.

#### 6.1.1 Existing Institutional Framework

It is necessary to outline the respective responsibilities and functions of the various major participants in the national development process.

The DEPD, in conjunction with Treasury, coordinates, appraises and prioritises investment programmes and projects by Government and Statutory Organisations. The Treasury is also responsible for budgetary allocation. The functions of OPC (Administration), DPMT, and TCPD also involve the overall consideration and coordination of development programmes and projects.

From the point of view of physical planning and development, the Ministries of Agriculture and of Works and Supplies play a leading role. The former plans, implements and manages development programmes and projects pertaining to agriculture and associated infrastructure, such as rural road and bridges, through the implementation of the National Rural Development Programme, an integrated rural development programme. The MOWS is an implementing Ministry. It carries out most of the Government's development programmes and projects requiring construction and engineering capabilities, regardless of which ministry/department will finally be responsible for the provision and management of actual services.

In addition to these two Ministries, all Government Ministries/Departments are involved in and responsible in one way or another for planning, implementing and monitoring development programmes and projects within their field of competence. The recently formed Rural Development Section within the OPC has the responsibility of monitoring, coordinating and implementing micro-projects and the NRCP.

District Councils, Statutory Organisations such as ESCOM and ADMARC, the National Rural Housing Project, and the SCDP also play an important role in the implementation and administration of development programmes with nationwide physical planning implications. Their specific functions in the implementation of the Plan are given in Tables 6.1 and 6.2.

#### 6.1.2 Legal Basis for Planning and Implementation

A legal framework for planning already exists -- the Town and Country Planning Act Cap. 23:01; but this should be replaced by a new Draft Town and Country Planning Act. A Draft Bill prepared by the NPDP is currently under consideration by the Government. The challenges which will establish the new (additional) legal context for the system of planning are:

- (a) the new planning frameworks introduced by the NPDP and its offshoots: the District Physical Development Plans and the Lakeshore Physical Development Plan.
- (b) National Physical Planning and Development.
- (c) urban planning outside existing statutory planning areas.
- (d) increased local authority and other forms of local involvement in decision-making in planning.
- (e) TCPD takeover of land use control powers from other agencies.
- (f) integration of physical planning with other Government decision-making processes through the provision of statutory duties to consult TCPD or refer matter for consideration to a new Town and Country Planning Board.

The Cabinet has approved that the Town and Country Planning Act be replaced. A new Draft Town and Country Planning Bill has been presented as a separate document of the NPDP Project and has been submitted to the Attorney General.

## **6.2 IMPLEMENTATION STRATEGIES**

### **6.2.1 Successful Implementation**

No matter how sound and practical this Plan may be, its successful implementation will depend upon the cooperation of Government Ministries, Departments and Statutory Organisations in particular and the private sector in general, specifically with respect to the extent to which they accept and commit themselves to the principles, objectives and strategies of the National Physical Development Plan. However, the overall responsibility for the implementation of the Plan rests with OPC/TCPD. A proposal for an Implementation Programme was forwarded to OPC for funding by UNDP.

### **6.2.2 Approval and Status of the Plan**

The Draft Town and Country Planning Bill, which is currently under consideration has the following provisions regarding the approval and status of the Plan:

"When a (National Physical Development) Plan has been prepared, it shall be submitted to the Minister."

"The Minister may place the Plan or an official summary of the Plan before Parliament for its consideration."

"When the Plan has been approved with or without modification by the Minister all District Plans, local Physical Development Plans, Development Programmes and Projects shall as far as practicable in their preparation and formulation, have regard to and take into account the principles and policies of the Plan."

### **6.2.3 Spatial Co-ordination of Development Proposals**

#### **6.2.3.1 National Development Projects**

The TCPD should be involved in the project planning process right from the beginning. This will facilitate (a) identification, monitoring and prompt assessment of physical development planning implications of programmes/projects in the pipeline, and (b) direct contribution in the form of technical inputs into decisions made by sectoral bodies and donors, particularly when location aspects are involved. Prior to approval of the Draft Town and Country Planning Bill by Parliament, Government should make administrative arrangements for effective participation of the TCPD, particularly through attendance at Development Proposals and Development Estimates Meetings. Prior to the meetings the DEPD should send copies of the Project Submissions to the TCPD (Reference Section 7 of Circular No. Dev/14/17/Vol.2, DEPD. Dated 4th December, 1985). It should be mentioned that the procedure recommended above will not involve development control and it should not delay the Development Estimates procedures.

#### **6.2.3.2 Locational Studies Advisory Committee**

In addition to the administrative arrangements recommended in section 6.2.3.1, a Locational Studies Advisory Committee should be established to review the suitability and implications of the proposed locations of development projects and recommend appropriate action to be taken by Government Ministries, Departments and Statutory Organisations concerned.

The matters to be considered by the Committee shall include:

- (a) Availability of suitable land , utilities, access roads and other locational requirements: and
- (b) land use impact on agricultural land, rural and urban human settlements and population distribution in general, and on environmentally sensitive areas.

The purpose is to achieve optimum location in terms of locational requirements (land, raw materials, labour, markets, transport and other utilities and facilities), balanced spatial or regional development and equity, and economy in the utilization of limited national resources, particularly funds. The Locational Studies Advisory Committee should consist of the following members:

1. Secretary for Economic Planning and Development (Chairman)
2. Secretary for Works and Supplies
3. The Commissioner for Town and Country Planning
4. The controller of Lands and Valuation
5. The controller of District Administration
6. The General Manager, ESCOM
7. Coordinator, National Environmental Committee
8. Co-opted Member: Ministry, Agency or Statutory Body requiring a site.

#### 6.2.4. Provision of Services and Facilities

It is recommended that all Ministries, Departments and Statutory Organizations take into consideration the Guidelines for the Location of Services and Facilities as contained in Section 3 of the Plan, in order to ensure co-ordinated provision of services and facilities for the maximum benefit of the national population in both urban and rural areas.

#### 6.2.5 Monitoring

An effective monitoring programme shall be established within the Town and Country Planning Department as an essential part of the implementation of the Plan and subsequent review/updating. The programme shall

- (i) determine the extent of success in achieving the objectives of the Plan;
- (ii) identify development programmes and projects and other major socio-economic activities which have an impact on rural and urban land use structure;
- (iii) identify policy conflicts and other implementation problems;
- (iv) collect, analyse and store data. While data and information will be obtained from the National Statistical Office and other organisations, the TCPD will establish a data base information system that will meet its work demands and serve special requirements for physical planning. The establishment of an information system/data bank will initially require the service of an expert in the field of information systems relating to human settlements and physical planning;



- (v) provide information from the Plan and its Background Study Report relevant to project identification and project preparation (feasibility studies); and
- (vi) prepare periodic reports on the monitoring programme for the subsequent review/updating of the Plan.

#### **6.2.6 Finance and Budgeting**

The National Physical Development Plan has financial and budgetary implications but it is neither appropriate nor practical to translate the Plan proposals into a capital works programme budget. This should be done by the pertinent organisations shouldering the responsibilities for sectoral development projects and programmes.

