

# **1. BACKGROUND**

## **1.1 Geography and History of Nigeria**

The Federal Republic of Nigeria is located on the coast of West Africa. It has a land area of 923,766 square kilometres. The officially accepted population figure from the 1963 census is 55.7 million. Estimates for 1986 indicate a population of about 100 million, making Nigeria the most populous country in Africa.

Nigeria gained independence from Britain in 1960 and the parliamentary system of government was adopted. In 1963, Nigeria was declared a Federal Republic. A major event in the post-independence period was a three-year civil war from which the Federation emerged intact in 1970.

Nigeria was divided into 12 states in 1967 and redivided into 19 States in 1976. The later date was the year that Ondo State was created out of the former Western State. Two additional states were created in 1987 so that Nigeria now consists of 22 administrative divisions: 21 states and Abuja, the federal capital territory.

## **1.2 Geography and Climate of Ondo State**

Ondo State is located on the coast in the southwestern part of Nigeria (see map). It has two main vegetation belts: 1) the rain forest with tall evergreen trees and thick undergrowth, which extends from the south coast to about 50 miles inland (the riverine area of Ondo State) and 2) the deciduous forest, which is characterised by tall trees and thin undergrowth. There are two seasons: the rainy season from April to October and the dry season from November to March. Ondo State experiences heavy rainfall during the rainy season and high temperatures throughout the year--between 25 and 33 degrees Celsius.

## **1.3 Population and the Economy**

Population estimates for Ondo State must be viewed with caution because there has been no official accepted population census in Nigeria since 1963 and because there is some controversy over the accuracy of the figures reported by that census (Ekanem, I.I., 1972). Nevertheless, according to the census figures, the population of the area now comprising Ondo State was 2.7 million in 1963. In developing the sample for the ODHS, the population of Ondo State was estimated by various procedures. The evidence available suggests that the population of Ondo State in 1986 was about 3.3 million.

The rate of natural population increase in Nigeria was 2.5 percent per annum in the 1960s, increasing to more than 3.0 percent by the early 1980s (Federal Ministry of Health, 1988). The rate for Ondo State was probably the same. Such rates would lead to a population characterised by a young age structure and a high dependency ratio. Fertility and mortality rates are not known for Ondo State. However, crude birth and death rates for all Nigeria are estimated to be 45-48 per 1,000 and 13-16 per 1,000 respectively. There is little reason to think that the rates for Ondo State differ greatly (National Population Bureau, 1984).

The population of Ondo State is predominately made up of Yorubas (85 to 90 percent) who are native to southwestern Nigeria. The population is also predominately Christian (85 to 90 percent).

Overall, the settlement pattern of Ondo is about 40 percent urban, 55 percent rural and 5 percent riverine. The urban population resides in seven major urban centers each with a population in excess of 50,000 and twenty smaller towns each with a population over 20,000. Commerce is a thriving activity in the urban areas where there is also some industry; the major industries being textiles, palm-oil and cocoa products, and building materials. In most of the state, farming is the main occupation.

Ondo State is divided into 17 Local Government Areas (see map), one of which, Ilaje Eseodo, is a riverine area. This is the low-lying area adjacent to the coast where the land is continually dissected by frequent branching of the Oluwa River. In the habitable area of Ijero Escodo, somewhat inland from the mangrove swamps of the coast, fishing villages are located along river banks. Access to many of these villages is mainly by boat.

## **1.4 Health Priorities and Programmes**

The Ondo State Ministry of Health (MOH) is responsible for the health of all members of the population. The main strategy of the MOH has been the provision of primary health care with emphasis on maternal and child health care services. The MOH programme consists of prenatal, postnatal and child welfare clinics, which are held in health facilities on specific days of the week. Basic health education is an important activity at these clinics and an effort is made to promote breastfeeding, to instruct in the use of oral rehydration therapy and to teach good nutrition and food hygiene practices. Since 1983, a top priority has been the Expanded Programme of Immunisation in which children are immunised against six major childhood diseases: diphtheria, whooping cough, tetanus, tuberculosis, poliomyelitis and measles.

