

SIERRA LEONE



1995 MULTI - INDICATOR CLUSTER SURVEY

Ministry of Planning
& Economic Development
Central Statistics Office
Freetown, Sierra Leone

APRIL 1996

Sierra Leone

**1995 MULTI-INDICATOR
CLUSTER SURVEY**

April, 1996
Freetown
Sierra Leone

Central Statistics Office

PREFACE

This is the final report of the Multi-Indicator Cluster Survey (MICS), undertaken in Sierra Leone in 1995 by the Central Statistics Office and conceived under the framework of an Integrated Household Survey Programme. Although initially planned as a single round national survey, the MICS was implemented in two phases. The first phase covered the Western Area whilst the second phase was carried out in the three provinces. A Preliminary Report on the first phase covering Western Area was published and disseminated in December, 1995.

The MICS is a new survey design and methodology. It was however adapted to suit the frame of the National Household Capability Programme introduced in the country in 1988. The MICS is modelled to be an instrument of monitoring and evaluation of the progress towards the attainment of desired goals in the social, economic and political life of Sierra Leoneans. The system is flexible enough to accommodate additional modules as required and if properly handled can be institutionalized and implemented on an annual basis.

The Central Statistics Office wishes to express with much appreciation for the initiative taken by UNICEF and the collaboration of UNDP, WHO, UNFPA and Plan International in supporting the survey as well as Mr J A W Lansana, Head of the Social Services Division of MOPEd who played pivotal role in mobilizing resources for the survey.

Special thanks are also due to Mr Sheku Golfa, the Survey Coordinator, who was responsible for planning and execution of the survey analysing the results and writing the report. In this respect many thanks should be extended to the following for their invaluable contribution Ms Christiana Williams for her secretarial assistance, Mr Abdulai Jalloh, Statistician and Mr P A Y Konteh, Principal Field Officer for their assistance in the execution of the survey and to all field officers, data entry operators, coders and verifiers.

Finally, we sincerely hope that this report will fill in some of the data gaps and to a large extent meet the data needs of the Government and other users.

April, 1996
Freetown
Sierra Leone

EXECUTIVE SUMMARY

1. A successful intervention strategy has four distinct elements (1) identifying the problem; (2) Analyzing and evaluating the magnitude of the problem and variation; (3) developing policies to improve standards of living; and (4) implementation and monitoring to realize desired targets and goals set therein. Our objective in this document is to attempt to tackle the first two elements and at the sametime complement the remaining two elements. Nonetheless, the discussion should be understood within the context of the political and macro economic changes that took place within this period.
2. The 1990 World Summit for children generated a Plan of Action by setting up specific goals to be achieved by 1995 and thereafter in the year 2000. These goals were monitored through an institutionalized mechanism. The recommended instrument for the regular and timely collection of requisite data, analysis and publication is the Multiple Indicator Cluster Survey (MICS). This is an integrated household survey based on a modular approach. The system allows for investigating the levels and patterns of several socio-economic indicators simultaneously and cost-effectively.
3. The present exercise is the first to be undertaken on this scale in Sierra Leone, though similar with the Demographic and Social Monitoring Survey (DSMS). The MICS addresses issues of social and economic policy changes and implications for household welfare. The study is intended to fill some of the data gaps and at the sametime set a bench mark for some indicators on which to measure or monitor the implications of future policies and programmes.
4. The survey came out with findings regarding the state of the mid decade goals in 1995 and the available baseline data for the MDG'S was used in the analysis as a means of indicating the significance of either the increase or decline in the levels of the indicators. It is but evident from Table 1.11 below, that the stated target of the Mid-Decade Goals have not been fully attained as one would have liked. Nonetheless, some have been fully attained, others partially and yet still others are at an unfavourable levels of attainment.
5. It was observed that the estimated total population in 1995 was 4,481,012 persons with 47.0% males and 53.0% females. The annual estimated growth rate (intercensal 1985-1995) is 2.42%.
6. The age-old rebel war has had a significant toll on the population. In 1995, it was observed that there were 2,192,518 displaced persons in the country, which amounts to more than 40% of the total population of Sierra Leone.
7. The observed average household size has increased from 6.05 in 1992 to 7.27 in 1995 a consequence of overcrowding and congestion in households. The rebel war

has resulted in massive movement of persons from the war-thorn areas to relatively safer urban centres to live with either families, friends and in camps. There are significant economic implications on households with larger average household sizes and household welfare especially in Sierra Leone where poverty is widespread and pervasive.

- 8 There has been a slight increase in immunization coverage of about 4% since 1994. This is important when one considers that by 1991 the EPI target of 75% coverage at national level had been attained. As regards TT2 coverage, it is clear that Sierra Leone is considerably above the global threshold of 12%. TT2 coverage in 1995 is 29.6% which more than doubles the global average. Measle cases reported between 1992 and 1995 seems almost stable with a very slight variation. Furthermore, in the management of diarrhoeal diseases, the global target of 80% or more in ORT usage is yet to be attained. A deficit of 17.5% calls for improvement in social mobilization and service delivery.

- 9 Furthermore, the achievement of 75% coverage in the consumption of iodized salt in the country is favourable. This figure may be used though with caution to justify the relatively insignificant number of reported cases relating to iodine deficiency disorders for example goitre.

- 10 Family Planning programmes in the country is on the increase with new acceptors and continuing users. This is implicit in the increase in CPR which more than doubled in three years. This is not the case for malnutrition, which instead of registering a decline shows chronic malnutrition to be on the increase.

- 11 Although there has been a drastic reduction in the number of existing schools country wide, alternatively, schools in the townships surveyed reported significant increases in enrollment figures. This formed the basis for an increase in the gross enrollment ratios from 53% in 1990 to more than 55% in 1995.

- 12 Finally indicators such as access to safe drinking water and sanitary excreta disposal show very favourable thresholds in 1992. However, the estimates for 1995 show very significant improvements in a relatively shorter period that had not witnessed any significant rehabilitation or reconstruction in the country. Thus, one may be inclined to regard the estimates as biased, reflecting more of an urban phenomenon than national.