The Ministry of Finance should recognise the National Physical Development Plan as an important policy document which has provided a sound nationwide basis for spatial distribution of limited investment funds, optimum geographical distribution of socio-economic benefits, and spatial co-ordination of land use and activities. Therefore, Treasury should use the Plan as one of the important instruments for achieving maximum effectiveness and efficiency in the use of limited investment funds. In particular the Treasury should give priority in the allocation of funds to services and facilities locating in the designated rural and urban centres.

#### 6.2.7 Physical Planning Administration

The OPC and DPMT should adopt the proposals submitted by the Commissioner, TCPD, for restructuring and strengthening the Department to perform more effectively at the national, district and local levels of planning.

#### 6.2.8 Further Studies

Further studies recommended in Sections 4 and 5 should be given serious consideration by the Ministries/Department/organizations concerned, and projects should be prepared and submitted for funding.

#### 6.2.9 Plan Review

The Plan shall be reviewed periodically in whole or in part in accordance with changing circumstances, new development policies and the findings of the monitoring programme recommended in this Section.

#### 6.2.10 Checklist of Recommended Policies

Tables 6.1 and 6.2 present a checklist of recommended policies and actions which should be carried out by the various Ministries, Departments, and Statutory Organizations in order to implement the Plan.

#### 6.2.11 Conclusion

In conclusion it is necessary to reiterate that the adoption of this Plan by itself will not achieve its objectives and that its successful implementation will depend upon the co-operation of the Government Ministries, Departments and Statutory Organisations and the private sector.

**Table 6.1:  
Check-List of General Policies**

General Policy Area		Plan Document Section	Key Organisation Responsible
P.1	Spatial co-ordination of Sectoral Programmes and Projects	Sections 2, 3, 4, 5 and 6; and Statutory provisions in the existing Town and Country Planning Act and the new Draft Town and Country Planning Bill (Components of NPDP)	OPC/TCPD, DEPD MOF/Treasury
P.2	The Development of a system of urban and rural service centres; the promotion of a more balanced economic growth, geographically; and the provision of services and facilities on an economic basis.	Sections 2, 3, 4, 5, and 6	MOA, (NRDP), OPC/ (NRGCP), TCPD, (SCDP) DOLV
P.3	Hierarchical development of urban centres in addition to Lilongwe and Blantyre	Sections 2, 3, and 4	TCPD (SCDP), OPC (NRGCP)
P.4	The promotion of functional links between human settlements with respect to commodity flows movement of people, the delivery of services and generally, socio-economic activities	Sections 3 and 4	MOWS, MOTC, ADMARC MOLG

**Table 6.2:  
Check-List of specific Policies**

Policy Ref. No.	Specific Policy Area	Plan Document Section	Organisation Responsible
SP.1	Promotion of Decentralized/Balanced industrial development	Section 2.2 Policy 2.2a	MOTIT OPC/TCPD/DEPD MOF, SEDOM
SP.2	Provision of special incentives to new industries locating outside the city of Blantyre and in selected strategic locations	Section 2.2 Policy 2.2b	MOTIT, MOF OPC/DEPD SEDOM
SP.3	Tourism promotion	Section 2.3.3 Policies 2.3a, 2.3b, 2.3c and 2.3e	MOTIT/Department of Tourism
		Policy 2.3d	MOTIT/Departments of Tourism and National Parks and Wildlife MOF
		Policy 2.3f	MOWS/Roads Department
		Policy 2.3g	OPC/DEPD, MOTIT
SP.4	Promotion of a balanced or more desirable distribution of rural population in relation to the population-carrying capacity of land	Section 2.5.3	MOA (NRDP) Private estates
SP.5	Hierarchy of service centres	Section 3.5 Policy 3a	OPC/TCPD, MOLG, MOE NRCP, SCDP, MOH, MOWS, ESCOM, MOTC ADMARC, MOA
SP.6	Access to essential services and centres	Section 3.5 Policy 3b	OPC/TCPD, MOLG, MOE MOE, MOWS, ESCOM, MOLG, MOTC/Dept. Telecommunications ADMARC, DEPD/TPU
SP.7	Provision of services and facilities and inter-settlement functional linkages	Section 3.5 Policy 3c and 3d	OPC/TCPD, MOWS, MOA MOTC/Dept. of P & T, MOH, MOE, MOLG. ADMARC, ESCOM DEPD/TPM
SP.8	Implementation of guidelines for the provision of services and facilities	Section 3.5 Policies 3c and 3d	OPC/TCPD All Ministries
SP.9	Development of Mzuzu as a Regional Centre	Section 3.5 Policy 3f	OPC/TCPD, (SCDP) DOLV
SP.10	Promotion of seven Sub-regional Centres	Section 3.5 Policies 3a and 3b	OPC/TCPD (SCDP)

**Table 6.2 Contd.**

SP.11	Promotion of 22 District and/or Main Market Centre	Section 3.5 Policy 3a	OPC/TCPD (SCDP)
SP.12	Promotion of 80 Rural Market Centres	Section 3.5 Policies 3a and 3b	OPC/TCPD (NRCP) MOWS
SP.13	Promotion of Local participation at Rural Market Centres and Village Centres	Section 3.5	MOLG, OPC/TCPD District Councils
SP.14	Road Development Projects	Table 4.1 and Policy 4.1a to 4.1f	MOWS, MOTC
SP.15	National Road Network	Policies 4.1a to 4.1f	MOWS, OPC/TCPD
SP.16	Airways	Policies 4.1b	MOTC
SP.17	Lake Transport	Policy 4.1a	MOTC/Malaŵi Railways
SP.18	Comprehensive Transportation Planning	Policy 4.1g	OPC/TCPD/DEPD/TPU MOWS, MOTC/MR/ Air Malaŵi
SP.19	Mobility of the Rural population	Policy 4.1c	MOTIT, MOF
SP.20	Electricity Supply	Policies 4.2a 4.2b and 4.2c	ESCOM, OPC/TCPD
SP.21	Water Schemes/Projects	Section 4.3 Policies 4.3a to 4.3d	MOWS/Water Department/OPC/TCPD
SP.22	Health Facilities	Policy 4.4.1	MOH, OPC/TCPD
SP.23	Education Facilities	Policies 4.5.1a 4.5.1b and 4.5.1c	MOE, OPC/TCPD
SP.24	General Land Use Management	Policy 5.3.1a and the Draft Town and Country Planning Bill	OPC/TCPD DOLV
SP.25	Population-Carrying Capacity of Land	Policy 5.3.2a Policy 5.3.2b Policy 5.3.2c Policy 5.3.2d	MOA DEPD, OPC/TCPD, MOA MOA MOTIT, MOF
SP.26	Agricultural Development	Policies 5.3.2a Policy 5.3.5, 5.3.2c Policy 5.3.4a, 5.3.4b Policy 5.3.7	MOA MOA, OPC/NRCP MFNR, TCPD, MOA DOLV
SP.27	Lakeshore Development	Policy 5.3.3	OPC/DOLV/TCPD MOA/Fisheries Dept.
SP.28	Fuelwood Plantations	Policy 5.3.4a Policy 5.3.4b Policy 5.3.4c Policy 5.3.4d	OPC/TCPD, MFNR, MOA EPU MFNR, EPU MFNR, DOLV
SP.29	Livestock Grazing	Policy 5.3.5	MOA
SP.30	Urban Fringe Development	Policy 5.3.6	OPC/TCPD/DA/MOLG
SP.31	Environmental Impact	Policy 5.3.7	MFNR, OPC/TCPD, MOA

