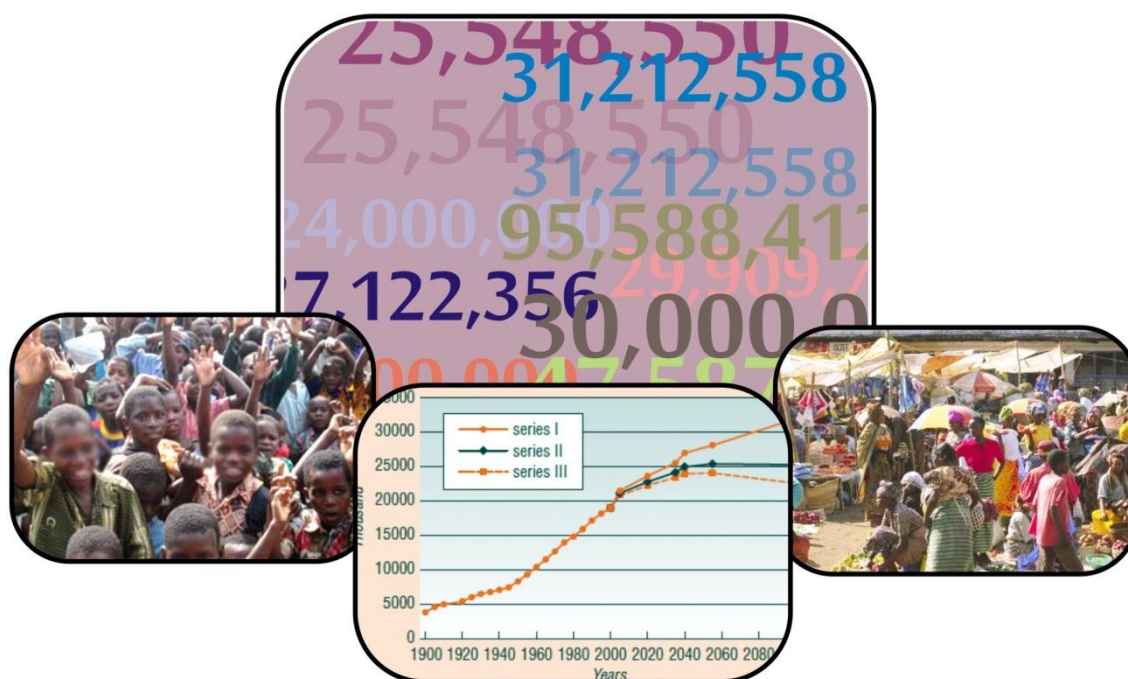




2010 POPULATION & HOUSING CENSUS REPORT



POPULATION PROJECTIONS / PROSPECTS



Ghana Statistical Service
October, 2014

Copyright © 2014 Ghana Statistical Service

PREFACE AND ACKNOWLEDGEMENTS

The mandate of the Ghana Statistical Service (GSS), like many other national statistical offices, includes data collection, compilation and analysis as well as dissemination of statistical information in an accessible and user-friendly manner. In order to satisfy the needs of users, GSS is required to analyse and interpret statistics in a form that makes it easily understood for people to appreciate the value of the statistical information. There is also the need to disseminate widely all the statistics produced by GSS so that all data users including potential data users can have access to it.

Ghana, like many other developing countries, relies mainly on survey and population census data for planning at the national and the sub-national levels. Detailed analysis of such data provides users with a wealth of information for planning and policy formulation. Analysis of the 2010 Population and Housing Census data on topical issues, therefore, provides information for effective planning at all levels.

Several reports, including six monographs, were prepared using the 2010 Census data and published in 2012 and 2013. The published reports from the census data was a collaborative effort between the GSS and Local consultants from research institutions and universities in Ghana with funding from the Government of Ghana and various Development Partners (DPs). In order to strengthen the report writing capacities of the Ghana Statistical Service (GSS) and Ministries, Departments and Agencies (MDAs) which are engaged in population-related activities, professional staff of GSS and these MDAs were paired up with consultant writers to prepare the reports.

The monograph on ‘Ghana Population Prospects’ is one of the additional eight monographs that has been prepared from the 2010 Population and Housing Census data and is meant to inform policy makers on issues relating to population trends in Ghana. The report provides an assessment of the future population of Ghana and is intended to unearth the demographic realities that reflect the developmental challenges facing the country. The cohort-component method was utilised in the construction of national projections, while the regional and district projections were derived from the national population projections using the ratio method.

The Ghana Statistical Service wishes to thank the United Nations Children’s Fund (UNICEF) and the United Nations Population Fund (UNFPA) for providing funds for the preparation of this monograph and the lead role UNFPA played in mobilizing resources from the UN System and from other DPs for the 2010 PHC. Our appreciation also goes to Professor Samuel K. Gaisie, Mr. Gershon Togoh and Mr. Godwin Odei Gyebi for the dedication and competence they demonstrated during the preparation of this report.

Dr. Philomena Nyarko
Government Statistician

TABLE OF CONTENTS

PREFACE AND ACKNOWLEDGEMENTS	iii
LIST OF TABLES	v
CHAPTER ONE: INTRODUCTION	1
1.1 Introduction	1
1.2 Estimates Based on Historical Profiles and Projections.....	1
1.3 Sources of Data, Assumptions and Methods.....	1
1.4 Assumptions on Future Fertility Trends.....	2
1.5 Replacement Level-Fertility.....	3
1.6 The issues	4
CHAPTER TWO: ASSUMPTIONS ON FUTURE MORTALITY TRENDS	6
2.1 Introduction	6
2.2 Total Population	7
2.3 Regional Populations.....	10
2.4 Single Years of Age Distributions	11
2.5 Age Structure.....	13
2.6 The School-Age Populations.....	14
REFERENCES	15
APPENDICES	16