Obviously, the picture depicted above calls for increased planning, service deliveries and monitoring. It is an up-hill task demanding significant allocation of resources, personnel and commitment at all levels of development. Perhaps, by the end of the decade (2000), the stated targets would have then being fully attained.

v
TABLE 1.11

STATE OF THE MID-DECADE GOALS AT NATIONAL LEVEL

<u>GOALS & TARGETS</u>	<u>BENCHMARK STATUS</u>	<u>CURRENT STATUS (1995)</u>
1 Elevation of immunization coverage (EPI) to 80% or more in all countries	67.3% (1994)	70.8%
2 Elimination of Neonatal Tetanus (TT2)	12.0%(1995)	29.6%
3 Reduction by 90% of Measles cases	61.2% (1992)	60%
4 Achievement of 80% or more in ORT use	50.0% (1995)	62.5%
5 Universal Iodization of salt in all countries where Iodine Deficiency Disorders (IDD) exist	n.a.	75%
6 Contraceptive Prevalence Rate (CPR)	2.6% (1992)	7.8%
7 Malnutrition Rate (Chronic)	21.7% (1990)	23.7%
8 Primary Enrollment Rate (Gross)	53.0% (1990)	55.4%
9 Access to Safe Drinking Water*	71.0% (1992)	94.0%
10 Access to sanitary excreta disposal**	79.4% (1992)	93.2%

Note: * = Tap, Well and Mechanical Pipes
 ** = Flush, Pit and Bucket toilets

TABLE OF CONTENTS

<u>Chapter</u>	<u>Module</u>	<u>Contents</u>	<u>Page No:</u>
X		Preface	ii
XI		Executive Summary	iii
1.1		Background	1
2.1		Objectives	2
3.1		Survey Methodology	3
4.1		Results	7
	4.12	Demographic Indicator	7
	4.13	Housing Characteristics	11
	4.14	Family Planning	15
	4.15	Health Status	18
	4.16	Diarrhoea and use of ORT	19
	4.17	Tetanus Toxoid	21
	4.18	Salt Iodization	21
	4.19	Nutrition and Immunization	22
5.1		Constraints	27
6.1		Conclusions and Recommendations	28
7.1		List of References	32
8.1		Annexes	33
	8.11	Sample Size Calculation for Measuring MDGs	34
	8.12	Questionnaire	35

THE 1995 MULTI-INDICATOR CLUSTER SURVEY (MIS)

1.1 Background

- 1.11** Socio-economic and demographic indicators needed for the monitoring of human dimension of the development process are not easily available. Providing adequate facilities in relation to education, health, nutrition, housing, water and sanitation to all sectors of the society is the ultimate goal for human development. The progress of a country towards this ultimate goal depends upon effective situational analysis, policy intervention and monitoring thereafter, all needing adequate data support.
- 1.12** The 1990 World Summit for Children generated a Plan of Action by setting specific goals to be achieved by 1995 (Mid-Decade Goals) and the year 2000. It is in this context that national level exercises on follow-up actions were recommended to "establish appropriate mechanisms for the regular and timely collection, analysis and publication of data required to monitor social indicators relating to the well being of children (and women in particular and the population in general)".
- 1.13** An Inter-Agency Committee on MICS consisting of the Social Services Division (SSD) DODEP, Central Statistics Office (CSO), Departments of Health (PMISU) and Education (Planning), UNICEF, UNDP, UNFPA, WHO and PLAN International was formed to oversee and monitor the progress of the survey. The Committee decided that MICS be carried out by CSO starting from September 1995 with the cost to be shared by the Donors.

2.1

OBJECTIVES

The ultimate objective of the survey was to measure the status of the Mid Decade Goals (MDGs) at national level using the global level targets as benchmark. Although there are about eleven global MDGs, a few of these were selected and investigated in this survey. These Includes:

- (a) Elevation of EPI coverage to $\geq 80\%$
- (b) Elimination of neonatal tetanus
- (c) Reduction of measles cases by 90% and deaths by 95%
- (d) Elimination of poliomyelitis in selected areas
- (e) Universal Iodization of Salt
- (f) Achievement of 80% ORT use rate
- (g) Primary school enrollment ratios
- (h) Access to safe drinking water
- (i) Access to sanitary excreta disposal
- (j) Malnutrition (chronic)

Additional modules were also investigated:

- (i) Status of family planning and prevalence.
- (ii) Displaced populations
- (iii) Health Status and
- (iv) Fertility.

Besides the above modules or MDGs investigated, four (4) health indicators were not included in the survey. These includes: Virtual elimination of Vitamin A deficiency; Making all hospitals and maternities "baby friendly"; Eradication of dracunculiasis; and the Ratification of Rights of the Child. The first indicator can only

be assessed in areas where Vitamin A supplements are given. As this is not the case in Sierra Leone, the prevailing state of the indicator cannot be evaluated.

Furthermore, the remaining three indicators are amongst the few MDGs that cannot be investigated by a survey of this nature.

3.1 **SURVEY METHODOLOGY**

3.11 **Survey Design**

A stratified multi-stage probability sample was developed for the survey. From the master sample, an updated frame for the Western Area was prepared. This facilitated a simple random sampling of Enumeration Areas (EAs), with an EA conceived to be a clustering of households. Mapping and prelisting were done simultaneously, a basis for the systematic selection of households to be interviewed.

A sample size of 4,500 households with the design effect maintained at 2, margin of error at 5% with a 95% confidence interval was estimated. This was derived using the specialised spreadsheet sample size estimation procedure supplied by WCARO/UNICEF. A print out of the spreadsheet and its estimated households across indicators is referred in the Annex 8.11. Furthermore, this sample was proportionally distributed over the strata at both national and provincial levels. The distribution of the estimated sample size over the strata is demonstrated in Table 3.1A below.

The sample size was disproportionately distributed over the sub-sample selected: the Western Area and the provincial headquarter towns of Bo, Kenema and Makeni. The statistics generated from both the Western Area and the townships have been weighted accordingly using both the sample and projected populations as shown

on Table 3.1B below to reflect provincial totals and aggregates. This is in view of making inferences on the total population by computing national aggregates. For this report, this was done using the population projections for 1995 by province.

It is worthy to mention two principal factors that underline the methodology of MICS. Primodially, it is an integrated household single round survey. This allows for a combination of inter-related social, economic, environmental and even political issues, designed as modules to be investigated simultaneously. Also, the model provides a timely and cost-effective means of collecting, analysing and disseminating information, disaggregated at all levels desired.

Secondly although this survey was designed to cover both rural and urban areas in the country, however, the prevailing security situation prevented this. Thus, the survey was confined exclusively to the provincial capitals or urban centres and the Western Area. The survey can rightly be called an Urban Based Survey, this factor has tended to bias some of the indicators, especially those relating to housing characteristics and facilities.

3.12 Survey Organisation

The Field Staff consisted of 30 enumerators under the supervision of 6 supervisors, 4 Facilitators and a Survey Coordinator; and these were divided into 6 teams, a team each in the provinces and three in the Western Area. With the exception of the teams in Bo and Makeni towns, the rest were provided with vehicles and other necessary survey materials.

3.13 Survey Implementation

The MICS was launched in September, 1995 and lasted one month. Each of the selected households was covered during this period and data was collected

on all indicators. It is a single round survey with recalls extending over two visits to make sure questionnaires are completed. The reference periods varies across indicators ranging from 2 weeks to 12 months. Thus, reliance on recall was significant in collecting data with reference periods extending up to 12 months.

