

# CHAPTER 1

## INTRODUCTION

### 1.1 History, Geography and Economy

#### History

Historical and archaeological evidence indicates that by the year 1500, much of modern Zambia was occupied by farming people who were ancestors of the present inhabitants. In the late nineteenth century, various parts of what was to become Northern Rhodesia were administered by the British South Africa Company. In 1924, the British Colonial Office assumed responsibility for administering the territory, and in 1953, Northern Rhodesia (Zambia) and Southern Rhodesia (Zimbabwe) joined Nyasaland (Malawi) to form the Central African Federation of Rhodesia and Nyasaland, despite the opposition of Northern Rhodesia's Africans. The Federation was, however, dissolved in 1963. In October 1964, Zambia gained her political independence and adopted a multiparty system of government. In December 1972, Zambia became a one-party state until 1991 when a multi-party system was re-introduced.

#### Geography

Zambia is a land-locked country covering an area of 752,612 square kilometres and consisting of about 2.5 percent of the area of Africa. It shares borders with Zaire and Tanzania in the north; Malawi and Mozambique in the east; Zimbabwe and Botswana in the south; Namibia in the southwest and Angola in the west. Administratively, the country is divided into nine provinces and 67 districts. Four of ten Zambians live in urban areas, most of which are located along the old line of rail.

Zambia lies between 8 and 18 degrees south latitude and between 20 and 35 degrees east longitude. It has a tropical climate and vegetation with three distinct seasons: the cool dry winter from May to August, a hot dry season during September and October and warm wet season from November to April.

Among the main river water sources in Zambia are the Zambezi, Kafue, Luangwa and Luapula. The country also has major lakes such as Tanganyika, Mweru, Bangweulu and the man-made Kariba. The northern part of the country receives the highest precipitation, with an annual average ranging from 1,100 mm to over 1,400 mm. The southern and eastern parts of the country have less rainfall, ranging from 600 mm to 1,100 mm annually, which often results in droughts.

#### Economy

Zambia has a mixed economy consisting of a modern and urban-oriented sector confined to the line of rail, and a rural agricultural sector. For a long time, the modern sector has been dominated by parastatal organisations, while private businesses have predominated in the construction and agricultural sectors. Since 1991, with the introduction of a liberalised market-oriented economy, the parastatals have been privatised and, in some cases, liquidated.

Copper mining is the country's main economic activity, accounting for 95 percent of export earnings and contributing 45 percent of government revenue during the decade following the attainment of political independence (i.e., 1965-1975). This situation was sharply changed by the drastic decline in world copper prices in late 1974 and 1975. The prices rose in 1978 but only to drop sharply between 1981 and 1982. The combined effects of the fall in copper prices, a rise in oil prices, the slow pace of industrialisation and a heavy dependence on imports have put the country's economy under serious pressure.

Copper production reached its peak at 713,000 tonnes in 1976 and has been fluctuating ever since; production fell to 607,000 tonnes in 1980 and continued falling to 459,000 tonnes in 1986 before the slight rise in 1987 to 483,100 tonnes. By 1996, copper production fell to between 300-400,000 metric tonnes (MoFED, 1996b). The decline in copper production can be attributed to many factors including increased cost of production as a result of the continued fall in the grade of ore and reduction in investment in advanced technology. The overvalued exchange rate that existed for a long time contributed to the high cost of copper production.

Before the closure of the Kabwe mines in 1994 due to reduced ore levels, the production of zinc and lead had also been showing a downward trend. About 10,600 tonnes of zinc and 3,900 tonnes of lead were produced in 1990 compared with 32,700 tonnes of zinc and 10,000 tonnes of lead produced in 1980 (NCDP, 1984).

Cobalt production also declined from 3,309 tonnes in 1980 to 2,407 tonnes in 1983, after which production levels began to increase to 5,055 tonnes in 1988, marking the highest production level during the 1980-90 period. The production of coal rose from 579,000 tonnes in 1980 to 604,000 tonnes in 1982, after which it started to decline to reach 330,000 tonnes in 1990 (NCDP, 1989).