**THE NATIONAL PHYSICAL DEVELOPMENT PLAN PROJECT TEAM**

The Project Team which prepared the Plan consisted of the following professional and technical personnel:

**(a) National Counterpart Personnel**

J.J. Matope	Commissioner for Town and Country Planning/National Project Co-ordinator
C.M. Kayuza	Senior Physical Planner/counterpart Team Leader
A.J.C. Kawonga	Senior Physical Planner
E.D.M. Nhlane	Physical Planner
G.M. Chiusiwa	Physical Planner
F.S.C. Zambezi	Physical Planner
J.S. Williams	Physical Planner
A.V. Jones	Transportation Planner
T.N. Phiri	Physical Planner
G.C. Mũnyambate	Physical Planner
N. Zahedi	Physical Planner

**(b) United Nations Personnel**

R. Acquah-Harrison	Project Manager/UN Team Leader (1982-87) Urban and Regional Planner
P.O. Lefvert	Project Manager (1981-82)
I.G. Zijlma	Infrastructure Engineer (Expert)
O.S. Ertur	Economist/Planner (Expert)
T.M. Potocki	Architect/Planner (Expert)

K. Twumasi	Economist/Planner (Consultant)
J.P.W.B. McAuslan	Planning Legislation (Consultant)
E. Neubauer	Economist/Planner (Consultant)
A. Erhard	Geographer/Planner (UN Associate Expert)
C. Kjørbeberg	Architect/Planner (UN Associate Expert)
A. Askari	Physical Planner (UN Volunteer)
R.T. Steele	Geographer/Planner (UN Volunteer)

**(c) Technical Personnel**

M.J. Kambwiri	Planning Technician
B.P.C. Msukwa	Planning Technician
J.G. Kamanga	Planning Technician
R.K. Banda	Planning Technician
M. Mkochi	Planning Assistant
S.A.K. Bwendera	Planing Assistant

**Appendix Table 2.1:  
Formal Sector Employment Growth 1977 — 1983**

Sector	1977 (Base Year)		1978		1979		1980		1981		1982		1983	
	No.	% Increase 1978-9	No.	% Increase 1978-9	No.	% Increase 1978-9	No.	% Increase 1979-80	No.	% Increase 1980-81	No.	% Increase 1981-2	No.	% Increase 1982-3
Total Employment	308,900	9.7	338,900	4.0	352,300	4.3	367,300	4.3	327,300	-10.9	344,100	5.1	387,500	12.6
Agricultural	154,700	9.2	169,000	5.8	178,800	1.3	181,100	1.3	157,100	-13.3	157,200	0.06	197,200	25.4
Non- Agricultural	154,200	10.2	169,900	2.1	173,500	7.3	186,200	7.3	170,400	-8.5	186,900	9.7	190,300	1.8

Source: Computed from Economic Reports 1979-85, DEPD



**Appendix Table 2.1:  
Formal Sector Employment Growth 1977 — 1983**

Sector	1977 (Base Year)		1978		1979		1980		1981		1982		1983	
	No.	% Increase 1978-9	No.	% Increase 1978-9	No.	% Increase 1978-9	No.	% Increase 1979-80	No.	% Increase 1980-81	No.	% Increase 1981-2	No.	% Increase 1982-3
Total Employment	308,900	9.7	352,300	4.0	367,300	4.3	327,300	-10.9	344,100	5.1	387,500	12.6	25.4	
Agricultural	154,700	9.2	178,800	5.8	181,100	1.3	157,100	-13.3	157,200	0.06	197,200	25.4	27.5	
Non-Agricultural	154,200	10.2	173,500	2.1	186,200	7.3	170,400	-8.5	186,900	9.7	190,300	1.8	23.4	

Source: Computed from Economic Reports 1979-85, DEPD

## APPENDIX 2.2

### METHODOLOGY FOR PROJECTED EMPLOYMENT AND POPULATION

#### 2.2.1 YEAR 2000 TOTAL EMPLOYMENT FORECAST

Analysis of the population carrying capacity of land<sup>(1)</sup> shows that land can accommodate the farming activities of 11,906,276 rural population by the year 2000. This number is greater than the year 2000 natural increase rural population of 10,667,777. This means that the land can provide more agricultural employment than that required by the rural farming population. Consequently, the non-agricultural and urban employment is forecast first and the rest of the gainfully employed labour force is assumed to be absorbed by the agricultural and rural sectors.

#### Non-Agricultural Employment Forecast: Year 2000

The forecast is based on three different employment elasticity assumptions and the G.D.P. projections made by the Department of Economic Planning and Development of the OPC for the period of 1986-1990.

The three different employment elasticity assumptions are : (a) employment elasticity of 1.3 under the medium employment growth assumptions; (b) elasticity of 1.5 under high growth, and (c) employment elasticity of 1 under the low employment growth assumptions respectively<sup>(2)</sup>.

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(1) The land carrying capacity is discussed in Section 2.1

(2) For the calculation of the employment elasticities, see NPDP Background Study Report on Employment.

The medium growth assumptions, based on development trends between 1970 and 1983 imply the continuation of the labour-intensive technology while the high and low employment assumptions imply the application of technologies with higher and lower labour intensities respectively.

**Non-Agricultural Employment Forecast Under Medium Employment Growth Assumptions.**

On the basis of the medium employment elasticity of 1.3 and the projected GDP growth rate of 3.9%<sup>(1)</sup>, the future non-agricultural employment growth rate is estimated at 5.1% (i.e.  $1.3 \times 3.9\% = 5.07\%$ ). Using 5.1% growth rate to apply to the 1977 non-agricultural employment of 309,300<sup>(2)</sup> the year 2000 non-agricultural employment is projected to be 971,100.

**Non-Agricultural Employment Forecast Under High Employment Growth Assumptions**

On the basis of the high employment elasticity of 1.5 and the projected GDP growth rate of 3.9% the future non-agricultural employment growth rate is estimated at 5.8% (i.e.  $1.5 \times 3.9 = 5.85\%$ ). At the rate of 5.8%, the non-agricultural employment will be 1,131,200 by the year 2000.

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(1) The non-agricultural sector GDP is forecast by the DEPD to increase from K568M in 1986 to K662M in 1990, thus yielding an annual GDP growth rate of 3.9%. See Economic Report 1985 P. 101, Table 13.2 (Figures own calculation). This GDP growth rate is assumed to hold for the year 2000.

(2) 1977 non-agricultural employment is obtained from the 1977 Population Census Report Vol. 2. See also NPDP Background Report on Employment.

Non-Agricultural Employment Forecast Under Low  
Employment Growth Assumptions

The forecast bases are (a) non-agricultural sector employment elasticity of 1 and (b) GDP growth rate of 3.9% yielding a non-agricultural employment growth rate of 3.9% (i.e.  $1 \times 3.9\%$ ) and consequently year 2000 non-agricultural employment of 745,700.