3.14 Reliability

One problem worth mentioning here is that respondents generally over reported their status as being displaced persons. This is wrongly based on the notion that being a displace person beings with it plenty of food, clothing and medication which the normal resident cannot afford. The survey design, being fundamentally urban based tend to biase some of the indicators. Accepting this underlying factor, the estimates should therefore be used with caution, especially in the realm of national aggregates.

3.15 Quality Control

Efforts were made at various stages of the field work and data processing to keep non-sampling errors at the minimum possible under the prevailing survey conditions. Both field work and data entry were carefully supervised, and during the survey period weekly progress reports were presented to the Study Coordinator by the Facilitators. This allowed resulting errors to be checked and corrected as much as possible. Editing was done at various stages of the survey exercise. The first editing stage was done in the field and at the provincial headquarters. Then, later further editing was done at head office.

Table 3.1A

DISTRIBUTION OF SAMPLE OVER STRATA

<u>Strata</u>	<u>Target/Sampled Households</u>	<u>Total Estimated Households</u>
1. Western Area - Greater Freetown - Rural Areas	3,900	148,876
2. Northern Province - Makeni Town	200	116,622
3. Eastern Province - Kenema Town	200	138,087
4. Southern Province - Bo Town	200	212,366
5. Sierra Leone	4,500	615,951

Table 3.1B

REGIONAL WEIGHTING PATTERN

<u>PROVINCE</u>	<u>TOWN</u>	<u>SAMPLE POPULATION - 1995</u>	<u>PROJECTED POPULATION - 1995</u>	<u>WEIGHT (FACTOR)</u>
Eastern	Kenema	= 1277	877,879	687.454
Southern	Bo	= 1085	1,169,705	1078.069
Northern	Makeni	= 2242	1,529,325	682.125
Western Area	Freetown	= 17667	922,976	52.243
SIERRA LEONE		22,251	4,499,985	

4.1 RESULTS

4.12 DEMOGRAPHIC INDICATORS

TOTAL POPULATION

4.121 The total population for Sierra Leone in 1995 is 4,481,012 (Table 4.12A referred in the Annex). The sex ratio is 88.6 which means that for every 100 females there are at least 89 males. Although the pattern has been an overall excess of women in Sierra Leone, the present ratio reveals a decline in the male population observed in 1992 (96.3 DSMS). This decline may be a consequence of the on-going rebel war on the male population.

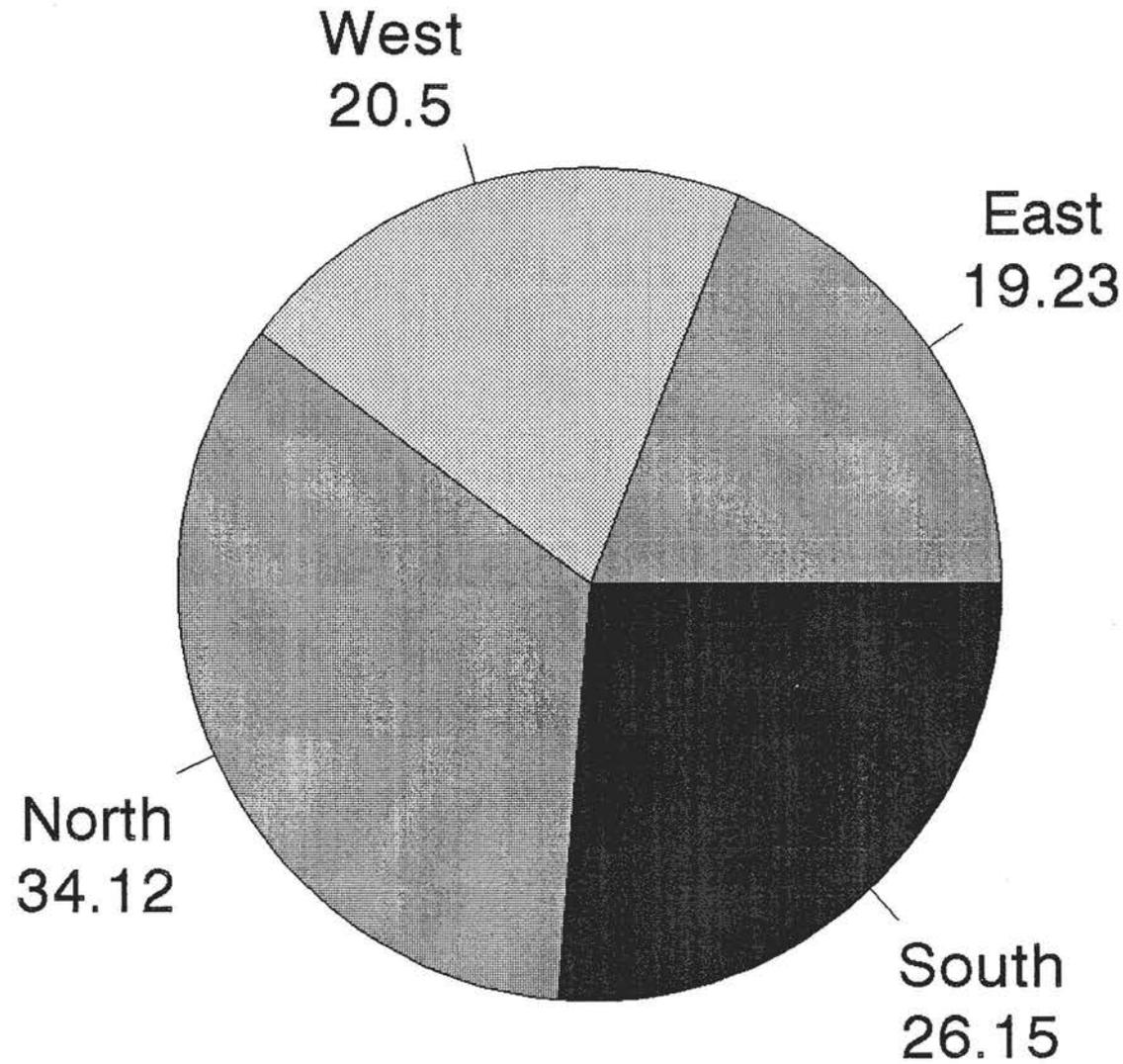
4.122 At the Provincial level, the North has the largest population in the country, (34.12%) followed by the South and West, 26.15% and 20.50% respectively as shown on Figure 4.122A. It is interesting to note that whilst the population in the East has declined significantly, alternatively the population in the Western Area has also increased considerably. This is clearly demonstrated in the comparative table below showing the 1995 population Distribution and that of the 1985 Census.