LIST OF TABLES

Table 1.1:	Fertility levels and trends: total fertility rates Ghana 1959-2010.....	3
Table 1.2:	Proposed total fertility values to use in the projections, 2005-2050.....	5
Table 2.1:	Expectancy values by sex, based on empirical data (2010 census) and models, 2005-2050	7
Table 2.2:	Recorded and projected population, 2010-2050.....	7
Table 2.3:	Summary demographic indicators - medium variant.....	8
Table 2.4:	Summary demographic indicators - high variant.....	9
Table 2.5a:	Recorded and projected population by region, 2010-2050.....	10
Table 2.5b:	Reported and projected annual growth rates (%)	11
Table 2.6:	Recorded and projected urban and rural populations, 2010-2050.....	12
Table 2.7:	School-age populations by five-year intervals	14
Table A1:	Population by age and sex-high variant.....	16
Table A2:	Five year age groups – Medium variant (National).....	17
Table A3:	Regions five year age groups recorded and projected population by region, 2010-2050	18
Table A4:	Population by age and sex-low variant.....	28

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Ghana's population has a high potential inherent in the age structure with a subsequent rapid expansion of the population well into the 21st century. A decline of fertility to the replacement level in such a population is usually accompanied by an ultimate population increase of two-thirds before growth ceases (Kefitz 1971). The total fertility rate is not expected to reach replacement level before 2050. The implications of the population expansion for development are momentous. The assessment of the future population of the country is therefore intended to unearth the demographic realities that reflect the development challenges facing the country.

1.2 Estimates Based on Historical Profiles and Projections

Fertility and mortality levels and trends are basic type of information needed for planning for the future. They also constitute a map of their demographic history and they may therefore be considered as a view of the past. Comparison of the historical fertility and mortality rates assists in the analysis of data consistency as well as derivation of plausible population estimates for further research and policy analysis. The pieces of data collected in censuses and surveys over the past five decades were put together to map the historical trends of fertility and mortality. The estimated trends were then used in determining the expansion of the population of Ghana.

1.3 Sources of Data, Assumptions and Methods

Sources of data

The adjusted age and sex distribution (GSS 2013, Chapter 3 Tables 3.6 and 3.7) and the recorded total population of Ghana in 2010 were employed in deriving the base population for the projections. Census and Ghana Demographic and Health Survey data on births and deaths were utilized to estimate the fertility and mortality levels and trends.

Methods

Credible estimates of mortality and fertility levels and trends were derived from the 2010 census and the latest GDHS data with viable instruments/procedures (e.g. Q-five and Relational Gompertz's procedures).

The cohort- component method was utilized in the construction the national projections. As regards the urban and rural projections, the percentage of the urban population of 50.9 percent indicates that the country is at an intermediate urbanization level. Thus, the acceleration in the rise of the urbanization level is most probably at a peak rate (UN 1974) and the percentage distribution is therefore assumed to approach a stable condition. For the projections of the urban and rural populations, the observed percentage in the 2010 census was held constant. The methods using the intercensal trend and the difference between the urban and rural growth rates yield unacceptable figures of the proportion of the urban population rising from 50.9 in 2010 to 61 and 62 percent respectively in 2025. Even the rise from 50.9 in 2010 to 57.3 percent (intercensal trend) and 58.0 percent (constant growth rates of urban and rural population) in 2020 may appear to be on the high side since the acceleration in the rise of the urbanization

level is at a peak rate as noted earlier on. Thus, the assumption that the rise in the intermediate urbanization level has reached a peak appears to be a reasonable one. And it has been recommended that "... the ratio method yields acceptable results at intermediate levels of urbanization, but it should not be used where the urbanization level is very low or very high" (UN 1974).

The regional and district projections were derived from independently constructed national population projections. The *Ratio Method* was employed to construct the population projections of the total country by regions and districts. The method is a highly practical method for estimating and projecting regional and district populations. The percentage distribution was held constant at the last observed level (2010 census)... The projected age-sex figures for the regions and districts were proportionately adjusted to the national and regional totals at all ages respectively through an iterative process (i.e. contingency table technique).

The user should keep in mind that the projections for constituent areas are subject to a greater margin of error than that for the whole country as a result of uncertainty of internal migration and the fact that errors are inversely related to the population size; population trends are more irregular for small populations than large ones

It is also important to bear in mind that there is no practical procedure for taking account of the impact of socio-economic development of the regions or districts in the ratio method. Nevertheless, the projections can serve as approximations of future demographic distributions of the population of an area, especially when comparable figures for regions or districts are required quickly for formulating regional or district development plans.

The size of an area and its rate of growth are factors that might systematically affect the accuracy of the projections. Frequent revision of the projections for the regions and districts is therefore highly recommended.

Lastly, error tends to vary directly with the length of the projection period. It has been observed that after 20 years, no projection method produces accurate figures. The longer the projection period the greater the likelihood of unforeseen developments, that can adversely affect the forecast. Thus, projections for sub-national areas should be prepared for shorter period than those for the national populations. We recommend that figures for the period beyond 2030 should be handled with great care.

1.4 Assumptions on Future Fertility Trends

The current fertility measured in terms of total fertility (average number of children that a woman in the age group 15-19 years would have in her life time) indicates a gradual downward movement. A small incipient decline set in during the late 1970s or early 1980s. The reported figures show that the total fertility rate dropped to 6.6 in the early 1980s and then to 6.4 by the end of the decade. It continued to decline to 5.5 in the early 1990s and by late 1990s it had plummeted to 4.6. It is important, however, to bear in mind that these figures are almost invariably affected by response and sampling errors and values derived directly from the raw data should be interpreted with great caution. The various pieces of information therefore need to be disciplined before the magnitude of decline can be really assessed (GSS 2013, Chapter 8).

Credible estimates derived from the data sets spanning a period of more than forty years show that the level of fertility was high and stable during the 1960s, 1970s and early 1980s.

Population expansion during that period is therefore attributable to declining mortality and high and constant fertility. The recorded total fertility rate (i.e. average number of children per woman) indicate a significant and steady fertility decline, falling from 6.9 children per woman in the 1960s and 1970s to 6.43 in 1988, 5.50 in 1993, 4.0, 4.4,4.0, and 3.3 in 2000, 2003, 2008 and 2010 respectively.

However, adjustment for possible under reporting of births yielded a total fertility rate of between 4.7 and 4.8 at the turn of the 20th century; plausible estimates based on the data collected in 2000 census, 2003 and 2008 GDHS and 2010 census range from 4.4 to 4.6. (Table 1, Gaisie 2010, GSS 2013, chapter 9) These estimates together with experiences of the countries that have moved or are moving through the fertility transition, the fundamental principles in population dynamics and knowledge about the history of the fertility levels and trends during the 20th century and the beginning of the 21st century underpin the guidance and the basis of the fertility assumptions.