Of the three different employment forecasts, the medium assumption, non-agricultural employment of 971,100 is taken for all future considerations since this is in accordance with the current level of technology.

Agricultural Employment Forecasts <sup>(1)</sup>

Considering that the rest of the future labour force can be absorbed in agriculture because of land availability, and on the assumption that the 1977 labour participation rate of 0.98 will hold for the year 2000, the total agricultural employment is forecast at 3,812,400, that is  $(0.98 \times 4,881,000) - 971,100 = 3,812,200$ .

Urban Employment Forecast

The same medium employment elasticity of 1.3, used for the non-agricultural employment, is assumed to hold for the urban employment as these two types of employment are about the same. This employment elasticity is again applied to the DEPD projected growth rate of 3.9% to yield an urban employment growth rate of 5.1%. Applying this to the 1977 urban employment of 232,100 the year 2000 urban employment is estimated at 728,100.

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(1) See Footnote (1), Section 2.4.1, first page.

### Rural Employment Forecast

As in the case of agricultural employment forecast, the rural employment forecast is done on the assumption that the labour force who are without urban employment will remain in the rural areas, having regard also to an assumed labour participation rate of 0.98. Thus year 2000 rural employment will be :  $(0.98 \times 4,881,000) - 728,100 = 4,054,900$ .

#### 2.2.2 POPULATION DISTRIBUTION : YEAR 2000

##### Projected Natural Growth Total Population

The year 2000 projected natural growth total population of 11,861,900 was obtained from the NPDP Background Study Report on Population. It was based on an annual average population growth of 3.36%.

##### Projected Total Urban Population

The projected total urban population for the year 2000 is taken to be an employment-supported population. It was obtained on the basis of the potential availability of urban jobs with regard to the available resources, and an assumed ratio of 0.28 between employment and urban population. This ratio is a medium between a series of employment-urban population ratios ranging from 0.22 to 0.34 which were computed from the Census Report. Using the ratio of 0.28 to apply to the projected urban employment of 728,100, the year 2000 total employment supported urban population is estimated at 2,600,400. See Appendix Table 2.2.1.

##### Rural Population

The total rural population for the country amounts to the difference between the total projected national population (11,861,900 people) minus the planned urban population (2,600,400 people); i.e. 9,261,500 people.

APPENDIX TABLE 2.2.1: URBAN POPULATION DISTRICTION BY SERVICE CENTRE YEAR 2000

DISTRICT	CENTRES	POPULATION 1977	PLANNED POPULATION 2000
Chitipa	Chitipa	3,110	5,900
	Kameme	800	1,200
	Nthalire	1,000	1,500
	Misuku	600	1,000
		5,510	6,600
Karonga	Karonga	12,000	37,200
	Chilumba	2,500	9,900
	Mlale	2,500	5,000
	Kaporo	2,500	5,000
		19,500	57,100
Nkhata Bay	Nkhata Bay	4,000	17,000
	Chintheche	500	5,000
	Chikwina	600	2,000
	Usisya	1,200	3,500
	Likoma	1,000	1,800
		7,300	29,300
Rumphi	Rumphi	4,000	8,000
	Livingstonia	2,500	4,000
	Bolero	1,300	2,000
	Mphophwa	400	1,000
	Katowo	1,100	1,800
		9,300	16,800
Mzimba	Mzuzu	22,300	198,400
	Mzimba	5,400	15,000
	Euthini	800	3,000
	Emfeni	1,000	2,000
	Champhira	400	2,000
	Embangweni	500	1,000
	Chikangawa	600	1,500
	Edingeni	500	1,000
	Kamchocho	500	1,000
	Mbalachanda	500	1,000
	Ekwendeni	1,000	1,700
	Emcisweni	400	1,000
			33,900

APPENDIX TABLE 2.2.1 cont'd

DISTRICT	CENTRES	POPULATION 1977	PLANNED POPULATION 2000
Kasungu	Kasungu	6,500	47,400
	Chisemphere	1,000	2,000
	Chamama	500	1,000
	Santhe	500	1,000
		8,500	51,400
Nkhotakota	Nkhotakota	10,300	20,000
	Dwangwa	700	1,400
	Mwansambo	1,500	4,000
		12,500	25,400
Ntchisi	Ntchisi	1,700	7,900
	Malomo	1,200	6,000
		2,900	13,900
Dowa	Mponela	3,400	7,000
	Madisi	2,000	3,500
	Nambuma	2,000	2,500
	Mvera	500	1,000
	Dowa	2,000	2,500
		9,900	17,500
Salima	Salima	4,700	25,000
	Chipoka	1,600	6,700
	Khombedza	1,500	3,000
		7,800	34,700
Lilongwe	Lilongwe	98,700	696,400
	Kasiya	1,000	2,500
	Nsaru	500	1,500
	Nathenje	1,000	3,000
	Mitundu	1,000	7,000
	Namitete	1,000	4,000
	Lumbadzi	500	1,500
	Sinyala	1,000	2,500
	Chimute	1,000	2,000
		106,600	720,400
Mchinji	Mchinji	2,000	7,000
	Kamwendo	1,000	6,000
	Mkanda	1,100	2,000
	Kapiri	500	1,500
		4,600	17,500

APPENDIX TABLE 2.2.1 cont'd

DISTRICT	CENTRE	POPULATION 1977	PLANNED POPULATION 2000
Dedza	Dedza	5,600	22,900
	Linthipe	500	1,200
	Lobi	1,000	2,000
	Mtakataka	1,500	4,000
	Golomoti	1,200	3,000
	Mayani	800	1,500
		10,600	34,600
Ntcheu	Ntcheu	3,100	8,900
	Bwanje	2,000	5,800
	Bilira	500	2,000
	Tsangano	500	2,000
	Lizuzu	800	2,000
		6,900	20,700



APPENDIX TABLE 2.2.1 cont'd

DISTRICT	CENTRE	POPULATION 1977	PLANNED POPULATION 200
Mangochi	Mangochi	2,800	29,700
	Monkey Bay	3,200	8,500
	Malindi	3,000	5,100
	Namwera	1,000	4,300
	Nankumba	1,500	2,500
	Chilipa	3,000	5,100
	Makanjila	2,000	3,400
		23,000	58,600
Machinga	Liwonde	3,800	23,300
	Ntaja	800	5,000
	Balaka	5,600	19,800
	Ulongwe	1,500	3,300
	Phalula	1,000	2,000
	Chikweo	500	1,000
	Nayuchi	500	1,000
	Nsanama	1,000	2,000
	Machinga Boma	700	1,500
		15,400	58,900
Zomba	Zomba DC	24,200	117,300
	Namwera T.O.	1,000	2,000
	Kachulu	1,000	2,000
	Chingale	1,700	3,900
	Mayaka	1,000	3,000
			28,900
Chiradzulu	Chiradzulu	700	800
	Namadzi	500	600
		1,200	1,400
Blantyre	Blantyre	219,000	848,700
	Lirangwe	1,200	5,000
	Nkula	500	2,000
		220,700	855,700
Mwanza	Mwanza	2,400	16,700
	Neno	900	2,000
	Thambani	700	2,000
		4,000	20,700