<u>PROVINCE</u>	<u>POPULATION</u>			
	1985		1995	
	Population	%	Population	%
Eastern	960,551	27.32	861,498	19.23
Western	554,243	15.76	918,684	20.50
Northern	1,259,641	35.83	1,29,044	34.12
Southern	741,377	21.09	1,171,186	26.15
Sierra Leone	3,515,812	100.0	4,481,012	100.0

4.123 There are 2,192,518 estimated displaced persons in the country in 1995. Although a greater concentration of the displaced is indicated in the Northern Province, this is a result of errors in reporting. Assuming that being a displaced person will bring in the much needed food and other assorted goods, it was revealed that majority of the population in the Northern Province claimed to be displaced by the war. At the national level, the statistics also show that more than 40% of the population are displaced persons and less than one percent refugees. The age and sex distribution of this category of people is similar to the normal population though with slight preponderance of children under 15 years and the aged above 55 years (Refer to Table 4.12C in the Annex).

Percent Distribution of Population by Province - 1995

Figure 4.122A



Source: MIS Data, 1995

4.124 AGE/SEX STRUCTURE

The Population is still youthful with over 56.84% percent of the population less than twenty years of age. Children (0-14 years) constitute 46.32 percent of the population while the elderly (65+years) constitute 3.06% of the population. The bulk of the population is composed of adults (15-64 years) who make up 50.62%.

4.125 NATIONALITY/ETHNICITY

In Sierra Leone, the Non-Sierra Leoneans constitute a very small percentage of the total population. Whilst nationals constitute 99%, non nationals constitute about one percent. The proportion of foreigners are slightly significant in the Western Area, 2.7%. They are almost non-existent in the Southern and Eastern Provinces. This trend may have arisen because of the rebel war in the country and the incessant migration from these areas.

4.126 MARTIAL STATUS

Marriage is not universal in Sierra Leone. At the time of the survey only 31.3% are shown to be married with the never married or single population showing 61.9%. This would imply that pre-marital child bearing is significant. Also widowhood is positively correlated with areas, especially in areas affected by the war, thus implying high paternal mortality.

4.127 LEVEL OF EDUCATIONAL ATTAINMENT

The table below indicates that 56.80% of the population have no education. Even though Universal Primary Education (UPE) was proclaimed in the 1960s only 55.4% has been achieved after more than three decades (Table 4.12H in Annex is

referred). At the provincial level, the Western Area is in a better position across all levels of education whilst the North and East demand further improvements.

Level of Educational Attainment	Percent (%)
None	56.80
Primary	29.16
'O' Level	11.94
'A' Level	0.56
1 st Degree	0.54
Higher	0.23
Others	0.77
Total	100.0

4.128 Furthermore, whilst a meagre 19.66% are still attending school, 23.47% have left school altogether. Nonetheless, majority of the school age population (56.5%) have never been to school. This has a correlation on both gross and net enrolment ratios in schools. Although the scenario at the provincial level is similar, the proportions for the Northern Province are on the high side (see Table 4.12G in the Annex).

4.13 **HOUSING CHARACTERISTICS**

ROOMS

4.131 The average household size in Sierra Leone in 1995 is estimated at 7.27

persons, with a total of 615, 951 Households in the country. A comparative analysis of computed average household sizes since 1988/89 is shown below:

<u>SURVEY</u>	<u>YEAR</u>	<u>AVERAGE HOUSEHOLD</u>
LFS	1988/89	5.90
SHEHEA	1989/90	6.70
DSMS	1992	6.05
MIS	1995	7.27

Comparing average household size in 1992 with that of 1995 it is clear that there has been a significant increase in the number of persons per household. This has very serious implications on the standard of living as poverty tends to be positively correlated with large average household sizes. A casual factor for this situation may have resulted from the war leading people to move and congregate in the relatively safer urban centres and as a result lead to over-crowding and congestion.

4.132 49.3 percent of households in the country occupy 1 -2 bedroom houses. The proportions are higher in the South and Eastern provinces (31% and 27% respectively) indicative of the congestion experienced in these areas as compared to the Western Area (21.3%). However, only 3.1% of the population live in houses with 12 or more bedrooms. These tends to prevail only in the Southern province and Western Area.

Table 4.131 Distribution of Households by Number of Rooms
1995

Number of Rooms Per Dwelling	County
1 - 2 Rooms	49.3
3 - 5 Rooms	33.4
6 - 8 Rooms	9.9
9 - 11 Rooms	4.3
12 - More Rooms	3.0
Not Stated	0.1
TOTAL	100.0

Alternatively, the index of the number of persons in a room reveals that the proportion increases positively as the size of the rooms. Whilst 4.57% of the population live in 1 - 2 bedroom houses, 26% live in 12 or more bedroom houses.

HOUSING

4.133 The majority of the population in 1995 lived in dwelling units with Zinc roofs (86.1%) followed by Thatch (9.2%) and concrete (3.7%) respectively.

At Provincial level, the Western Area 43.75% of the roofs are concrete, whilst in the East, 49.77% of the dwelling units are made of thatch roofs. The proportion of Zinc roofs across the strata is similar, except the North, registering a low percentage of 17.1% (Table 4.13C referred in the Annex).

4.134 The floors of most dwelling units in the country where the population live were made of cement/concrete (67.6%) followed by mud floors (26.3%). Wooden floor houses are widespread in both the Southern province and the Western Area.

Nonetheless, mud floors are significant sources of building materials especially in the Eastern and Northern provinces (Table 4.13D is referred in the annex).

- 4.135** Cement/concrete is the dominant form of material used in the construction of walls in the country with over 52.2%, with a significant proportion of dwelling units with mud (32.8%) and zinc walls (10.0%) respectively. Mud walls tend to prevail in all the provinces, especially in the East (38%) and North (34%). These cannot give guaranteed protection in the face of heavy down pour of rains during the rainy season (Refer to Table 4.13E in the annex).

WATER AND SANITATION

- 4.136** The majority of the population in the country (46.8%) continue to get their drinking water directly from Public Taps. This is followed by ordinary wells and piped indoor by 37.4% and 9.6% respectively. Nonetheless, the river continue to be a principal source of drinking water for the population (3.5%).

Whilst piped indoor is almost non-existent in some of the provinces, 78.8% of households in the Western Area make use of this facility. In the North, however, Rain water (37.9%) and Lakes/Pool (44.7%) are significant sources of drinking water.

- 4.137** Pit latrines continue to be the principal toilet facility in Sierra Leone (84.8%), with 46.4% private and 38.4% public/communal pit latrines. Bush/River is also significant (5.6%) whilst private flushed toilet are prevalent in the Western Area. The same scenario prevails in the provinces. (refer to Table 4.13G in the annex).

- 4.138** Public dustbin both at national and provincial level is shown to be the principal means of waste disposal (61.2%). Not much variation is observed across all strata. In - house burning is only common to the Western Area and the Southern provinces.

(Refer to Table 4.13H in the Annex).