Table 1.1: Fertility levels and trends: total fertility rates Ghana 1959-2010

Period	Reported	Estimated*
1959 - 1960 ¹	6.2	6.9
1967 - 1968 ²	6.6	6.9
1968 - 1969 ³	6.9	6.9
1970 - 1971 ⁴	5.9	6.9
1977 - 1980 ⁵	6.3	6.7
1982 - 1984 ⁶	6.6	6.7
1985 - 1988 ⁷	6.4	6.6
1983 - 1988 ⁸	6.4	6.6
1988 - 1993 ⁹	5.5	5.7
1993 - 1998 ¹⁰	4.6	4.8
1999 - 2000 ¹¹	4.0	5.7
1998 - 2003 ¹²	4.4	4.6
2003 - 2008 ¹³	4.0	4.4
2009 - 2010 ¹⁴	3.3	4.6

* Based on indirect estimation procedure
[e.g. Relational Gompertz procedure]

1.5 Replacement Level-Fertility

Ghana is classified as a medium- or intermediate-fertility country. Intermediate fertility countries are countries that are experiencing fertility decline but the level of fertility is still above replacement level (i.e. 2.1 children per woman). “The reduction projected for the group of 48 least developed countries is even steeper: from 4.41 children per woman to 2.76 children per woman in 2045-2050 and 2.13 in 2095-2100. To achieve such reductions, it is essential that access to family planning expands, particularly in the least developed countries.

Around 2009, the use of modern contraceptive methods in the least developed countries was a low 25 percent among women of reproductive age who were married or in union and a further 24 percent of those women who had an unmet need for family planning” (UN,2010 Revision).

The level of fertility in Ghana is estimated to reach replacement level between 2070 and 2075 (UN, 2010 Revision). In Ghana, there is a huge discrepancy between contraceptive use and the level of fertility. The findings of the 1998 and 2003 Demographic and Health Surveys indicate that contraceptive prevalence levels increased from 22 percent (proportion of women using any method) and 13 percent (proportion of women using any modern method) during the mid-1990s to 25 and 19 percent respectively by the turn of the last century. The 2008 DHS data show that the proportion using modern methods has dropped to 17 percent.

1.6 The issues

Replacement level-fertility is a theoretical construct. No population has a built-in replacement mechanism; the replacement fertility-level varies with level of mortality prevalent in the population. The most important evidence guiding our decisions in respect of future fertility trends is the experience of the countries that had moved through the fertility transition. But because fertility declines have occurred in many different situations, it is not easy to ascertain which factors can indicate how long it will take a country which is mid-way through the transition to reach replacement level and by what amount of decline at the various time intervals.

Experience also shows that there tends to be slowdown of the rate of decline during the movement through the transition. Argentina, Uruguay, Egypt and Tunisia, to name a few, have experienced slowdowns during 1950-2000 and they are yet to reach the replacement level.

Another emergent issue is the huge discrepancies between contraceptive use and fertility levels. Significant drops in the level of fertility without marked increases in contraceptive prevalence can only be explained in terms of major changes in the proximate determinants- e.g. timing of marriage, commencement of exposure to the risk of childbearing and changes in the durations of postpartum abstinence, amenorrhoea and breastfeeding and foetal losses. For instance, an assessment of the effects of proximate determinants in Ghana indicates that postpartum infecundability (i.e. postpartum abstinence and amenorrhoea) has reduced between 70 and 80 percent of the average number births per woman since 1988 as compared with only between 6.8 and 18 percent by contraceptive use during the same period. It is, however, unlikely that postpartum infecundability can withhold the momentum for long. To complete the transition, contraceptive prevalence needs to be substantially step-up. Once again, experience indicates that in countries where below replacement-fertility levels have been reached, contraceptive prevalence levels range between 65 and 70 percent and, in some cases, rising to 85 percent. It has also been noted that below replacement levels are usually not attained with contraceptive prevalence of less than 50 percent; levels of 70 percent are more common among populations with very low fertility. Thus, for populations to reach replacement levels, they need to reach high levels of use of effective modern contraceptive methods.

As noted above, adjusted total fertility rates based on the 2008 GDHS and 2010 census data range from 4.4 to 4.6. These estimates together with experiences in other countries and the issues raised above are the main evidence guiding our decisions and form the basis of the fertility assumptions.

1.6.1 High fertility assumption

The fertility level estimated for 2005-2010 is 4.5 and will remain constant throughout the projection years, Table 2 - High Variant.

The assumption is based on the considerations of the following: past fertility trends; evidence of slowdowns of the rate of decline during the movement through the transition (e.g. in Tunisia, Egypt, Argentina and Uruguay). In the case of Tunisia, the total fertility rate of four children per woman remained constant for a considerable length of time before resuming a downward trend. Similar observation has been made in respect of fertility decline in Egypt: “Relatively steep falls occurred in the 1960s and by the end of the 1970s the crude birth rate was around 37 per thousand. Thereafter, fertility apparently began to stabilize again. The subsequent levelling off is harder to explain (Pat Caldwell 1977: 594). Argentina and Uruguay have exhibited similar patterns of fertility. Fertility level dropped to about 3 children per woman in 1950-1955, but it has remained consistently above replacement level for over forty-five years.

The other considerations underpinning the assumption are low levels of contraceptive prevalence that cast doubt on the continual fertility decline and the ability of the postpartum infecundability variables (i.e. postpartum abstinence, amenorrhoea, breastfeeding and foetal loss-natural or induced) to withhold the moment of decline for long; nature and the extent of the impact of the implementation of the population policy and programmes on the targeted beneficiaries; stabilization of the ideal mean number of children: dropping from 6.1 in the early and mid-1980s to 5.3 in the late 1980s and then to 4.4 in 1993, 4.3, 4.4, and 4.3 in 1998, 2003 and 2008 respectively . The corresponding figures for males are 4.8, 4.6, 4.8 and 4.5.