Agriculture contributes 15 percent of Zambia's gross domestic product (GDP), and employs 75 percent of the labour force. The agricultural sector is expected to provide both food-stuffs and industrial raw materials to rural and urban consumers and producers. Ninety percent of the farming population consists of small-scale farmers, while less than 10 percent are medium-scale farmers, and less than 3 percent are part of the large-scale sector. Maize is the country's staple as well as a major cash crop, accounting for 75 percent of the land cropped and 85 percent of the crop output. Other crops include cotton, groundnuts, sunflower, millet, tobacco, cassava, and vegetables. In 1995, the government launched the Agricultural Sector Investment Programme (ASIP) aimed at boosting agricultural production and streamlining the marketing of agricultural inputs and produce.

About 42 million hectares are potentially suitable for agriculture. However, only 2.5 million hectares (6 percent) of this land are cropped annually (MoFED, 1996a). Of all the cultivated land, only 50,000 hectares (2 percent) are irrigated. This implies heavy dependency on rainfall to sustain agricultural production. With erratic rainfall in the major agricultural production areas of Southern and Eastern Provinces, an appropriate irrigation policy needs to be put in place. More than 10 million hectares of land are also used for the raising of 2.2 million cattle, 500,000 goats, 70,000 sheep, 300,000 pigs and 20 million poultry (CSO, 1994).

Under the structural adjustment programme being implemented in Zambia, the average annual inflation rate was reduced from 191 percent (December 1991-November 1992) to 53 percent and 45 percent in 1994 and 1995, respectively. Amidst the declining economic situation, the total long-term debt rose from \$60 million in 1971 to \$7.3 billion in 1991, representing an increase in per capita indebtedness from \$160 to \$900. By the end of October 1993, Zambia's debt burden was \$6.8 billion. In the same year, Zambia's external debt service payments totaled \$375 million net of debt relief, which represented 35 percent of exports (MoFED, 1996c). Currently, approximately 70 percent of the total external finance flow to Zambia is reallocated to debt service, principally to the international finance institutions.

The poor economic performance since the mid-1970s has consequently led to lower GDP. For instance, GDP per capita (in constant 1977 prices) declined from \$350 in 1980 to \$264 in 1994, representing an average annual decline of 2 percent. In the interim periods, fluctuations were observed. In 1989, the GDP grew by a meagre 0.1 percent in contrast to 6.3 percent in 1988. Real output declined on average by about 1.0 percent annually between 1989 and 1991 (NCDP, 1994).

In an effort to halt the economic recession, the Movement for Multiparty Democracy (MMD) Government has launched an Economic Recovery Programme (ERP) to turn around the “protracted decline of the economy into sustained positive real growth, and consequent improvement in living standards and the quality of life of the people” (Republic of Zambia, 1992).

## 1.2 Population

The 1969, 1980 and 1990 national censuses reported total populations of 4.0 million, 5.7 million and 7.8 million respectively, with growth rate of 2.7 percent per annum in 1990 (see Table 1.1). The growth rates vary by province, ranging from 1.5 percent in Copperbelt Province to 4.2 - 4.4 percent in Central and Eastern Provinces during the 1980-90 intercensal period (data not shown).

Indicator	Census year		
	1969	1980	1990
Population (millions)	4.0	5.7	7.8
Density (pop./sq. km.)	5.3	7.5	10.4
Percent urban	29.4	39.9	38.0
Crude birth rate (per 1,000)	47.7	50.0	44.0
Crude death rate (per 1,000)	19.7	16.7	18.3
Growth rate (per 1,000)	28.0	33.3	25.7
Total fertility rate	7.1	7.2	6.7
Completed family size (women age 40-49)	5.1 <sup>a</sup>	6.7 <sup>a</sup>	7.0
Infant mortality rate	141	97	123
<b>Life expectancy at birth</b>			
Male	41.8	50.4	46.1
Female	45.0	52.5	47.6

<sup>a</sup> Reported figures  
Sources: Central Statistical Office, 1974, 1985a, 1985b, and 1995b.