FACILITIES

4.139 Whilst 1.06% of households are located 3 km and more from the nearest primary school in the country, 8.0% of households are required to walk the same distance to the nearest secondary school. Whilst majority of the schools are within less than a km to households in the country, the proportions for the Western Area for distance above 5km seems high this might be a result of errors in reporting especially regarding the conception of measurement in kilometers and miles.

On the health front, whilst 5.6% of households live 3 km and more away from the nearest health centre, 12.4% however are required to walk the same distance to the nearest hospital in the country. One can conclude that majority of households in the country are located nearer to health centres than hospitals.

4.14 FAMILY PLANNING

KNOWLEDGE FAMILY PLANNING

4.141 73.6% of persons aged 15 years and over in the country are shown to have knowledge of family planning with 26.4% indicating no knowledge at all. The figures indicate a significant increase about 20% in 3 years of over the 1992 observed scenario. (DSMS Report)

PAST AND CURRENT PRACTISE

4.142 Table 4.142 shows the proportions of persons who ever used family planning methods and the corresponding proportion of current practise obtained from females.

Table 4.142 Proportion of persons aged 15 years and Above with past and current practise of family planning

	Persons (15+) Ever Practised	Females 15+ Currently practising
Sierra Leone	12.7	7.8 (MIS, 1995)
Sierra Leone	6.37	2.62 (DSMS, 1992)

4.143 The overall proportion for the country is 12.7% as regards persons who ever used the method as against the current practise of 7.8%. It is also heartening to note that the current practise is significant across the provinces, though slightly lower in the Northern Province.

Eventhough the above proportions can be regarded as moderate, but they however reveal significant improvements over the statistics observed in 1992 (DSMS). In short, whilst the contraceptive prevalence rate was about 3% in 1992, by 1995 this has increased dramatically to almost 8% over a three year period. Successes in the family planning programmes at national level and increased acceptance rate may have contributed to this rapid developments.

FAMILY PLANNING METHODS & SOURCE

4.144 Table 4.14B in the annex indicate a distribution of the population by current family planning method used. It is observed that the "Pill" by far was the most current popular method in the country 56%. This is similar for all the provinces. The second most popular method is the condom 14.7% and is significantly utilized in all the strata, with the exception of the withdrawal method, only practised in the Western Area.

4.145 Access to service delivery is crucial for effective family planning programmes.

It was shown that of those practising family planning methods, the principal source in the country is PPASL, followed by Government Hospital/Clinics and private clinics respectively. This trend is observed in all the provinces (Table 4.14C is referred in the annex).

- 4.146** Attempt was made to investigate the attitude of partners of females aged 15 years and over currently practising family planning. It was revealed that 75.2% of their partners or husbands do not approve the use of family planning in the country. Only 24.8% does approve. A significant change in attitude and monitored over time is very crucial for any eventual increase in the prevalence rate of contraceptive use. This scenario is only favourable in the Eastern province where about 43.3% of the husbands do approve of a contraception. On the other hand, in the South, there is an overwhelming disapproval over contraception and ultimately this may have a negative bearing on the current fertility scenario.

FAMILY SIZE PREFERENCE

- 4.147** Also investigated was the attitude of respondents aged 15 years and over regarding the average number of children desired a consequence of a consensus reached in the family. It was revealed that 4.39% never discussed the issue, 11.3% discussed it once or twice and 6.7% discussed it often (Table 4.14D referred in the annex). At the provincial level, the issue is discussed often in the East and less often in the West.
- 4.148** Figure 4.148 demonstrates the desired family size in the country. On average, at national level, it ranges between 1 and 3 children. Whilst the proportion of Households wanting one child is higher in the South and Western Area, the East and Northern provinces have indicated higher proportions for three children as the desired family size. It is at the attainment of four children that the proportions show dramatic declines up to six and more children (Table 4.14E is referred in the Annex).

4.15 HEALTH STATUS

4.151 Health is wealth. The wisdom of these words prompted the need to investigate the health status of respondents within the last 14 days of the survey.

4.152 As indicated on Table 4.15B below Malaria/Fever is shown to be prevalent in the country (44.90%) followed by Cough/Cold and Diarrhoea/Vomit 13.93% and 9.37% respectively. Compared to 1992, whilst incidence of Malaria is almost stable (43.1%, 1992) yet Cough/Cold and especially Diarrhoea have shown a dramatic increase by more than 50% in three years. This may have a positive correlation on the nature of the environment and other related factors as poor water and sanitary conditions.

This holds true even for the provinces. The war affected have indicated very high proportion for persons affected by Diarrhoea and Malaria. Conversely the Western Area is relatively in a favourable position showing the least percentages across all illness or injury. It is however interesting to note that there has been a gradual reduction in the incidence of measles cases and especially so in townships of Kenema (wherein there have been cases of double measles vaccinations) and Bo (Table 4.15B is referred in the Annex).

TABLE 4.153 DISTRIBUTION OF PERSON BY TYPE OF ILLNESS OR INJURY (IN THE LAST 14 DAYS) - 1995

Type of Illness or Injury	Country Total
Diarrhoea/Vomit	9.37
Fever/Malaria	44.90
Cough/Cold	13.93
Pneumonia	1.30
Hypertension	1.04
Measles	0.40
Eye Infection	3.41
Accident Injury	0.97
Others	24.68
Total	100.0

4.16 DIARRHOEA AND USE OF ORT

4.161 Of the respondents complaining illness, 9.37% were affected by diarrhoea in the country. The proportions are higher more than 20% in the provinces and least in the Western Area (11.98%).

4.162 In the treatment of the disease, various fluids were utilized as shown on Table 4.162 below. Amongst these, the ORS solution is the principal method utilized in the country in the management of diarrhoea (62.54%). This is followed by the salt sugar solution (SSS) by about 15%. The provincial scenario is much the same though higher proportions are observed for ORS solution, especially in the Eastern Province (75.7%). Nonetheless, the SSS is indicated to be very significant in the Western Area (20.7%).

Table 4.162

**Distribution of Population by Type of Medication
Used in the Management/Control of Diarrhoea - 1995**

Type of Medication	Province								Sierra Leone	
	Eastern		Western		Northern		Southern		N	%
	N	%	N	%	N	%	N	%		
Breast Milk	-	0.00	312	1.86	-	0.00	3234	7.10	3546	2.48
Cereal Based	1374	2.86	676	4.02	1364	4.17	2156	4.73	5570	3.89
Other Fluids	687	1.43	624	3.72	2046	6.25	5390	11.83	8747	6.11
ORS Solution	36411	75.71	9360	55.73	21142	64.58	22638	49.67	89551	62.54
SS Solution	5496	11.43	3484	20.74	5456	16.67	6468	14.19	20904	14.60
Water Alone	1374	2.86	988	5.88	1364	4.17	1378	3.02	5104	3.56
Nothing	687	1.43	988	5.88	682	2.08	4312	94.6	6669	4.66
Don't Know	2061	4.28	364	2.17	682	2.08	-	-	3107	-
Sierra Leone	48090	100.0	16796	100.0	32736	100.0	45576	100.0	143198	100.00

4.17 TETANUS TOXOID

4.171 To assess the status of neonatal tetanus, pregnant women and mothers were investigated. Their immunized status was considered as providing an indirect means of protecting children against neonatal tetanus. It was required of the mothers to have full protection by completing the stipulated five doses. The survey revealed, as indicated on Table 4.171 that only 12.3% have completed the required tetanus toxoid (TT5) dosage in the country. Nonetheless, for TT2 the coverage is almost 30%. Although the default rate is experienced after the second dose (4.1%) this increased dramatically to 11.2% after the third dosage. This trend is observed in all the provinces.