1.6.2 Medium fertility assumption

Future fertility trends were determined by fitting a logistic function to the estimated values of the total fertility rates of 6.7 and 4.5 for the periods 1977-1980 and 2003-2010 respectively (Table 1 2). The logistic curve fits many types of growth data much better than that of other curves such as the exponential curve. It has been demonstrated that logistic curves possess a certain predictive value and that future estimates derived by means of logistic extrapolation have, in many cases, been reasonably confirmed by actual observations as censuses were taken subsequently (UN 1961:33).

The projected fertility rate will reach replacement level between 2060 and 2065 (Medium Variant). Replacement-level fertility is defined as a total fertility rate (TFR) of 2.1 children per woman, which includes one-tenth of a child extra to make up for mortality of children and women who will not survive to the end of the reproductive years.

1.6.3 Low-fertility assumption

The estimated level of fertility 4.5 during the period 2003- 2010 will reach replacement level between 2045 and 2050 (Table 2) - Low Variant

Table 1.2: Proposed total fertility values to use in the projections, 2005-2050

Period (Years)	High	Medium	Low	Medium*
2005 - 2010	4.5	4.5	4.5	4.3
2010 - 2015	4.5	4.2	4.1	4.0
2015 - 2020	4.5	3.9	3.7	3.7
2020 – 2025	4.5	3.7	3.4	3.4
2025 - 2030	4.5	3.4	3.1	3.2
2030 - 2035	4.5	3.2	2.8	3.0
2035 - 2040	4.5	3.0	2.5	2.8
2040 - 2045	4.5	2.8	2.3	2.7
2045 - 2050	4.5	2.6	2.1	2.5

*A new probabilistic method that was used in the 2010 Revision for projecting total fertility (UN, 2010).

CHAPTER TWO

ASSUMPTIONS ON FUTURE MORTALITY TRENDS

2.1 Introduction

If mortality has been changing, information on the proportion of children dead can yield not only estimates of child mortality but also estimates of its trends. In fact, the power of Brass' method for estimating childhood mortality increases when it is applied to several data sets referring to the same population. Estimates covering overlapping periods provide a powerful tool for checking their consistency and selecting those less likely to be affected by extraneous biases.

The most reliable estimates of childhood mortality produced by the Brass method usually refer to a period between three and ten years preceding the interview. Under-five mortality $q(5)$ was selected for the determination of the mortality trends because it is particularly sensitive to the mortality patterns underlying the different models. It has been demonstrated that no matter which mortality model is chosen to apply the Brass method, the errors that are likely to affect resulting estimates of $q(5)$ are likely to be smaller in both absolute and relative terms than those affecting $q(1)$ or $q(2)$. This underscores the robustness of $q(5)$ as an indicator of mortality in childhood when it is estimated by the Brass method, because the estimate is not severely affected by deviations from assumptions on which it is based.

The most striking feature of the estimated $q(5)$ values is the declining trend they display and although the estimates exhibit considerable inconsistency one can infer from them the likely trend that mortality in childhood has followed through time. And as noted above, the power of Brass' method is substantially enhanced when it is applied to several data sets. The independent estimates covering overlapping periods allow the analyst to check their consistency and select those less likely to be distorted by extraneous factors. The $q(5)$ estimates were used to derive the most reliable estimates of life expectancies of 60.2 for males and 63.4 for females (GSS, 2013 chapter 9). The projected ones of 60.0 and 63.6 for males and females for the period 2005 and 2010 during the construction of the projections based on the 2000 census data ((GSS, chapter 10, Table 10.2. p208, 2005, appear to indicate that the analysts were quite close to the normal track. As regards mortality, only one variant of future mortality trends was used for the standard variants (high, medium and low variants)

Future mortality trends were determined by fitting a logistic function to the estimated values of life expectancies at birth for the periods 2005-2010 to 2045-2050. The projected ones based on the empirical data and those derived from two UN models are presented in Table 2.1

Table 2.1: Expectancy values by sex, based on empirical data (2010 census) and models, 2005-2050

Period (Year)	Empirical		Slow pace*		Very slow pace*	
	Male	Female	Male	Female	Male	Female
2005-2010	60.2	63.4	60.2	63.4	60.2	63.4
2010-2015	61.2	64.9	61.9	65.4	61.2	64.1
2015-2020	63.7	66.4	63.6	67.4	62.2	64.8
2020-2025	65.4	67.8	65.3	69.4	63.2	65.5
2025-2030	67.1	69.3	67	71.4	64.2	66.2
2030-2035	68.7	70.6	68.7	73.4	65.2	66.9
2035-2040	70.2	72	70.4	75.4	66.2	66.7
2040-2045	71.8	73.3	72.1	77.4	67.2	68.3
2045-2050	73.2	74.6	73.8	79.4	68.2	69

*Based on models for mortality improvement, quinquennial gains in life expectancy at birth according to the initial level of life expectancy (UN, 2010).

2.2 Total Population

Table 2.2 presents, under the three fertility assumptions, the recorded and projected population of Ghana over the period 2010 to 2050. The medium projections indicate that the country's population will increase by 6.3 million during the decade 2010-2020, by 13.3 million in 2030 and by 27.8 million by the middle of the 21st century-. Every year about 629,637 people will be added to the population during the period 2010-2020; the number will increase to 702,839 and 729,379 in the periods 2020-2030.and 2030-2040 respectively. Summary of demographic indicators based on the three variants are presented in table 5-7. The population projections by age and sex are presented in Appendix 1 Tables 1-4.

Table 2.2: Recorded and projected population, 2010-2050

Year	Medium Variant	High Variant	Low Variant
2010	24,658,823	24,658,823	24,658,823
2015	27,670,174	27,804,116	27,634,926
2,020	30,955,202	31,482,220	30,816,511
2,025	34,419,044	35,65,0697	34,094,925
2,030	37,983,586	40,291,385	37,376,582
2,035	41,608,695	45,463,874	40,597,880
2,040	45,277,379	51,321,876	43,706,546
2,045	48,940,223	58,037,955	46,614,504
2,050	52,503,721	65,750,778	49,197,882