Basic health services are provided through facilities operated by the MOH (24 hospitals and 52 health centers), the Local Government Area Councils (191 maternity centers and 229 dispensaries), missionary groups (6 hospitals and 6 maternity centers) and private sector institutions (53 small hospitals, 70 health and maternity centers and numerous pharmacies). The capacity of the public sector and missionary facilities, in terms of in-patient beds, is as follows: hospitals, 2,200 beds; health centers, 500 beds; and maternity centers, 1,500 beds. While these facilities tend to be located in the urban areas, they are nevertheless well distributed throughout the state. Only the riverine area suffers from a relative shortage of health facilities.

## **1.5 Population and Family Planning Policies and Programmes**

During the decade of the 1980s, there has been increasing concern over the high rate of population growth in Nigeria. Thus, in 1988, a policy fostering the provision of family planning services came into being with the adoption of the National Policy on Population for Development, Unity, Progress and Self-Reliance. An underlying principle of this policy is that "all couples and individuals have the basic right to decide freely and responsibly on the number and spacing of their children and to have the information, education and means to do so."

Notwithstanding the recent genesis of a national population policy, family planning services have been available in Ondo State for a number of years. Family planning activities were initiated by the Planned Parenthood Federation of Nigeria (PPFN) in 1969. By 1985, PPFN was providing family planning services free-of-charge through eight clinics in urban areas. In 1981, the provision of family planning services in a MOH hospital was begun by a project sponsored by the United Nations Fund for Population Activities. In 1984, the International Training in Health Programme (INTRAH) held a workshop to develop the capacity of the MOH to train staff to provide family planning services. By 1986, 150 nurses and midwives were trained and providing services throughout the state.

Although the reporting of family planning service statistics in Ondo State is incomplete, the available statistics indicate that by 1986, PPFN was providing services to about 4,000 new acceptors per year and the MOH was providing services to about 8,000 new acceptors per year.

## **1.6 Objectives of the Survey**

The primary objective of the ODHS is to provide policymakers and planners with information on fertility, family planning, maternal and child health, and infant and child mortality. The data will be used to evaluate existing health and family planning programmes and to aid in the design of new programmes.

Another objective of the survey is to test the feasibility of conducting a population-based survey in Ondo State where, as with the rest of Nigeria, a sampling frame is available for only part of the State.

A third objective is to document recent changes in population characteristics and fertility and family planning practices in Ondo State.

## **1.7 Selection of Ondo State for a DHS Survey**

The ODHS differs from most other surveys in the DHS Programme which are national in scope. Ondo State was chosen for a DHS survey for two reasons. First, the Ondo State MOH expressed a need for, and interest in, the type of data collected in DHS surveys. Second, the efforts of the National Population Board to provide a population-based sampling frame for Nigeria through the Enumeration Area Demarcation Exercise had progressed further in Ondo State than in any other state of Nigeria.

Without the Enumeration Area Demarcation Exercise, it would have been difficult to implement the ODHS. In 1985, when the survey was designed, it had been 22 years since the 1963 Population Census, the last officially accepted census of Nigeria. A census was attempted in 1973 but abandoned because of data irregularities. By 1980 there was considerable uncertainty about the size and distribution of the national population. To rectify this situation, the National Population Bureau began the Enumeration Area Demarcation Exercise in 1983. By 1985, this project had not progressed very far, except in Ondo State, where new enumeration areas had been created in 13 of the state's 17 Local Government Areas.

## **1.8 Organization of the Survey**

The ODHS was funded by the United States Agency for International Development and implemented by the Ondo State Ministry of Health. Technical assistance was provided by the Institute for Resource Development, located in Columbia, Maryland. The National Population Bureau participated in the survey by providing one senior technical staff member from its Lagos office and the manpower for sample implementation from its Ondo State office. The United Nations Children's Fund provided vehicles during the fieldwork phase of the survey.

The ODHS survey activities took place over a 38 month period, from February 1986 to March 1989. The schedule of activities is shown in Table 1.1 and described in Appendix A.

Two survey instruments were used in the ODHS: a household schedule and an individual woman's questionnaire. Both were adapted from the Model "B" Core Questionnaires of the DHS Programme. The English version of the questionnaires is reproduced in Appendix C.