Table 4.131 Distribution Percent of Mothers by Tetanus Toxoid Doses Completed - 1995

TT Doses	Country Total
One Dose	18.3
Two Doses	29.6
Three Doses	25.5
Four Doses	14.3
Five Doses	12.3
TOTAL	100.0

4.18 SALT IODIZATION

4.181 The achievement of Universal Salt Iodization in the country is far from attained. The results indicate that about 75% of salt consumed in homes are iodized and less than 15% not iodized. It is worthy to note that about 11% of households investigated did not have salt at home on the day of the survey. So it was impossible to test the salt consumed in the previous day which may or may not have been iodized.

Interestingly a greater proportion of households in the Southern province tend to consume more iodized salt than households in the Western Area. However, their relative population size must have underscored this phenomena (Table 4.15F in the Annex is referred).

- 4.182** It was also shown by investigation the type of salt at home or patronized in the markets that salt sold loose or in cups is predominant in the country, 58.39% followed by salt in plastic bags (29.98%). This trend is the same across the provinces, though in the Eastern province households consume more salt in plastic bags than salt sold loose (Table 4.15G is referred in the Annex).

Table 4.181 Iodization of Salt in the Western Area

Status	Country Total
Iodized	74.98
Not Iodized	14.28
No Salt at Home	10.74
TOTAL	100.0

4.19 NUTRITIONAL AND IMMUNIZATION

- 4.191** Height and weight were measured in the Country (Western Area, Bo, Kenema and Makeni). A total of 4,742 children in the households were traced and measured. All weights and heights were interpreted with regard to the weight/height ratio, using NCHS/CDC Reference Charts.

- 4.192** In this report, Malnutrition is classified as follows:

- W/H > 80 = Well Nourished
- 70% < = W/H < 80% = Moderately Malnourished
- W/H < 70% = Severely Malnourished

Table 4.192A **Sex Distribution of Children (06-59 months) in the Country**
TOWNSHIPS

Sex	Western Area	Bo	Kenema	Makeni	Total
Male	1140	482	380	401	2403
Female	1076	434	420	409	2339
Total	2216	916	800	810	4742
Sex Ratio	102.7				

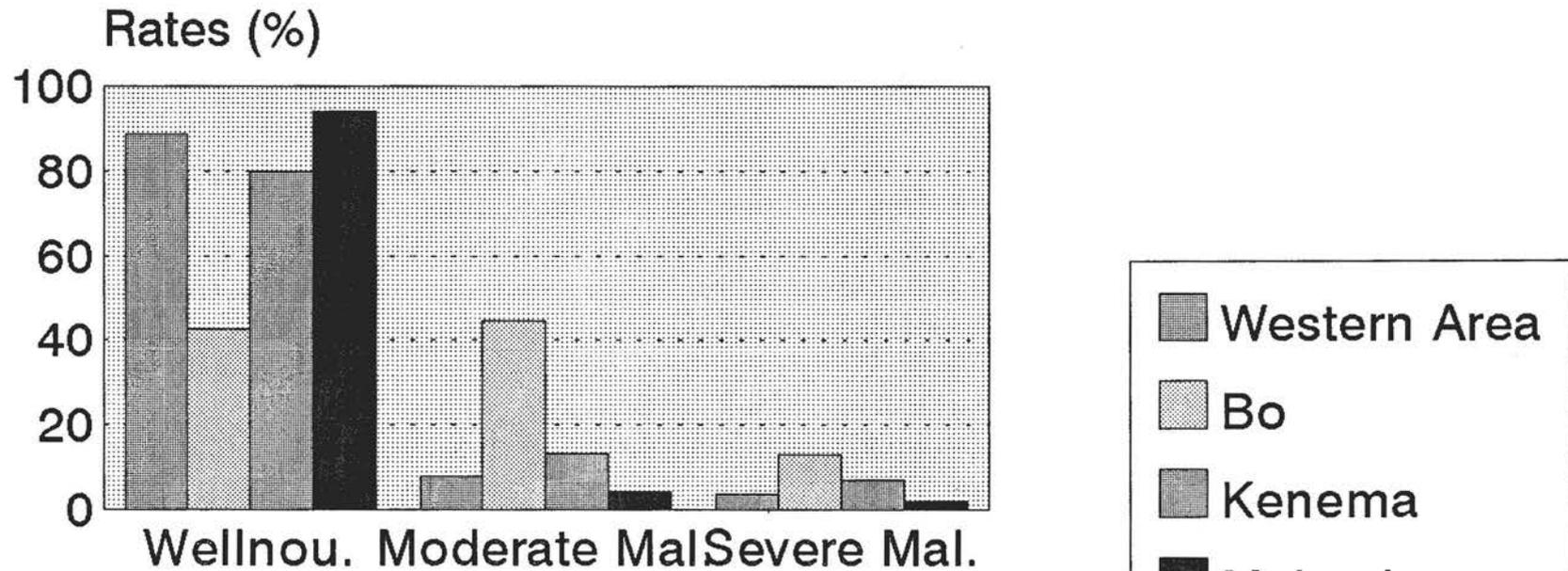
Table 4.192A **Nutrition Indicators**

Sex	<u>TOWNSHIPS</u>				
	Western Area	Bo	Kenema	Makeni	Total
Well Nourished	88.7	42.5	80.0	94.0	76.3
Moderately Malnourished	7.8	44.6	13.1	4.1	17.4
Severely Malnourished	3.5	12.9	6.9	1.9	6.3
Total	100.0	100.0	100.0	100.0	100.0

4.193 The sex ratio would indicate that male children were proportionately higher than female children. At the national level, malnutrition is high more than (23%), while severe malnutrition is found to be less than 10%. Nonetheless, the state of malnutrition both moderates and severe are very high in Bo, followed by Kenema. These are township that have experienced the worst episodes of the rebel war. The impact of this phenomenon on the availability of food and the existence of a healthy environmental condition is formidable (Refer to Figure 4.192B).