Table 2.3: Summary demographic indicators - medium variant

	2010	2015	2020	2025	2030	2035	2040	2045	2050
Fertility									
Input TFR	4.5	4.26	4.03	3.79	3.55	3.31	3.08	2.84	2.6
Calculated TFR	4.5	4.26	4.03	3.79	3.55	3.31	3.08	2.84	2.6
GRR	2.22	2.1	1.98	1.87	1.75	1.63	1.51	1.4	1.28
NRR	1.89	1.82	1.74	1.66	1.58	1.5	1.41	1.32	1.22
Mean Age of Childbearing	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7
Child-woman ratio	0.54	0.56	0.54	0.51	0.48	0.45	0.42	0.4	0.37
Mortality									
Male LE	60.2	61.8	63.4	65	66.7	68.3	69.9	71.6	73.1
Female LE	63.4	64.8	66.1	67.5	68.9	70.4	71.7	73.1	74.5
Total LE	61.8	63.3	64.8	66.3	67.8	69.3	70.8	72.3	73.8
IMR	59	53.3	48.1	42.9	37.7	33	28.5	24	20.1
U5MR	90.3	80.3	71.1	61.9	53	45.1	37.8	30.5	24.7
CBR per 1000	34	32	30	28	26	24	23	21	19
CDR per 1000	10.5	9.1	8.1	7.3	6.8	6.5	6.3	6.2	6.1
RNI percent	2.3	2.3	2.2	2	1.9	1.8	1.6	1.5	1.3
GR percent	2.3	2.3	2.2	2	1.9	1.8	1.6	1.5	1.3
Doubling time	30	31	32	34	37	40	43	47	52
Annual births and deaths									
Births	830,598	878,597	923,587	953,700	975,333	998,499	1,020,275	1,029,344	1,019,584
Deaths	259,698	251,517	249,193	251,414	257,872	269,603	284,413	301,034	319,585
Population									
Total	24,658,823	27,670,174	30,955,200	34,419,044	37,983,586	41,608,695	45,277,379	48,940,223	52,503,721
Male	12,024,845	13,562,093	15,231,056	16,987,629	18,795,656	20,635,727	22,502,850	24,374,898	26,204,145
Female	12,633,978	14,108,081	15,724,144	17,431,415	19,187,930	20,972,969	22,774,529	24,565,326	26,299,576
Percent 0-4	13.81	14.45	13.78	12.98	12.16	11.42	10.8	10.19	9.53
Percent 5-14	24.27	23.17	23.23	23.42	22.52	21.47	20.42	19.5	18.67
Percent 15-24	19.72	19.38	18.93	18.28	18.62	19.09	18.66	18.07	17.46
Percent 15-49	49.3	49.87	50.07	49.86	50.53	51.07	51.42	51.6	51.69
Percent 15-64	56.84	57.93	58.69	59.15	60.5	61.77	62.81	63.62	64.29
Percent 65 and over	5.08	4.45	4.31	4.45	4.83	5.33	5.97	6.69	7.51
Percent females 15-49	49.96	50.46	50.47	49.95	50.39	50.73	50.93	51.06	51.16
Sex ratio	95.18	96.13	96.86	97.45	97.96	98.39	98.81	99.22	99.64
Dependency ratio	0.76	0.73	0.7	0.69	0.65	0.62	0.59	0.57	0.56
Median age	21	21	22	22	23	24	25	26	28

Table 2.4: Summary demographic indicators - high variant

Fertility	2010	2015	2020	2025	2030	2035	2040	2045	2050
Input TFR	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Calculated TFR	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
GRR	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.22
NRR	1.89	1.92	1.95	1.98	2.01	2.04	2.06	2.09	2.11
Mean Age of Childbearing	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7
Child-woman ratio	0.54	0.58	0.59	0.6	0.59	0.58	0.58	0.59	0.6
Mortality									
Male LE	60.2	61.8	63.4	65	66.7	68.3	69.9	71.6	73.1
Female LE	63.4	64.8	66.1	67.5	68.9	70.4	71.7	73.1	74.5
Total LE	61.8	63.3	64.8	66.3	67.8	69.3	70.8	72.3	73.8
IMR	59	53.3	48.1	42.9	37.7	33	28.5	24	20.1
U5MR	90.3	80.3	71.1	61.9	53	45.1	37.8	30.5	24.7
Vital Rates									
CBR per 1000	34	33	33	32	31	30	30	30	30
CDR per 1000	10.5	9.2	8.1	7.4	6.8	6.3	6	5.6	5.3
RNI percent	2	2	2	2	2	2	2	2	2
GR percent	2	2	2	2	2	2	2	2	2
Doubling time	30	29	29	29	29	29	29	29	28
Annual births and deaths									
Births	830,598	927,551	1,032,582	1,133,109	1,238,565	1,371,335	1,542,582	1,746,651	1,978,338
Deaths	259,698	254,596	256,328	262,511	272,590	288,148	307,082	327,200	349,159
Population									
Total	24,658,823	27,804,116	31,482,220	35,650,697	40,291,385	45,463,874	51,321,876	58,037,955	65,750,778
Male	12,024,845	13,629,791	15,497,480	17,610,601	19,963,692	22,587,600	25,564,361	28,985,189	32,918,644
Female	12,633,978	14,174,325	15,984,740	18,040,096	20,327,692	22,876,274	25,757,515	29,052,765	32,832,134
Percent 0-4	13.81	14.87	14.81	14.54	14.17	13.9	13.85	13.92	13.99
Percent 5-14	24.27	23.05	23.25	24.06	23.93	23.55	23.13	22.9	22.92
Percent 15-24	19.72	19.29	18.61	17.65	17.87	18.6	18.56	18.27	17.9
Percent 15-49	49.3	49.63	49.23	48.14	47.96	47.86	47.71	47.41	47.04
Percent 15-64	56.84	57.65	57.7	57.11	57.35	57.66	57.75	57.54	57.1
Percent 65 and over	5.08	4.42	4.23	4.29	4.55	4.88	5.27	5.64	6
Percent females 15-49	49.96	50.22	49.64	48.26	47.88	47.61	47.34	47.02	46.69
Sex ratio	95.18	96.16	96.95	97.62	98.21	98.74	99.25	99.77	100.26
Dependency ratio	0.76	0.73	0.73	0.75	0.74	0.73	0.73	0.74	0.75
Median age	21	21	21	21	21	22	22	22	22

2.3 Regional Populations

The regional populations are presented in Table 2.5a. The total populations of the regions range from 865,879 in the Upper West Region to nearly 6 million in the Ashanti Region in 2020. The populations of Greater Accra and Ashanti Regions will be 1.7 and 2 times larger than the populations of the Western, Eastern and Northern Regions respectively with the Central, Volta and Brong Ahafo regions trailing behind with populations of 2.6, 2.7 and 2.9 million respectively. In 2030, the populations of Greater Accra and Ashanti Regions will increase to 6.2 and 7.4 million respectively as compared with 3.2, 3.3, 3.5, 3.8, 3.9 and 4 million in the Central, Volta, Brong Ahafo, Northern, Western and Eastern Regions respectively whilst the populations of the Upper East and Upper West Regions hover between 1 and 1.6 million respectively. By the middle of the century, the populations of the most populous regions (Greater Accra and Ashanti) will rise to the neighbourhood of between 9 and 10 million whilst that of the remainder of the regions will increase to less than 5 million except Western and Northern Regions with 5.4 million each.