Table 1.1 Schedule of Activities for the Ondo State Demographic and Health Survey

Activity	Time Period
Survey Design and Questionnaire Development	Feb-April 1986
Preparation of Sampling Frame	March-June 1986
Pretest	June-July 1986
Household Listing in Sample PSUs	July 1986
Printing Questionnaires	August 1986
Training for Main Survey	August-Sept 1986
Fieldwork for Main Survey	Sept 1986-Jan 1987
Data Entry and Editing	Sept 1986-Mar 1987
Tabulations for Preliminary Report	May 1987
Publication of Preliminary Report	August 1987
Special Tabulations of Owo LGA (for UNICEF)	September 1987
Tabulations for First Country Report	August-Nov 1987
Analysis and Report Preparation	Dec 1987-Mar 1989
Publication of First Country Report	April 1989

The sample was a stratified, self-weighting probability sample, representative of the entire state. The primary sampling units were enumeration areas created by the National Population Bureau and the second stage units were households. Table 1.2 shows the distribution of the 90 selected primary sampling units by Local Government Area and type of area (urban, rural or riverine). A household listing operation was carried out in these sampling units and household selection was done at the survey office in Akure using systematic random sampling. Details of the sample design are presented in Appendix A.

Eligibility for the woman's questionnaire was on a *de facto* basis: all women aged 15-49 who had stayed in a sample household during the previous night were eligible respondents. The sample design specified a target of 3,600 completed interviews from female respondents. For the survey, a total of 4,213 completed interviews were obtained.

## 1.9 Population Statistics for Ondo State

Population statistics for Ondo State are available from two national-level surveys of Nigeria: the 1980 National Demographic Sample Survey (NDSS) and the 1981-82 Nigeria Fertility Survey (NFS). The latter was conducted as part of the World Fertility Survey Programme.

Three relevant publications from these surveys are *National Demographic Sample Survey, Ondo State* (National Population Bureau and Institute for Resource Development/Westinghouse, 1988), *Principal Report of the Nigeria Fertility Survey* (National Population Bureau, 1984) and *Nigeria Fertility Survey, Ondo State Report* (National Population Bureau and Federal Ministry of Health, 1986). Unfortunately, the last report is based on only 389 female respondents, so the information available is limited. When appropriate, statistics from the above three sources are cited in this report.

Table 1.2 Number of Selected Primary Sampling Units by Local Government Area and Urban-Rural Residence, ODHS, 1986

Local Government Area	No. of Primary Sampling Units			
	Urban	Rural	Riverine	Total
1 Akure	8	1	-	9
2 Akoko North	3	4	-	7
3 Ekiti East	2	2	-	4
4 Ero	2	2	-	4
5 Ekiti South	3	1	-	4
6 Ekiti South-west	1	1	-	2
7 Ekiti Central	2	3	-	5
8 Ijero	2	1	-	3
9 Ekiti West	1	2	-	3
10 Akoko South	1	3	-	4
11 Ekiti North	2	4	-	6
12 Owo	3	5	-	8
13 Idanre Ifedore	2	3	-	5
14 Ondo	2	7	-	9
15 Ifesowapo	-	2	-	2
16 Ilaje Eseodo	-	-	9	9
17 Ikale	2	4	-	6
Total	36	45	9	90

## 1.10 Background Characteristics of ODHS Respondents

This section presents information on the demographic characteristics of ODHS respondents. Table 1.3 shows the distribution of respondents by selected characteristics along with Ondo State data from the 1980 National Demographic Sample Survey (NDSS).

### Age

Data on age were obtained in the ODHS by asking respondents two questions, "In what month and year were you born?" and "How old were you at your last birthday?" Interviewers were instructed that, in cases where respondents could not provide a year of birth, it was essential to obtain information on age and they were trained in techniques of probing for age. As a last resort, interviewers were instructed to estimate the respondent's age.

The year of birth was recorded for eighty-five percent of respondents: both month and year for 66 percent and year only for 19 percent. Fifteen percent of respondents did not provide a year of birth. Age was recorded for all 4,213 respondents.