APPENDIX TABLE 2.2.1 cont'd

DISTRICT	CENTRE	POPULATION 1977	PLANNED POPULATION 2000
Thyolo	Thyolo	3,400	29,800
	Lunchenza	3,900	29,800
	Thekerani	3,300	16,500
		10,600	76,100
Mulanje	Mulanje	3,000	29,800
	Phalombe	1,200	19,900
	Migowi	2,000	6,200
	Muloza	1,500	3,000
		7,700	58,900
Chikwawa	Chikwawa	3,600	8,700
	Chapananga	3,400	7,000
	Nchalo	5,000	9,000
	Ngabu	4,800	10,000
		16,300	34,700

APPENDIX TABLE 2.2.1 cont'd

DISTRICT	CENTRE	POPULATION 1977	PLANNED POPULATION 2000
Nsanje	Bangula	5,100	20,000
	Nsanje	6,400	9,700
		11,500	29,700
Northern Region		75,510	341,400
Central Region		170,200	936,100
Southern Region		249,300	1,322,900
MALAWI		495,010	2,600,400

### APPENDIX 3.1

#### PROFILES OF INFLUENCE AREAS OF DISTRICT AND/OR MAIN MARKET CENTRES

In the following, a more detailed description of influence area characteristics for District and/or Main Market Centres is provided. The description includes statements about population developments in the influence area, commercial prosperity of the centre and possible infrastructure bottlenecks in the catchment area.

##### Chitipa:

The relatively poor primary and secondary road development in the district limits the influence area of the centre. About 20,000 inhabitants who live in scattered settlements are beyond the desirable distance to a District and/or Main Market Centre. Whether or not the situation can be improved depends on the standard of the existing/proposed district roads (i.e. all-weather standard). The centre's influence area is around the minimum of 65,000 inhabitants in 1985 (107,000 in 2000). Improvements in the road transportation network will indeed be necessary to make the centre commercially more attractive.

##### Rumphi:

The next centre south of Karonga is Rumphi. Its road connections to the hinterland are reasonably well developed. Furthermore, most of the routes are regularly frequented by buses. This gives Rumphi a fairly large influence area. Nevertheless, the corresponding influence area population is quite small (only 70,000 inh. in 1985) due to the rather low density. It can be expected, however, that by the year 2000 the centre will have become much more attractive due to its improved commercial services, as its catchment area population will then have grown to about 115,000 inhabitants.

### Euthini:

This centre is proposed as a new District and/or Main Market Centre. It has a sphere of influence over the west of the Northern Region, close to the Zambian boundary. In 1985 figures the potential influence area population was about 50,000 inhabitants. Assuming that the available road system (secondary roads only) is of reasonable quality and motorable throughout the year, by 2000 the service area population will have grown into the 82,000 inhabitant range, thus making it a commercially viable centre. The road situation in the area is rather unsatisfactory, however, thus making access to the centre very difficult. A promotion of the centre will therefore only be viable if the surrounding road network is substantially improved.

### Nkhata Bay:

This centre is a long established District Centre. It draws a good part of its importance from its harbour facilities, which make it indispensable for the Northern Region. Although it has all the features which ought to be expected at this level, the commercial sector is relatively poorly developed. This is understandable due to its proximity to Mzuzu, which actually limits the influence area population to slightly less than 65,000 in 1985 terms, growing to about 107,000 in the year 2000. The commercial viability of the centre is rather low at this point in time. It is likely that trading facilities will develop over the next 15 years as the population grows.

**Mzimba:**

Mzimba's location within the Northern Region appears to be strategically good. However, road connections are available only in a south-north direction. Connections to the fairly well populated western part are poor. Assuming that the south-north traffic in the area will, in the near future, be mostly on a tar road, the overall influence area of the centre is of a reasonable size. It partly overlaps in the north with the influence areas of Mzuzu and Euthini. In the south it almost touches the northern extension of Kasungu's influence area. Despite the fact that population density is rather low the influence area population is over 75,000 inhabitants in 1985 terms (about 120,000 in 2000), which makes it commercially viable. An improved road situation could bring notable increase in the population within reach of the centre. District road development is therefore highly recommended.

**Nkhotakota:**

Nkhotakota's influence area extends up to Dwangwa and half way down to Salima. The influence area population is about 65,000 (in 1985) which makes it a reasonably viable centre also in commercial terms. The served population will grow to about 107,000 in the year 2000.

**Ntchisi:**

The centre's influence area population was about 150,000 inhabitants in 1985. Like Dowa District, poor primary and secondary road development limits Ntchisi's sphere of influence. The influence area of Mponela covers almost entirely the influence area of Ntchisi.

**Dowa:**

Dowa has a long-established district centre. The relatively poor main and secondary road development in the district limits the influence area of the centre. Although it has all the features which ought to be expected at this level, its commercial sector is relatively poor compared to Mponela. The limited influence area of Dowa is also partly covered by that of Mponela. At present the influence area population is about 100,000 people.

**Mponela:**

Although not a District Centre, Mponela has far more commercial dynamics than those in the adjacent District Centres of Ntchisi and Dowa. Due to its strategic location on the main road between Lilongwe and Kasungu it has a fairly large influence area in all directions. It covers both Ntchisi and Dowa. The influence area population is about 160,000 people (263,000 in 2000).

**Mchinji:**

This District Centre has only recently gained considerable importance due to the Estate development in area. Mkanda in particular, situated north of Mchinji, is an area of high commercial potential. Although the influence area population was only about 100,000 in 1985, it should be around 165,000 people in 2000 due to the recent developments. The commercial establishments of the centre (which are partly complemented by retail and wholesale shops at Kamwendo, some 15 Km out of Mchinji) appear to be fully viable.

### Monkey Bay:

Monkey Bay is designated a Main Market Centre because the two centres of Salima and Mangochi cannot satisfactorily cover the entire lakeshore area at the District and/or Main Market Centre level. Unfortunately, the area in question is rather sparsely populated; thus Monkey Bay will not be a commercially viable centre until 1990. Nevertheless, by that time it will close an important gap along the lakeshore.

### Ntcheu:

Ntcheu, a long-established District Centre, strongly competes in its influence area with Balaka, which is located about 40 Km southeast. Due to this situation and a limited district road development, the influence area of this centre is rather small, covering only about 75,000 inhabitants (1985), leaving about 20,000 (1985) people out of its reach (in southern direction) due to the absence of adequate district roads. Its commercial viability is improved by the fact that it is conveniently located on the main road, half way between Blantyre and Lilongwe. It is estimated that about 30% of the retail turnover in the centre is realized by sales to motorists passing by. The total influence area population will grow to about 124,000 people by the year 2000.

### Machinga:

Located on the M1 Lilongwe-Blantyre road is the administrative centre for Machinga District. In the near future the centre will lose its status to Liwonde as the administrative centre of the District. The centre has a very small influence area because it does not have commercial facilities. The place has little potential for growth compared to Liwonde and Balaka.