The regional populations by age and sex are presented in Appendix 3.

Table 2.5a: Recorded and projected population by region, 2010-2050

Year	All Regions	Western	Central	Greater Accra	Volta	Eastern
2010	24,658,823	2,376,021	2,201,863	4,010,054	2,118,252	2,633,154
2015	27,670,174	2,828,013	2,328,950	4,519,273	2,384,404	2,966,642
2020	30,955,202	3,163,760	2,605,444	5,055,805	2,659,489	3,308,896
2025	34,419,044	3,533,601	2,910,028	5,646,833	2,979,311	3,659,196
2030	37,983,586	3,873,255	3,189,738	6,189,612	3,265,687	4,063,119
2035	41,608,695	4,237,471	3,489,680	6,771,641	3,572,769	4,445,189
2040	45,277,379	4,346,626	4,029,687	7,380,213	3,893,855	4,844,681
2045	48,940,223	4,992,364	4,111,360	7,977,997	4,209,250	5,237,084
2050	52,503,721	5,444,252	4,483,502	8,700,125	4,590,250	5,711,123

(Cont'd)

Year	All Regions	Ashanti	Brong Ahafo	Northern	Upper East	Upper West
2010	24,658,823	4,780,380	2,310,983	2,479,461	1,046,545	702,110
2015	27,670,174	5,295,599	2,606,211	2,800,288	1,164,471	776,323
2020	30,955,202	5,924,294	2,915,622	3,132,742	1,302,719	868,484
2025	34,419,044	6,720,772	3,256,457	3,498,958	1,328,336	885,552
2030	37,983,586	7,366,779	3,569,470	3,835,282	1,578,386	1,052,258
2035	41,608,695	8,059,501	3,905,117	4,195,926	1,744,844	1,186,557
2040	45,277,379	8,783,812	4,256,073	4,573,017	1,901,649	1,267,768
2045	48,940,223	9,459,260	4,583,354	4,943,421	2,055,680	1,370,452
2050	52,503,721	9,607,389	4,839,957	5,390,874	2,241,748	1,494,500

2.4 Single Years of Age Distributions

Single year of age distributions are usually distorted by errors arising from age misreporting. A very common type of age-misreporting is “age heaping” caused largely by digit preference. Ages ending in 0 and 5 appear to be generally preferred to other digits such as 1, 3 or 9. Hence the irregular patterns with peaks at ages 5, 10, 15, 20, etc. and troughs at ages terminating in odd numbers. These errors can be removed or, at least, corrected to a considerable extent with adjusting instruments. It is not, however, easy to adjust the single year of age distributions for sub-national populations (e.g. region or district) which are also affected by internal migration. You may, therefore, come across some fluctuations in the single age distributions, especially distributions for small areas. Fortunately, *grouping* considerably reduces the effect of the errors.

School-age populations derived from the observed age distributions are almost invariably larger than those based on the adjusted or smoothed age distributions in both the *sending* (e.g. Central and Upper East Regions) and *receiving* populations (e.g. Ashanti and Greater Accra Regions) except, in most cases, among the 15-17 age group where the grouping based on the smoothed age distributions tends to yield slightly larger population than that based on the observed ones. The difference between the figures base on the two age distributions may be mostly attributed to the smoothing procedure. The method combines the census population into 10-years age groups and those from the age 10 to 69 are smoothed by averaging the consecutive 10 -year age groups with specific weights. The 15-17 age groups are also much more likely to be affected by internal migration than the 6-11 age group.

As pointed out above, grouping of single years into larger age groups tends to minimise the effect of age reporting errors and the observed school-age populations are therefore good enough for any analysis.

2.4.1 Rates of change

One of the guiding principles in evaluating the accuracy of a census count is that population change normally proceeds in an orderly manner. Thus, in the absence of any unusual events the rate of growth for a country as a whole and its subdivisions change only gradually in successive inter-censual periods and almost invariably follows a fairly constant trend.

The growth rate of 2.4 percent between 1960 and 1970 rose to 2.6 and 2.7 percent in the periods 1970-1984 and 1984 and 2000 respectively; declining to 2.5 percent in 2000-2010 and estimates based on the medium variant indicate that the population is at the moment increasing at the rate of 2.3 percent per year but the growth rate will climb down gradually from 2.0 percent in 2025-2030 to 1.3 percent by the middle of the century (Table 2.5b).

The doubling time will increase from 31 years in 2015-2020 to 52 years in 2045-2050 (Table 2 5) Fertility trends affect the rate of growth by

Table 2.5b: Reported and projected annual growth rates (%)

Period	Annual growth rate
1960-1970	2.4
1970-1984	2.6
1984-2000	2.7
2000-2010	2.5
2010-2015	2.3
2015-2020	2.2
2020-2025	2
2045-2050	1.3

determining the number of births women have by the size of different generations. In the majority of African countries where fertility is above replacement level, children outnumber their parents by substantial levels and the children in turn have more children than required to replace their parents' generations, even when fertility level is declining. Consequently, as fertility falls, the number of births to relatively large generations of parents remains high for some time relative to the number of deaths, mostly of grandparents and great grand-parents. This process tends to maintain a relatively high population growth rate even though fertility is falling. In most of the countries where fertility rate is reported to be falling, overall population growth rates are relatively high and, in consequence, the balancing of the demographic "deficit" takes much longer to be effected. The decline of fertility in Ghana therefore is yet to make an impact on the demographic profile of the country.