Nutrition Indicators - 1995

Figure 4.192B



Western Area	88.7	7.8	3.5
Bo	42.5	44.6	12.9
Kenema	80	13.1	6.9
Makeni	94	4.1	1.9

Townships

4.194 Immunization coverage cannot be reliably estimated from administrative records per se. This is because of mis-reporting of events, poor recording systems and lack of motivation of the health personnel involved in the exercise. The survey investigated current state of the antigens in terms of coverage in the country.

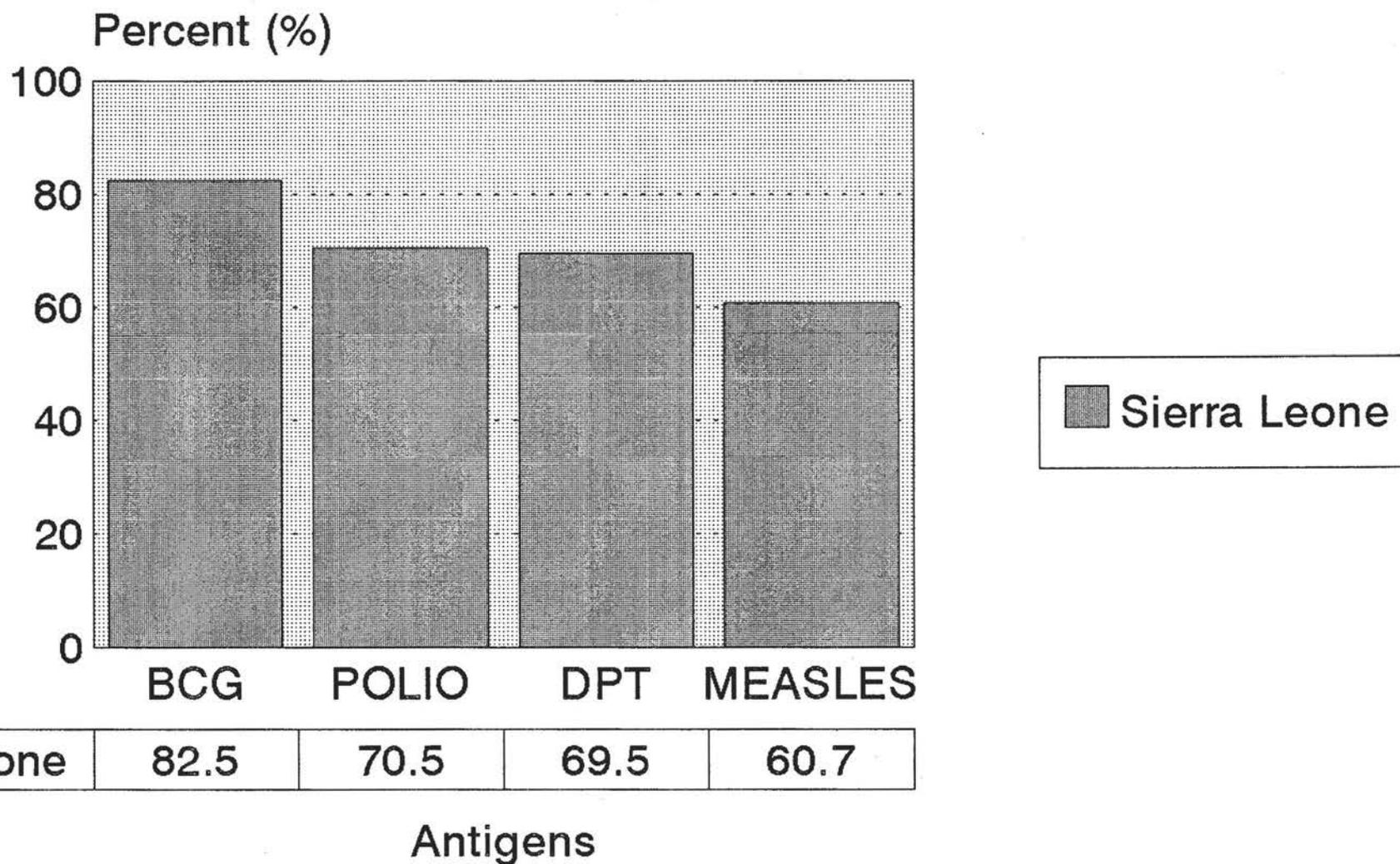
Table 4.194 IMMUNIZATION COVERAGE - 1995

Coverage	
Antigens	Percent (%)
BCG	82.5
Poliomyelitis	70.5
DPT	69.5
Measles	60.7

Whilst 60.7% of children under 5 have been fully protected against measles, 82.5%, 70.5% and 69.5% have been immunized against BCG, Poliomyelitis and Diphtheria. Thus, the stated goal of elevation of EPI coverage to $\geq 80\%$ though achieved for BCG, is far from attained for Poliomyelitis, Diphtheria and Measles (Figure 4.194 is referred). On the average, the EPI coverage in 1995 across the antigens is 70.8%.

IMMUNIZATION COVERAGE - 1995

Figure 4.194



5.1

CONSTRAINTS

In the course of the survey, several constraints were faced and these may have delayed some of the scheduled activities as planned. They include amongst others:

- 1 **Logistics and transportation problems:** warranting make-shift arrangements

- 2 **Seasonal factors:** Heavy down pour of rains especially at the start of the survey

- 3 **Respondent Fatigue:** Respondents were weary of responding to incessant rounds of adhoc surveys at times having identical modules.

- 4 **Budgetary constraints:** This was a significant problem and affected every aspect of the survey.

- 5 **Revel War:** It has a bearing on orientation of respondents, attitude of Tribal Headmen and security officers around the peninsular in particular. Moreover, it made it impossible for the survey to cover areas beyond the relatively safer urban centres in the provinces.

- 6 **Equipment:** The proposed computer to be loaned to the project never materialized and this factor contributed negatively to work progress and timely completion.

6.1 CONCLUSIONS AND RECOMMENDATIONS

6.11 Conclusions

It is but evident from Table 6.11 below, that the stated target of the Mid-Decade Goals have not been fully attained as one would have liked. Nonetheless, some have been fully attained, others partially and yet still others are at an unfavourable levels of attainment. There has been a slight increase in EPI coverage of about 4% since 1994. This is important when one considers that by 1991 the EPI target of 75% coverage at national level had been attained. As regards TT2 coverage, it is clear that Sierra Leone is far above the global threshold of 12%. TT2 coverage in 1995 is 29.6% which more than doubles the global average. Measles cases reported between 1992 and 1995 seems almost stable with a very slight variation. Furthermore, in the management of diarrhoeal diseases, the global target of 80% or more in ORT usage is yet to be attained. A deficit of 17.5% calls for improvement in social mobilization and service delivery.

Furthermore, the achievement of 75% coverage in the consumption of iodized salt in the country is favourable. This figure may be used though with caution to justify the relatively insignificant number of cases relating to iodine deficiency disorders for example goitre.