**Ntaja:**

Ntaja serves a population of at least 110,000 people in 1985 figures (181,000 in the year 2000). Investigations have established that its wholesale influence area for the distribution of groceries is about the same size as Balaka's. It can therefore be deduced that it has already commercially developed into a full Main Market Centre.

**Zomba:**

Zomba's importance as a commercial centre has long been established, dating from the time when it served as the nation's Capital. Although its importance is declining and it is coming increasingly into the influence area of Blantyre, it still has a reasonably wide influence area as a District and/or Main Market Centre. In 1985 terms the population in the influence area is about 120,000, growing to about 197,000 in the year 2000. Zomba's urban features are already well developed in comparison to those of other centres at this level, and service provision is quite advanced.

**Chiradzulu:**

This centre is mainly an administrative centre with a short history as it used to be part of Blantyre District in the early sixties. The centre lacks in many respects the services and the facilities required at this level, and the commercial sector is relatively poorly developed. This is understandably due to proximity to Blantyre, which actually limits the influence area of Chiradzulu, which falls under the influence areas of both Blantyre and Zomba. It is likely that the trading facilities will develop rather slowly during the next 15 years.

**Mwanza:**

Although Mwanza has a relatively short history as an administrative centre, the district has gained a significant attractiveness for immigrants during the last few years as land became short in adjacent areas. Its influence area population of only about 50,000 inhabitants (1985) indicates that the centre's commercial viability is low. Nevertheless, the western border area served by Mwanza is out of the range of Blantyre on a regular basis. Therefore it appears fully justified for it to be designated as a District and/or Main Market Centre. In addition the service population of the centre will grow to about 82,000 by the year 2000, which will increase its commercial strength.

**Thyolo:**

Thyolo is located southeast of Blantyre in a heavily developed tea estate area. The centre has an influence area population of well over 300,000 inhabitants, growing to 540,000 by the year 2000. This makes it a very important centre east of Blantyre City, but the entire influence area is also covered by Blantyre and Mulanje.

**Mulanje:**

This centre, located southeast of Blantyre in a heavily developed estate area, has an influence area population of well over 120,000 inhabitants, which will be close to 200,000 in the year 2000. This makes it a very important centre in the Southern Region. Notwithstanding, it cannot fully cover the important and densely populated area of Mount Mulanje. About 80,000 inhabitants in 1985 terms (197,000 in the year 2000) are left outside Mulanje's influence area.

**Phalombe:**

It is proposed that this centre caters for the population behind Mulanje Mountain. With developing services and functions it may additionally attract some people now within the influence areas of Mulanje and Zomba and thus become a highly commercially viable centre within a relatively short period. Its promotion is highly recommended.

**Chikwawa:**

Chikwawa is located about 30 Km southeast of Blantyre in the Lower Shire valley. It has a catchment area population of about 190,000 people, and, apart from the M1 to Blantyre and Bangula, has poor road system.

Its influence area is completely covered by Blantyre and Bangula, with a good road connection to these centres.

The 2000 population is estimated at 300,000 people.

**Nsanje:**

Nsanje is situated at the southern-most part of Malawi and is somewhat isolated. At present the population in the catchment area is estimated at 83,000 and may grow to 137,000 by the year 2000.

## APPENDIX 3.2

### METHODOLOGY FOR THE CALCULATION OF PRIORITY INDICES

The four indicators which are used for the derivation of priorities are:

- (a) the central service score as derived from NPDP's central place survey in 1982.
- (b) the estimated number of inhabitants in the influence area in 1985
- (c) the additional population carrying capacity in the influence area.
- (d) the non-agricultural job creation potential in the influence area.

In the first step, the absolute value of the indicator is determined from the available empirical background material (see for example columns (3), (5), (7) and (9) in Table APP 3.2.1).

The second step is to make the absolute indicators comparable among each other. This is achieved through the derivation of relative indices. The individual absolute indicators for each centre are set into relation with the average absolute value for all centres. For instance, the absolute reciprocal service centre score of 42 for Liwonde is divided by the average absolute score of 32. The result is a relative index of 142. In fact this relative index means that the centre's indicator is 42 percent higher than the average.

In the third step composite relative index is derived for each centre. As all indicators are assumed to carry the same weight, the four index values are summed up and divided by four.

The ranking of the centre is done in accordance with the value of the composite index. The centres are grouped in descending order of the index.

In the following, the calculation of priority indices is presented for the Sub-Regional level, the District and/or Main Market Centre level and for the Rural market Centre level. For the latter the composition of the indicators is somewhat different. The fourth indicator is deleted as it is almost negligible at this centre level. The third indicator dealing with the population carrying capacity is differently applied, in that only different values for high, medium and low potential are assigned to each centre. The calculation procedure is, however, the same as for the other centre level.

**App. Table 3.2.1**  
**Calculation of Priority Indices for Sub-Regional Centres**

Rank (1)	Centre (2)	Reciprocal Central Service Score (1)		Inhab. in Catchment Area ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000) (2)		Non-agricultural job Creation Potential (1000 jobs Year 2000)		Composite Priority Index (4)  (3)
		Abs. No. (3)	Rel. Index (4)	Abs. No. (5)	Rel. Index (6)	Abs. No. (7)	Rel. Index (8)	Abs. No. (9)	Rel. Index (10)	
1.	Liwonde	42	129	350	139	1125	237	18	114	155
2.	Bangula	50	155	200	80	269	57	20	126	105
3.	Mangochi	25	78	240	95	765	161	9	57	98
4.	Kasungu	25	78	320	127	167	35	24	151	98
5.	Dedza	29	91	190	76	535	112	10	63	86
6.	Karonga	26	82	220	88	154	33	20	126	83
7.	Salima	28	87	240	95	318	67	10	63	78
Average		32	100	251	100	476	100	16	100	100

- (1). The higher the original Service Provision Score by centre (Background Studies Section 5), the more the services available. For the priority index the deficit in service provision is relevant, so that the reciprocal value has been taken. An original score of 40 will then turn into a reciprocal score of 25; i.e.  $1/40 \times 100$ .
- (2). Source: NPDP calculations based on land suitability analysis.
- (3). Source: Section 2: Employment and Population Distribution Strategy
- (4). Average of all relative indices (equal weights)

**App. Table 3.2.1**  
**Calculation of Priority Indices for Sub-Regional Centres**

Rank (1)	Centre (2)	Reciprocal Central Service Score (1)		Inhab. in Catchment Area ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000) (2)		Non-agricultural job Creation Potential (1000 jobs Year 2000)		Composite Priority Index (4)  (3)
		Abs. No. (3)	Rel. Index (4)	Abs. No. (5)	Rel. Index (6)	Abs. No. (7)	Rel. Index (8)	Abs. No. (9)	Rel. Index (10)	
1.	Liwonde	42	129	350	139	1125	237	18	114	155
2.	Bangula	50	155	200	80	269	57	20	126	105
3.	Mangochi	25	78	240	95	765	161	9	57	98
4.	Kasungu	25	78	320	127	167	35	24	151	98
5.	Dedza	29	91	190	76	535	112	10	63	86
6.	Karonga	26	82	220	88	154	33	20	126	83
7.	Salima	28	87	240	95	318	67	10	63	78
Average		32	100	251	100	476	100	16	100	100