2.4.2 Urbanization

There have been considerable migratory movements in the country since the period of European colonization. The country experienced a great deal of movement of population from one locality to another. The most important movement in recent years reflects the socio-economic changes taking place within the country. The usual four types of internal migratory movements have been identified: rural to rural, rural to urban, urban to urban and urban to rural. Of these, although the rural to rural movements are of the largest volume in most countries, the most significant in its impact is the accelerated migration from rural to urban areas. Ghana exhibits one of the fastest urban growth in the world. In 1960, nearly one-quarter (23%) of the population lived in urban areas. By 2000, 4 out of 10 Ghanaians (8 million) were urban dwellers, the number increased to 12.5 million in 2010 and it is expected rise to 14.1, 19.3 and 26.7 million in 2015, 2030 and 2050 respectively.

Table 2.6: Recorded and projected urban and rural populations, 2010-2050

Year	Urban	Rural
2010	12,545,228	12,113,594
2015	14,084,119	13,586,055
2020	15,756,198	15,199,004
2025	17,511,460	16,892,195
2030	19,324,019	18,640,655
2035	21,166,758	20,418,228
2040	23,032,112	22,217,617
2045	24,891,895	24,011,631
2050	26,700,304	25,756,089

Migration has been a population response to the changing social and economic conditions in the country. As these conditions changed, so did the type of migrant and the purpose of movement. Urban centres or agglomerations emerged as a destination of the major structural flows of people across the country. Thus, urbanization also becomes part of the response to social change; a response which is an integral part of the socio-economic and political transformations taking place to-date in Ghana. Furthermore, urbanization has led to redistribution of the population in such a way as to effect still more social change. The increasing agglomeration of the population engenders a new configuration of both political and purchasing power which will continue to attract still more people as well as economic activities to these centres. But this process is, among other things, a major factor of political instability and dissipation of economic potentialities.

As a component of the modernization process, urbanization is seen as a hub of the development process to which the political leadership should pay greater attention, if Ghana is to make any significant headway in poverty reduction. The concern should be focused more seriously on

the strategy to make cities/towns play a more effective role as a form of social organization for social and economic development. The need to maintain them physically as a healthy environment deserves repeating. The pattern of future development will depend very much on the manner in which the country deals with these changing phenomena of internal migration and increasing urbanization. These observations immediately direct our attention to other related phenomena: size, composition and growth of the rural population, the most neglected people in the country. Despite high urban growth rates, African rural populations continue to grow. The rural population is currently growing at an estimated rate of 1.3 percent per annum.

2.5 Age Structure

The proportion of 0-14 year-olds is expected to decline from 38.1 percent in 2010 to between 37 percent in 2020. In 2000, there were 3.5 million persons aged between 15-24 years. In 2010, the size of this population had expanded to 4.9 million, increasing its size by more than four-folds between 1960 and 2020.

The growth of the country's youth population (adolescents and young adults) reflects the underlying high annual growth rate of 2.5 percent.

The rapid growth of the adolescent and youth population has increased the pressure to expand education and health services and employment opportunities. Policy makers must bear in mind that the period of rapid expansion of the adolescent population will be long. For instance, the medium projections indicate that the number of young people (15-24 years) will grow much more rapidly, rising from 4.9 million in 2010 to 5.45 million in 2015 and nearly 5.9 million in 2020.

In addition to absolute numbers, the proportion of young people in the total population raises policy concerns. The proportion increased from nearly 19 percent in 2000 to 19.7 in 2010 and it is estimated to drop slightly to 19.4 in 2015. A situation in which 20 percent or more of a population is aged 15-24 years has been described as "young bulge". There is a speculation that this phenomenon may subject a society to potentially disruptive, political and social movements. In addition to increasing services and facilities to cope with large numbers of young people, the expansion of this segment of the population raises two important policy concerns: first, the adolescents and young adults are about to enter or are already in their prime reproductive years, leading to large numbers of births, even when fertility is low; second, the adolescent and young adults are prone to all types of risk behaviour, including smoking, drinking, drug abuse and high-risk sexual behaviour leading to increase in prevalence of HIV/AIDS. As noted earlier, the projected figures indicate that the youthfulness of the population will persist during the projection period. Thus, the population still has the high potential inherent in the age structure with subsequent rapid expansion of the population in the 21st century.

The population of women aged 15-49 years increased from 4.5 million in 2000 to 6.3 million in 2010 and it is expected to increase further to 7.1 million in 2015. Thus, large number of births and the size of different generations will generate expansion of the population even though fertility will be declining. When fertility declines from high to low levels, populations tend to be characterized (for about 15 to 20 years later) by unusually large proportions of men and women in their reproductive years, leading to large numbers of births even when fertility rates are low. For this very reason, the population continues to grow, a phenomenon described as "population momentum". For instance, Japan reached replacement level in the period 1970-1975, but because of population momentum, the Japanese population kept on growing until

2005. Hence, even if Ghana's fertility reaches replacement level in 2050, which is very unlikely, the population will continue to grow throughout the century. The proportion of the 15-64 year-olds will increase from 56.8 percent in 2010 to 57.9 in 2015 and then to 58.7 percent in 2020. This segment of the age structure will increase the pressure on provision of job opportunities. The population is at the same time aging gradually, and it will be a great mistake to dismiss aging as an issue that need not be considered until sometime in the future. The population aged 65 years and older increased from 1.3 million in 2010 and it is estimated to rise to 1.5 million in 2025. Policy options for this segment of the population will include enhancement of traditional support systems, greater employment opportunities for the elderly who are still capable to remain in the work force, institutions that support high levels of personal savings and government programmes such as pension schemes and health care systems (see GSS, *The elderly*, 2013).

In conclusion, the implications of these demographic realities are manifold and penetrating. For instance, the obvious related dimensions of the age structure are the labour force potential, high dependency ratios, consumption needs and social and economic requirements for the present and future generations. It is important to emphasize that population is the only major factor that interacts with all the other variables in the development equation. Unless serious and conscious attempt is made to put population at the core of development, all efforts to improve human wellbeing and reduce poverty will not be sustained. Stabilization of the population is therefore an essential requirement for sustained economic growth and sustainable social and economic development. Effective management of the population must, therefore, be one of the major concerns of all Ghanaians in the coming decades.