Family Planning programmes in the country is on the increase with new acceptors and continuing users. This is implicit in the increase in CPR which more than doubled in three years. This is not the case for malnutrition which instead of registering a decline shows chronic malnutrition to be on the increase.

Although there has been a drastic reduction in the number of existing schools country wide, alternatively, schools in the townships surveyed reported significant

increases in enrollment figures. This formed the basis for an increase in the gross enrollment ratios from 53% in 1990 to more than 55% in 1995.

Finally indicators such as access to safe drinking water and sanitary excreta disposal show very favourable thresholds in 1992. However, the estimates for 1995 show very significant improvements in a relatively shorter that had not witnessed any significant rehabilitation or reconstruction in the country. Thus, one may be inclined to regard the estimates as biased, reflecting more of an urban phenomenon than national.

Obviously, the above picture depicted calls for increased planning, service deliveries and monitoring. It is an up-hill task demanding significant allocation of resources, personnel and commitment at all levels of development. Perhaps, by the end of the decade (2000), the stated targets would have then being fully attained.

TABLE 6.11
STATE OF THE MID-DECADE GOALS AT NATIONAL LEVEL

<u>GOALS& TARGETS</u>	<u>BENCHMARK STATUS</u>	<u>CURRENT STATUS (1995)</u>
1 Elevation of immunization coverage (EPI) to 80% or more in all countries	67.3% (1994)	70.8%
2 Elimination of Neonatal Tetanus (TT2)	12.0% (1995)	29.6%
3 Reduction by 90% of Measles cases	61.2% (1992)	60.0%
4 Achievement of 80% or more in ORT use	50.0% (1995)	62.5%
5 Universal Iodization of salt in all countries where Iodine Deficiency Disorders (IDD) exist	N.A.	75.0%

6 Contraceptive Prevalence Rate (CPR)	2.6% (1992)	7.8%
7 Malnutrition Rate (Chronic)	21.7% (1990)	23.7%
8 Primary Enrollment Rate (Gross)	53.0% (1990)	55.4%
9 Access to Safe Drinking Water*	71.0% (1992)	94.0%
10 Access to sanitary excreta disposal**	79.4% (1992)	93.2%

Note: * = Tap, Well and Mechanical Pipes

** = Flush, Pit and Bucket Toilets

6.12 Recommendations

The following recommendations are suggested for the institutionalization of the Integrated Monitoring System in the country.

1. The Monitoring of national goals should be an annual exercise.
2. Establishment of Coordinating and Technical bodies to oversee the programme. The Technical Committee should have its membership coopted from the line ministries - DODEP, Education, Health, Agriculture, Social Services and the Environment.
3. Funding for the activities should be budgeted for or earmarked and finalized prior to the survey. This will obviate the setbacks experienced in the present survey.

4. Lack of adequate logistics and equipments delayed most of the scheduled activities of the survey. For further surveys, these have to made available for speedy and successful conclusion of the activities.

LIST OF REFERENCES

Central Statistics Office, 1985 Population and Housing Census: Sierra Leone Vol.

_____, 1995 Annual Statistical Digest

_____, 1992 Demographic and Social Monitoring Survey (DSMS)

_____, 1985 Statistical Tables

Statistical Analysis System, World Bank Manual (SAS)

WCARO/UNICEF, Multiple Indicator Survey for Measuring Child Summit Goals:
Mid Decade Goals (1995) Year 2000 Goals

Sierra Leone Government, Poverty Profile October, 1995

United Nations, Principles and Recommendation for Population and Housing
Censuses Statistical Papers Series M No.67

SAMPLE SIZE CALCULATIONS FOR MEASURING MDGs

BASIC ASSUMPTIONS	Low	High
Design effect	2	10
Persons per household	6.05	
Pct of population <5 years	0.15	
Prevalence of diarrhea 15 days	0.3	

Formula for required target sample
 $n = 4 * p * (1-p) * defl / e^2$

GOAL NUMBER	INDICATOR	Target population	Estimated prevalence	Margin of error	Required target sample	Required number of households
1.1	DPT3 coverage	12-23 mo	0.5	0.05	800	4408
1.2	Measles coverage	12-23 mo	0.32	0.05	696	3836
1.3	OPV3 coverage	12-23 mo	0.5	0.05	800	4408
1.4	BCG coverage	12-23 mo	0.8	0.05	512	2821
1.6	TT2 coverage (pregnancy)	0-11 mo	0.12	0.05	338	1862
5.1	Vitamin A coverage	0-23 mo	0.3	0.05	672	1851
6.1	Iodized salt consumption	Households	0.1	0.05	288	288
7.1	Use of ORT(1) in diarrhea	Diar <5 yr	0.4	0.05	768	2821
7.2	Use of ORT(2) in diarrhea	Diar <5 yr	0.5	0.05	800	2938
11.1	Percent low weight/age	All < 5 yr	0.4	0.05	768	846
12.4	School enrolment	5-9 yr	0.63	0.05	746	822
13.1	Safe water	Population	0.6	0.05	3840	635
13.2	Sanitation	Population	0.16	0.05	2150	355
Required number of households						4408

GOVERNMENT OF SIERRA LEONE
CENTRAL STATISTICS OFFICE
MULTI-INDICATOR CLUSTER SURVEYS (1995)

FORM B : Housing Characteristics

Province:
Sample NO:

District
E. A. NO:

Town
Ward

Street/Village
Household No:

ROOMS		MATERIALS OF CONSTRUCTION			SANITATION		SAFE WATER	DISTANCE FROM NEAREST FACILITY						
Numbers of Rooms in Dwelling	Number of persons in a room	Floor	Roof	Walls	Toilet Facility	Waste Disposal	Principal source of water supply	Toilet Facility	Source of water	Primary School	Secondary School	Health Clinic PHU	Hospital	Pharmacy
								(Code)	(Code)	(Code)	(Code)	(Code)	(Code)	(Code)
		1. Concrete/Planks 2. Wood/tile 3. Dirt/straw 4. Other	1. Concrete/Tile 2. Asbestos/ 3. Zinc 4. Thatch 5. Other	1. Stone/Cement 2. Asbestos 3. Zinc 4. Plank 5. Mud 6. Pote/Reed 7. Other	1. Communal Pit 2. Communal Bucket 3. Private Pit 4. Private Bucket 5. Private Flushed 6. Bush/River 7. Other	1. In-house bucket 2. Public 3. Ordinary Wells 4. Mechanical Pipes 5. River 6. Lake/Pool 7. Rain Water 8. Other (specify):								
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
14-15	16-17	18	19	20	21	22	23	24	25	26	27	28	29	30

Distance Codes

1. In-house
2. Less than 1 km
3. 1 km to less than 3km
4. 3 km to less than 5km
5. 5 km to less than 10km
6. 10km or more.