The age distribution of respondents in the ODHS and the NDSS, by five-year age groups, is shown in Table 1.3. Both distributions conform to the pattern characteristic of a high fertility population, i.e., more women in the younger than in the older age groups. However, the ODHS distribution is somewhat irregular; the percentage of women is high in the age group 15-19 (26 percent), declines to 13 percent for the age group 20-24, remains constant for the two following age groups, declines to 11 percent for the age group 35-39 and remains constant again for the two following age groups. This

contrasts with the NDSS distribution where, above age 25, the percentages in each successive age group gradually decline.

In terms of broad age groups, the distribution of respondents is about the same in the ODHS and the NDSS with the percentage under 30 being 53 and 56 percent, respectively. Moreover, the substantial decline in the percentage of women between age groups 15-19 and 20-24 in the ODHS is consistent with the enumeration of twice as many women in the age group 10-14 as in the age group 15-19 in the 1980 NDSS (National Population Bureau and Institute for Resource Development/Westinghouse [1988]). Thus, the ODHS survey found the same size difference between adjacent age groups as was found six years earlier in the NDSS. Nevertheless, peculiarities of the ODHS age distribution, particularly the flat spots over the broad ages from 20 to 34 and 35 to 49, suggest errors in age reporting and those errors may affect some of the survey results.

Table 1.3 Percent Distribution of Women Age 15-49 by Background Characteristics, 1980 NDSS for Ondo State and 1986 ODHS

Background Characteristic	1980 NDSS	1986 ODHS	Background Characteristic	1980 NDSS	1986 ODHS
<b>Age</b>			<b>Religion</b>		
15-19	21.6	26.3	Catholic	80.6	10.3
20-24	16.6	13.4	Protestant		74.4
25-29	17.6	13.3	Moslem	13.0	13.4
30-34	14.9	13.0	Traditional	5.3	1.0
35-39	13.2	11.4	None	1.2	0.9
40-44	9.7	11.3	<b>Ethnicity</b>		
45-49	6.3	11.3	Yoruba	87.8	85.8
<b>Residence</b>			Other	12.2	14.2
Urban	31.7	40.2	<b>Education</b>		
Rural	68.3	52.0	None	53.5	36.9
Riverine		7.8	Primary	20.5	23.8
<b>Education</b>			Secondary	19.2	33.4
None	53.5	36.9	Post-Secondary	6.7	5.8
Primary	20.5	23.8	<b>Total Percent</b>		
Secondary	19.2	33.4	Number of Women	5867	4213
Post-Secondary	6.7	5.8	<b>Total Percent</b>		
				100.0	100.0

Source: National Population Bureau and Institute for Resource Development/Westinghouse [1988]: Tables I-2, I-3, I-4, II-2.

## Residence

The distribution of respondents by residence area was as follows: 40 percent urban, 52 percent rural, and 8 percent riverine. This represents a somewhat greater concentration of the population in urban areas than was found in the 1980 NDSS (32 percent) which suggests a net rural-to-urban migration flow in recent years.

## Religion and Ethnicity

The majority of ODHS respondents reported that they were Christian (74 percent Protestant and 10 percent Catholic), another 13 percent reported that they were Muslim, and 2 percent followed either a traditional religion or had no religious affiliation. In terms of ethnicity, the women of Ondo State were overwhelming Yoruba (86 percent).

## Education

All women were asked if they had ever attended school. Respondents who had attended school were asked the highest level of school attended (primary, secondary or post-secondary) and the highest class or year completed at that level. Thirty-seven percent of respondents reported no education; 24 percent reported completing between one and six years of primary education; 33 percent, between one and four years of secondary education and 6 percent reported post-secondary education. Relative to 1980 NDSS results, the ODHS shows a pronounced increase in secondary education. This reflects the success of the government's efforts to promote education since 1976 when the provision of free primary education was started.

Table 1.4 shows percent distributions of women by education, five-year age groups and urban-rural residence. The table indicates strong associations between educational attainment and age and between educational attainment and area of residence. Younger women have much higher levels of education than older women. For example, 80 percent of women aged 15-19 have a secondary or higher education while only 3 percent of women aged 45-49 attained that level. The association between education and area of residence, while significant, is not as pronounced as in the case of age. The proportion of women with a secondary or higher education increases from 22 percent in riverine areas to 48 percent in urban areas.