The population density in Zambia increased from 5.3 people per square kilometre in 1969 to 7.5 in 1980 and 10.4 in 1990. The average density in 1990 ranged from 50 people or more per square kilometre in Lusaka and Copperbelt Provinces to 5 or fewer people per square kilometre in Western and North-Western Provinces. In addition to being the most densely populated provinces, Lusaka and Copperbelt are also the most urbanised areas in the country.

There has been a steady flow of people to mining towns and urban centres. As a result, the proportion of the population living in urban areas has increased steadily from 29 percent in 1969 to 38 percent in 1990. The proportion of urban population varies by province, from 91 percent in Copperbelt Province to 9 percent in Eastern Province. While the urban population has grown by 2.7 percent per annum during the 1980-90 decade, the rural population has increased by 3.5 percent in the same period. During 1969-80, the urban population grew much faster than the rural population (5.8 vs. 1.6 percent annually). Thus, the speed of migration to the urban areas has slowed considerably during the 1980-90 period, compared with the earlier period (CSO, 1995).

The crude birth rate as estimated from the census data increased from 48 per 1,000 population in 1969 to 50 in 1980 and dropped to 44 in 1990. The crude death rate is estimated to have increased slightly from 17 per 1,000 during 1975-80 to 18 during 1985-90 (CSO, 1995). Total fertility rates estimated from the 1969 and 1980 censuses are in the neighbourhood of 7.0 births per woman. The rate declined to 6.7 births per woman in 1990.

Life expectancy at birth for males increased from 42 years in 1969 to 50 years in 1980 and was estimated to have declined to 44 years by 1990. Zambian women live, on average, 2 to 3 years longer than men; however, the gap appears to have narrowed in 1990. Mortality levels are highest in Eastern, Luapula and Western Provinces, followed by Northern and Southern Provinces, with Lusaka, Copperbelt and Central Provinces experiencing the lowest mortality rates (data not shown). Life expectancy at birth ranged from 45 years in Eastern Province to 57 years in Copperbelt (CSO, 1985b). The overall infant mortality rate declined from 141 deaths per 1,000 live births in the mid-1960s (based on the 1969 census) to 97 in the late 1970s, after which it increased to 123 in the late 1980s.

### **1.3 The Population Policy and National Population and Development Programme of Action**

For the first decade and a half after independence, Zambia did not view the high rate of population growth as a development problem. The only concern then was with the high rate of migration from rural to urban areas and the uneven spatial distribution of the population. The results of the 1980 Population and Housing Census exposed the rapidity with which the population was expanding and the implied adverse effect on development and individual welfare. This led the government to reappraise the role of population in national development efforts. The government realised that the nation's development planning and plan implementation processes should not only aim at accommodating the increased demands for goods and services brought about by population growth, but should also aim at influencing those aspects of the country's sociocultural life that underpin high levels of reproduction and thus of population growth.

In 1984, the then National Commission for Development Planning (NCDP) was given a mandate to initiate a draft population policy which would aim at achieving a population growth rate consistent with the growth rate of the economy. The National Population Policy was accepted in May 1989. Since then, the country's population growth rate has remained high and continues to act as a serious impediment towards sustainable development.

The original population policy was revised in December 1996 to redefine or clarify its objectives. Another important rationale for the revision of the population policy was to take account of new concerns which include HIV/AIDS, teenage pregnancy, poverty, and gender issues.

The objectives of the revised policy are:

1. To ensure that population issues and other development concerns are mutually integrated in the planning and implementation processes so as to attain development;
2. To ensure that all couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so in order to enhance the health of families;
3. To establish and continuously update a national population-related database and information system that will pool pertinent data and information from various sources with a view to ensure availability of timely, population-related data;

4. To enhance participation among opinion leaders and the general public in population and development issues in order to generate and sustain commitment;
5. To contribute to the reduction of maternal, infant and child mortality in order to increase life expectancy;
6. To contribute to the reduction of HIV/AIDS and other sexually transmitted diseases so as to improve the general health status of the population;
7. To promote fair distribution of the population between rural and urban areas so as to ensure balanced development;
8. To promote productive employment opportunities for women in order to promote gender equality;
9. To improve the population's access to appropriate, affordable and quality reproductive health services including family planning and sexual health in order to have a healthy nation;
10. To promote the incorporation of population and gender education into school curricula at all levels in order to increase the knowledge and understanding of population and gender issues; and
11. To promote and maintain equal access to education for both sexes at all levels in order to raise literacy levels.