- (1). The higher the original Service Provision Score by centre (Background Studies Section 5), the more the services available. For the priority index the deficit in service provision is relevant, so that the reciprocal value has been taken. An original score of 40 will then turn into a reciprocal score of 25; i.e.  $1/40 \times 100$ .
- (2). Source: NPDP calculations based on land suitability analysis.
- (3). Source: Section 2: Employment and Population Distribution Strategy
- (4). Average of all relative indices (equal weights)

**Appendix Table 3.2.2**  
**Calculation of Priority Indices for District and/or Main Market Centres**

Rank	Centre	Reciprocal Central Service Score (1)		Inhab. in Catchment Area ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000) (2)		Non-agric. job Creation Potential (1000 jobs Year 2000) (3)		Composite Priority Index (4)
		Abs. No.	Rel. Index	Abs. No.	Rel. Index	Abs. No.	Rel. Index	Abs. No.	Rel. Index	
1.	Zomba	24	60	120	107	1155	590	37	462	305
2.	Thyolo	33	83	330	293	-	0	22	275	163
3.	Ntaja	71	178	110	98	402	206	6	75	140
4.	Mponela	40	100	160	142	297	152	8	100	124
5.	Phalombe	42	105	80	71	467	239	5	63	120
6.	Chikwawa	30	75	186	165	119	61	10	125	107
7.	Mwanza	28	95	50	45	345	177	7	88	102
8.	Mulanje	29	73	120	107	152	78	12	150	102
9.	Ntcheu	38	95	75	67	261	134	7	88	96
10.	Euthini	66	166	50	45	195	100	4	50	91
11.	Mzimba	30	75	75	67	251	129	6	75	87
12.	Monkey Bay	63	158	45	40	174	89	3	38	82
13.	Chiradzulu	53	133	195	173	-	0	1	13	80
14.	Machinga	53	133	129	115	70	36	2	25	78
15.	Nchisi	33	83	150	133	41	21	5	63	75
16.	Mchinji	33	83	100	89	69	36	6	75	71
17.	Nsanje	30	75	83	74	13	7	9	113	68
18.	Rumphi	32	80	70	62	113	58	5	63	66
19.	Nkhata Bay	33	83	65	58	22	12	8	100	64
20.	Dowa	37	93	105	93	30	16	3	38	60
21.	Chitipa	32	80	65	58	84	43	3	38	55
22.	Nkhotakota	27	68	65	58	53	28	3	38	48
	Average	40	100	113	100	196	100	8	100	100

- (1). The higher the original Service Provision Score by centre (Background Studies Section 5), the more the services available. For the priority index the deficit in service provision is relevant, so that the reciprocal value has been taken. An original score of 40 will then turn into a reciprocal score of 25; i.e.  $1/40 \times 100$ .
- (2). Source: NPDP calculations based on land suitability analysis.
- (3). Source: Section 2: Employment and Population Distribution Strategy
- (4). Average of all relative indices (equal weights)



TABLE APPENDIX 3.2.3 CALCULATION OF PRIORITY INDEX FOR RURAL MARKET CENTRES

RANK	NAME OF CENTRE	Reciprocal Central Service Score		Inhab. in Catchment Areas ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000 (1))		Compo-site Priority Index (2)
		abs.	rel.	abs.	rel.	abs.	rel.	
1	Mayaka	100	112	60	218	158	208	179
2	Bilila	125	141	30	109	179	235	162
3	Namadzi	77	87	60	218	136	179	162
4	Sinyala	83	93	55	200	135	177	157
5	Luchenza	45	51	60	218	147	196	154
6	Linthipe	83	93	55	200	120	158	151
7	Nathenje	77	87	45	164	145	191	148
8	Khumbedza	142	160	35	127	114	150	146
9	Mitundu	59	66	60	218	114	150	145
10	Lobi	142	160	35	127	111	146	145
11	Bwanje	125	141	25	91	150	197	143
12	Chikweo	142	160	35	127	101	133	140
13	Migowi	83	93	35	127	146	192	138
14	Kasiya	77	87	40	145	137	180	138
15	Kachulu	125	141	35	127	110	145	138
16	Lirangwe	83	93	45	164	114	150	136
17	Nambuma	77	87	50	182	95	125	132
18	Lumbadzi	77	87	50	182	93	122	131
19	Balaka	31	35	40	145	154	202	128
20	Ngabu	45	51	35	127	147	193	124
21	Nankumba	125	141	13	47	133	175	121
22	Mayani	142	160	45	164	27	36	120
23	Chilipa	83	93	20	73	141	185	117
24	Thambani	142	160	20	73	90	118	117
25	Embangweni	62	70	20	73	152	200	115
26	Madisi	66	74	43	156	84	111	114
27	Ulongwe	59	66	35	127	110	145	113
28	Golomoti	91	102	15	55	134	176	111
29	Malomo	83	93	20	73	126	166	111
30	Nkula	142	160	15	55	87	115	110
31	Chisemphe	100	112	20	73	107	141	109
32	Emfeni	100	112	18	65	111	146	108
33	Kamchocho	111	125	15	55	108	142	108
34	Kamwendo	77	87	30	109	96	126	108
35	Chimutu	142	160	45	164	-	-	108
36	Mkanda	83	93	28	102	94	124	107
37	Namitete	50	56	45	164	69	90	104
38	Chingale	62	70	35	127	84	111	103
39	Chamama	142	160	20	73	58	76	103
40	Phalula	100	112	27	98	70	92	101
41	Nsaru	83	93	28	102	80	105	100
42	Kaporo	142	160	23	84	39	52	99
43	Chipoka	77	87	23	84	91	120	97
44	Nsanama	71	80	35	127	63	83	97
45	Ekwendeni	62	70	17	62	119	156	96
46	Mbalachanda	100	112	12	44	99	130	96
47	Namwera TO	59	66	30	109	-	107	94