Background Characteristic	Education			Total	Number of Women
	None	Primary	Secondary +		
<b>Age</b>					
15-19	4.4	15.1	80.5	100.0	1109
20-24	13.0	23.5	63.5	100.0	563
25-29	30.7	30.4	38.9	100.0	560
30-34	49.8	36.3	13.9	100.0	548
35-39	56.1	33.5	10.4	100.0	478
40-44	67.2	24.3	8.6	100.0	478
45-49	83.7	13.0	3.3	100.0	477
<b>Residence</b>					
Urban	29.1	22.8	48.1	100.0	1695
Rural	40.4	24.8	34.8	100.0	2192
Riverine	54.0	23.6	22.4	100.0	326
<b>Total</b>	<b>36.9</b>	<b>23.9</b>	<b>39.2</b>	<b>100.0</b>	<b>4213</b>

## Housing Characteristics

The ODHS collected a limited amount of information on the dwelling units in which respondents lived (Table 1.5). The flooring material of the dwelling units was either cement (73 percent), packed earth (21 percent), or wood planking (6 percent). Cement flooring was most common in urban areas (95 percent). A majority of respondents in rural areas (65 percent) also had cement flooring, while wood planking was most prevalent in riverine areas (63 percent) where homes are built on stilts over swampy terrain.

Table 1.5 Percent Distribution of Respondents by Housing Characteristics and Percentage Owning Certain Household Possessions, by Residence, ODHS, 1986

Housing Characteristic/Pos-session	Residence			Total
	Urban	Rural	Riverine	
<b>Material of Floor</b>				
Cement	95.1	65.4	10.1	73.1
Earth	4.2	33.2	27.3	21.1
Wood Planks	0.7	1.4	62.6	5.8
<b>Drinking Water Source</b>				
Piped to Home	10.6	2.0	0.0	5.3
Public Tap	55.1	17.6	0.0	31.3
Well	16.6	5.3	5.8	9.9
River/Spring	16.6	73.5	86.8	51.7
Tanker Truck	1.1	1.6	7.4	1.8
<b>Source of Water for Household Use</b>				
Piped to Home	10.4	1.8	0.0	5.2
Public Tap	39.4	12.4	0.0	22.3
Well	29.3	8.0	4.6	16.4
River/Spring	19.7	77.2	89.0	54.9
Tanker Truck	1.2	0.6	6.4	1.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Household Possessions</b>				
Electricity	78.1	23.3	7.1	44.1
Television	40.1	9.1	6.1	21.4
Refrigerator	28.5	6.4	0.0	14.8
Radio	73.1	56.9	35.0	61.7
Bicycle	12.0	17.6	6.4	14.5
Motorcycle	26.4	27.8	8.3	25.7
Car	20.1	10.3	1.8	13.6
Tractor	0.4	1.1	1.2	0.9



## **Sources of Water**

Information was also collected on the sources of water for drinking and for general household use. Sources of water differ considerably by area of residence. In urban areas, piped water is the primary source of drinking water--11 percent of respondents have water piped to their homes and another 55 percent obtain water from a public tap. In rural and riverine areas, water from rivers and springs is the main source of drinking water (74 and 87 percent, respectively). In both urban and rural areas, well water is relied on to a greater extent for general household use than for drinking. This reflects the fact that wells are more accessible than public taps throughout Ondo State.

## **Household Amenities/Possessions**

Respondents were also asked about household amenities (electricity, television, refrigerator and radio) and about the ownership of specific vehicles of transportation by a household member (bicycle, motorcycle, car, and tractor). Electricity is available to the majority of women in urban areas (78 percent) but to a minority in rural (23 percent) and riverine (7 percent) areas. Television and refrigerators are common in urban areas (40 percent and 29 percent of respondents, respectively) but not in rural and riverine areas (less than 10 percent of respondents). Household possession of a radio is common in all areas, but more prevalent in urban (73 percent) and rural (57 percent) than in riverine (35 percent) areas.

In terms of vehicles, 20 percent of urban women and 10 percent of rural women resided in households in which a member owned a car; 25 percent of urban and rural women lived in households in which a member owned a motorcycle. These percentages were much lower in riverine areas.