Donor and non-governmental agencies such as the United Nations Population Fund (UNFPA), International Planned Parenthood Federation (IPPF) through its Zambian affiliate, the Planned Parenthood Association of Zambia (PPAZ), and the Family Life Movement of Zambia (FLMZ) provide material, financial and technical assistance and operate family planning clinics, supplementing the efforts of the Ministry of Health (MOH).

#### **1.4 Health Priorities and Programmes**

*The Government's commitment to the objectives of attaining health for all means not only improving the accessibility of health services and reducing mortality and morbidity, but also improving the quality of life of all Zambians. One of the strategies for achieving this objective is the Primary Health Care (PHC) programme, which constitutes an important component of the health care delivery system. To ensure that the PHC programme operates efficiently in tackling the main health problems of the individual, the family, and the community, the health service has been decentralised, with the responsibility of planning, implementing, monitoring, and managing PHC programmes falling to the districts. The integrated health plans developed out of the District Health Boards' Basic Health Programme constitute the PHC package.*

The reformulated PHC programme aims, among other things, to tackle the main health problems in the community, focusing on the needs of the underserved, high risk, and vulnerable groups. Thus, attention is paid to the rural and peri-urban areas where the health needs of the people are greatest, with particular emphasis placed on maternal and child care, family planning, nutrition, control of communicable diseases (e.g., diarrhoea, cholera, dysentery, sexually transmitted diseases, HIV/AIDS, malaria, etc.), immunisation, and environmental sanitation in order to secure adequate health care for all Zambians.

The National Population and Development Programme and Health Reforms establishes the government's commitment to improve the health of the population by progress towards the achievement of the following targets by the year 2000:

- To reduce the percentage of underweight children (0-5 years) from 23 to 18 percent.
- To bring under control 80 percent of tuberculosis cases.
- To increase accessibility to and acceptability of family planning services and appropriate use of information in order to increase family planning use.
- To improve the quality of, access to and utilisation of maternal and child health services in order to reduce maternal deaths and complications.
- To reduce the incidence of sexually transmitted diseases (STDs), AIDS, and reproductive tract infections.
- To reduce the incidence of induced abortions in order to reduce maternal complications and deaths.
- To increase the percentage of the population having adequate sanitation from 66 to 75 percent in urban areas and from 37 to 57 percent in rural areas in 5 years' time (MOH, 1992).

The implementation of all these aspects of the PHC programmes requires multi-sectoral action and close collaboration among the various government institutions. The government has therefore set up multi-sectoral PHC committees as an integral part of the PHC basic supportive manpower, and inter-sectoral collaboration with other ministries has been given prominence.

## **1.5 Objectives and Organisation of the Survey**

### **Objectives**

The Zambia Demographic and Health Survey (ZDHS) is a nationwide sample survey of women of reproductive age designed to provide information on fertility, family planning, child survival and health of children.

The primary objectives of the ZDHS are:

- i) To collect up-to-date information on fertility, infant and child mortality and family planning;
- ii) To collect information on health-related matters such as breastfeeding, antenatal care, children's immunisations and childhood diseases;
- iii) To assess the nutritional status of mothers and children;
- iv) To support dissemination and utilisation of the results in planning, managing and improving family planning and health services in the country; and
- v) To enhance the survey capabilities of the institutions involved in order to facilitate the implementation of surveys of this type in the future.

## Organisation

The ZDHS was conducted by the Central Statistical Office. Macro International Inc. of Calverton, Maryland provided technical assistance to the project through its contract with the U.S. Agency for International Development (USAID). Funding for the survey was supplied by Macro International (from USAID), the United Nations Population Fund (UNFPA), the Swedish International Development Agency (SIDA), and the government of Zambia (through the Central Statistical Office). The UNICEF office in Zambia contributed to the survey by providing salt-testing kits for use in data collection.