TABLE APPENDIX 3.2.3 CALCULATION OF PRIORITY INDEX FOR RURAL MARKET CENTRES

RANK	NAME OF CENTRE	Reciprocal Central Service Score		Inhab. in Catchment Areas ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000 (1))		Compo- site Prio- rity Index (2)
		abs.	rel.	abs.	rel.	abs.	rel.	
1	Mayaka	100	112	60	218	158	208	179
2	Bilila	125	141	30	109	179	235	162
3	Namadzi	77	87	60	218	136	179	162
4	Sinyala	83	93	55	200	135	177	157
5	Luchenza	45	51	60	218	147	196	154
6	Linthipe	83	93	55	200	120	158	151
7	Nathenje	77	87	45	164	145	191	148
8	Khombedza	142	160	35	127	114	150	146
9	Mitundu	59	66	60	218	114	150	145
10	Lobi	142	160	35	127	111	146	145
11	Bwanje	125	141	25	91	150	197	143
12	Chikweo	142	160	35	127	101	133	140
13	Migowi	83	93	35	127	146	192	138
14	Kasiya	77	87	40	145	137	180	138
15	Kachulu	125	141	35	127	110	145	138
16	Lirangwe	83	93	45	164	114	150	136
17	Nambuma	77	87	50	182	95	125	132
18	Lumbadzi	77	87	50	182	93	122	131
19	Balaka	31	35	40	145	154	202	128
20	Ngabu	45	51	35	127	147	193	124
21	Nankumba	125	141	13	47	133	175	121
22	Mayani	142	160	45	164	27	36	120
23	Chilipa	83	93	20	73	141	185	117
24	Thambani	142	160	20	73	90	118	117
25	Embangweni	62	70	20	73	152	200	115
26	Madisi	66	74	43	156	84	111	114
27	Ulongwe	59	66	35	127	110	145	113
28	Golomoti	91	102	15	55	134	176	111
29	Malomo	83	93	20	73	126	166	111
30	Nkula	142	160	15	55	87	115	110
31	Chisemphe	100	112	20	73	107	141	109
32	Emfeni	100	112	18	65	111	146	108
33	Kamchocho	111	125	15	55	108	142	108
34	Kamwendo	77	87	30	109	96	126	108
35	Chimutu	142	160	45	164	-	-	108
36	Mkanda	83	93	28	102	94	124	107
37	Namitete	50	56	45	164	69	90	104
38	Chingale	62	70	35	127	84	111	103
39	Chamama	142	160	20	73	58	76	103
40	Phalula	100	112	27	98	70	92	101
41	Nsaru	83	93	28	102	80	105	100
42	Kaporo	142	160	23	84	39	52	99
43	Chipoka	77	87	23	84	91	120	97
44	Nsanama	71	80	35	127	63	83	97
45	Ekwendeni	62	70	17	62	119	156	96
46	Mbalachanda	100	112	12	44	99	130	96
47	Namwera TO	59	66	30	109	-	107	94

TABLE APPENDIX 3.2.3 CALCULATION OF PRIORITY INDEX FOR RURAL MARKET CENTRES  
(Cont'd)

RANK	NAME OF CENTRE	Reciprocal Central Service Score		Inhab. in Catchment Area ('000)		Add. Popul. Carrying Capacity (1000 inh. Year 2000 (1))		Composite Priority Index (2)
		abs.	rel.	abs.	rel.	abs.	rel.	
48	Champhira	83	93	15	55	97	128	92
49	Nchalo	45	51	35	127	73	96	92
50	Namwera	63	71	38	138	51	67	92
51	Malindi	71	80	28	102	67	88	90
52	Mwansambo	100	112	29	105	39	52	90
53	Bolero	83	93	12	44	91	120	86
54	Mtakataka	59	66	27	98	66	87	84
55	Kameme	142	160	15	55	23	31	82
56	Mphophwa	125	141	10	36	44	58	79
57	Makanjila	111	125	10	36	52	69	77
58	Mvera	100	112	30	109	6	8	77
59	Edingeni	91	102	10	36	68	90	76
60	Neno	100	112	10	36	59	78	76
61	Nayuchi	142	160	15	55	7	10	75
62	Santhe	77	87	22	80	40	53	74
63	Thekerani	83	93	30	109	13	17	73
64	Chapananga	83	93	15	55	50	66	72
65	Mulale	125	141	12	44	20	27	71
66	Misuku	125	141	18	65	-	-	69
67	Katowo	142	160	5	18	17	23	67
68	Kapiri	83	93	20	73	19	25	64
69	Muloza	77	87	25	91	8	11	63
70	Lizulu	77	87	12	44	38	50	61
71	Chikwina	125	141	7	25	11	15	61
72	Tsangano	91	102	18	65	10	14	61
73	Dwangwa	77	87	10	36	32	42	55
74	Chilumba	50	56	19	69	22	29	52
75	Nathalire	100	112	12	44	-	-	52
76	Usisya	100	112	8	29	-	-	47
77	Chintheche	66	74	12	44	14	19	46
78	Likoma	100	112	6	22	-	-	45
79	Chikangawa	83	93	8	29	6	8	44
80	Livingstonia	66	74	12	44	-	-	40
-	Average	89	100	28	100	76	100	100

NOTES: (1) NPDP calculations based on land suitability analysis.  
(2) Average of all relative indices (equal weight).

**Appendix 5—1:  
Schedule of Forest Reserves Incorporated in the Plan**

Proposed Reserves Incorporated in the Plan without Modifications	
Name	Size (Km <sup>2</sup> )
1. Chipala	94
2. Mbula	40
3. Songwe	33
4. Kalembe Hills	78
5. Jembya	79
6. Mahowe	68
7. Chinthi (a & b)	33
8. Therere	38
9. Sonjo	26
10. North Viphya	70
11. Kaning'ina Extension	102
12. Kaombe Extension (Mfumbati)	114
13. Ntchisi Elephant Corridor	12
14. Nkhoma	7
	<b>794</b>

**Proposed Reserves Incorporated  
in the Plan with Modifications**

Name	Size (Km <sup>2</sup> )	Deletions (Km <sup>2</sup> )
1. Karonga Escarpments	334	42
2. Henga Kasitu	97	124
3. Henga Hills	156	134
4. Kampande	36	304
5. Ntcheu RDP Proposals	173	103
6. Phirilongwe	114	68
7. Phirilongwe Extension	762	151
8. Namizimu		12
9. Kawinga Nyambi Hills	40	86
10. Tsamba Extension	88	49
11. Zobue	27	10
12. Thambani Extension	14	26
13. Chapananga	28	26
14. Neno Eastern Escarpment	216	406
15. Matope		20
16. Tedzani Nkula	49	556
	<b>2134</b>	<b>2,117</b>

Reserves Approved for Gazetting and Incorporated in the Plan	
Name	Size (Km <sup>2</sup> )
7. Chitipa (40)	40.00
8. Ighembe (0.79)	0.79
13. Musisi Extension	74.00
16. Katali	57.95
17. Kasimba	0.64
18. Chanthurwa	2.32
19. Ngara (Karonga District)	80.00
20. Chanthasha	3.90
24. Chombe	53.00
31. Kandoli Hills	136.00
34. Chirundwe	77.95
35. Kavuzi	77.94
41. Mzuma	92.33
43. Kawiya	6.88
44. VFIT	4.72
46. Chisasira	9.32
47. Chisasira Extension	112.54
48. South Viphya Extension	233.01
50. Dwambadzi	786.27
52. Kasungu/Chitala	1.43
53. Chipokosa	2.13
54. Chinungu/Kapelula	1.07
55. Kakhome	1.85
56. Mchezi/Chiuta	2.06
57. Ngongonda	0.41
58. Simulemba	1.46
60. Kaombe	71.52
73. Mbalame	3.50
74. Sani	2.60
75. Chimvu	1.44
94. Dzanzi Mvai	133.64
106. Chingale	67.00
107. Mulinda Hill	0.85
108. Namilonga	
110. Pirimiti	0.59
111. Macheleni 1 and 2	0.46
112. Zigoma	4.76
114. Namisu	
118. Bangwe (Blantyre Dist.)	1.14
123. Mpemba	5.04
	<b>2,176.03</b>