## Sample

In preparation for the 1990 Census of Population, Housing and Agriculture, the entire country was demarcated into Census Supervisory Areas (CSAs). Each CSA was in turn divided into Standard Enumeration Areas (SEAs) of roughly equal size. The ZDHS sample was selected from this frame in three stages. First, 312 CSAs were selected from this frame with probability proportional to size. One SEA was then selected from each CSA, again with probability proportional to size. After a household listing operation in all selected SEAs, a systematic sample of households was then selected. Every fourth household was identified as selected for the men's survey, meaning that, in addition to interviewing women age 15-49, interviewers also interviewed men age 15-59. As a result of oversampling of households in Luapula, North-Western and Western Provinces in order to produce province-level estimates for some variables, the ZDHS sample is not self-weighting at the national level. A more detailed description of the sample design is presented in Appendix A.

## Questionnaires

Three types of questionnaires were used for the ZDHS: the Household Questionnaire, the Women's Questionnaire and the Men's Questionnaire. The contents of these questionnaires were based on the DHS Model "B" Questionnaire, which is designed for use in countries with low levels of contraceptive use. Additions and modifications to the model questionnaires were made after consultation with a number of institutions, including the University of Zambia, the Ministry of Health, the Planned Parenthood Association of Zambia (PPAZ), and the National Commission for Development Planning. The questionnaires were developed in English and then translated into and printed in seven of the most widely spoken languages (Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga).

The Household Questionnaire was used to list all the usual members and visitors of a selected household. Some basic information was collected on the characteristics of each person listed, including his/her age, sex, education, and relationship to the head of the household. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. In addition, information was collected on the household itself, such as the source of water, type of toilet facilities, material used for the floor of the house, and ownership of various consumer goods.

The Women's Questionnaire was used to collect information from women age 15-49 about the following topics:

- Background characteristics (education, religion, etc.);
- Reproductive history;
- Knowledge and use of family planning methods;
- Antenatal and delivery care;
- Breastfeeding and weaning practices;
- Vaccinations and health of children under age five;
- Marriage;
- Fertility preferences;

Husband's background and respondent's work;  
 Awareness of AIDS; and  
 Maternal mortality.

The Men's Questionnaire was used to collect information from men age 15-59 years in every fourth household about the following topics:

Background characteristics (education, religion, etc.);  
 Reproductive history;  
 Knowledge and use of family planning methods;  
 Marriage;  
 Fertility preferences; and  
 Awareness of AIDS.

In addition, the interviewing teams measured the height and weight of all children under age five and their mothers.

### Fieldwork

The fieldwork for the ZDHS was carried out by 11 interviewing teams. In general, each team consisted of one supervisor, one field editor, five interviewers and one driver. In total, there were 11 supervisors, 11 field editors, 56 interviewers, and 11 drivers. Of the interviewers, 45 were women and 11 were men. Fieldwork commenced on 15 July 1996 and was completed on 6 January 1997. The persons involved in the survey are listed in Appendix D.

Table 1.2 is a summary of response rates from the household and the individual interviews. A total of 8,016 households were selected; of these 7,286 were successfully interviewed. The shortfall is due primarily to dwellings being vacant at the time they were visited by the interviewing team. Of the 7,365 households that were occupied, 99 percent were successfully interviewed. In these households, 8,298 women were identified as eligible for the individual interview and 8,021 were successfully interviewed. The number of men eligible for individual interview was 2,043, among whom 1,849 were successfully interviewed, resulting in the eligible men's response rate of 91 percent.

**Table 1.2. Results of the household and individual interviews**

Number of households, number of interviews, and response rates, Zambia 1996

Result	Residence		Total
	Urban	Rural	
<b>Household interviews</b>			
Households sampled	2,329	5,687	8,016
Households occupied	2,230	5,135	7,365
Households interviewed	2,205	5,081	7,286
<b>Household response rate</b>	98.9	98.9	98.9
<b>Individual interviews</b>			
Number of eligible women	3,124	5,174	8,298
Number of eligible women interviewed	3,001	5,020	8,021
Number of eligible men	794	1,249	2,043
Number of eligible men interviewed	698	1,151	1,849
<b>Eligible woman response rate</b>	96.1	97.0	96.7
<b>Eligible man response rate</b>	87.9	92.2	90.5