2.6 The School-Age Populations

The school-age populations (6-11, 12-14 and 15-17 years) by single year are presented in Appendix 4 Tables 1P, 2J and 3S. The regional and district population distributions by single age and year by sex are available in the CD and regional and district school-age populations might easily be formed by the user.

Table 2.7: School-age populations by five-year intervals

Year	6-11 years	12-14 years	15-17 years
	Primary	JSS	SHS
2010	3,656,977	1,679,176	1,577,670
2015	3,916,418	1,826,475	1,729,166
2020	4,413,576	1,964,061	1,874,395
2025	4,907,446	2,283,381	1,960,211
2030	5,190,330	2,457,324	2,347,694
2035	5,404,113	2,597,115	2,510,064
2040	5,581,806	2,702,443	2,632,767
2045	5,758,602	2,791,355	2,732,249
2050	5,908,376	2,883,248	2,822,102

The primary school-age population was nearly 3.7 million in 2010 and it is expected to increase to 5.2 million in 2030, the corresponding figures for the JSS and SHS are 1.7 and 2.5 and 1.6 and 2.3 million. The enormity of the educational facilities and services that need to be provided over the years cannot be overemphasized.

REFERENCES

- 1960 Population Census of Ghana; Gaisie (1976); 1967/1968 Demographic Sample Survey (DSS) Gaisie (1976); 1968/1969 DSS Registration Data from the Sample Areas (Gaisie (1976);
- 1971 Supplementary Enquiry (10 percent Sample - Gaisie (1976); 1979/1980 Ghana Fertility Survey; 6-10: 1988-2008 Ghana Demographic and Health Surveys; 11: 2000 census (Gaisie 2005); 12-13: Ghana
- GSS, (2013) Demographic and Health Survey's manual, chapter 8. Caldwell, Pat. 1977 Egypt and Arab and Islamic Worlds, in *Persistence of high Fertility* ed.J.C. Caldwell), Canberra, Australia.,
- Gaisie, S. K. 1969 "Dynamics of Population Growth in Ghana", *Ghana Population Studies No. 1*, Ghana Publishing Corporation (Printing Division), Accra-Tema.
- Gaisie, S. K. & de Graft-Jonhson K. T. 1976 "The Population of Ghana", *C.I.C.R.E.D Series* Imprimerie Louis-Jean, Paris
- GSS, 2013 2010 Population & Housing Census, National Analytical Report
- Keyfitz 1971 "The Impact of Modernization" in *Approaches to the Science of Socio-economic Development*, Paris
- United Nations 1961 "Manual 1:Methods of Estimating Total Population for Current Dates", United Nations, New York
- United Nations 1974 *Manual VIII. Methods for projections of urban and rural population* (United Nations publication, Sales No. E.74.XIII.3)
- United Nations 1990 "Guide to the Estimation of Child Mortality", New York.
- United Nations 2001 "World Population Prospects, The 2000 Revision, Volume 1", United Nations, New York.
- United Nations 2003 "World Population Prospects, The 2002 Revision, Volume 1", United Nations, New York
- United Nations 2011 "World Population Prospects, The 2010 Revision, Volume 1", United Nations, New York

APPENDICES

Table A1: Population by age and sex-high variant

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	3,404,462	1,737,100	1,667,362	3,964,163	2,002,962	1,961,201
5-9	3,129,896	1,584,319	1,545,577	3,312,879	1,688,451	1,624,427
10-14	2,854,231	1,430,577	1,423,654	3,097,352	1,567,043	1,530,310
15-19	2,573,069	1,272,023	1,301,046	2,825,577	1,414,987	1,410,591
20-24	2,290,438	1,105,250	1,185,188	2,537,800	1,251,760	1,286,040
25-29	2,003,419	955,440	1,047,979	2,252,493	1,083,877	1,168,616
30-34	1,699,607	803,180	896,427	1,967,166	935,947	1,031,219
35-39	1,438,859	679,601	759,258	1,665,238	785,200	880,038
40-44	1,180,761	564,366	616,395	1,404,308	661,788	742,520
45-49	970,910	465,892	505,018	1,145,933	546,031	599,902
50-54	769,252	370,190	399,062	933,267	445,530	487,737
55-59	616,707	295,481	321,226	728,001	348,118	379,883
60-64	473,648	224,362	249,286	570,616	270,642	299,974
65-69	379,903	175,356	204,547	419,501	196,219	223,282
70-74	305,836	135,092	170,744	313,254	142,377	170,877
75-79	251,447	103,569	147,878	223,087	96,515	126,572
80+	316,378	123,047	193,331	274,290	106,831	167,459
Total	24,658,823	12,024,845	12,633,978	27,634,926	13,544,278	14,090,648

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	4,162,009	2,104,644	2,057,365	4,280,500	2,166,564	2,113,936
5-9	3,872,479	1,954,942	1,917,536	4,080,900	2,062,647	2,018,254
10-14	3,282,945	1,672,460	1,610,485	3,842,461	1,939,133	1,903,328
15-19	3,069,445	1,551,656	1,517,789	3,256,562	1,657,779	1,598,783
20-24	2,790,127	1,394,296	1,395,831	3,034,395	1,530,967	1,503,427
25-29	2,499,188	1,229,551	1,269,637	2,751,391	1,371,747	1,379,643
30-34	2,215,196	1,063,601	1,151,594	2,461,455	1,208,602	1,252,853
35-39	1,930,809	916,739	1,014,070	2,177,959	1,043,725	1,134,234
40-44	1,628,550	766,322	862,229	1,891,943	896,653	995,291
45-49	1,366,040	641,973	724,066	1,587,666	745,308	842,358
50-54	1,104,287	523,766	580,520	1,319,761	617,660	702,101
55-59	886,717	420,527	466,190	1,052,487	496,190	556,297
60-64	676,001	320,374	355,627	826,772	388,829	437,944
65-69	508,187	238,183	270,003	605,375	283,693	321,683
70-74	348,799	160,802	187,997	425,838	196,893	228,946
75-79	231,082	103,050	128,032	260,308	117,926	142,382
80+	244,651	98,058	146,593	239,151	99,373	139,778
Total	30,816,511	15,160,945	15,655,566	34,094,925	16,823,689	17,271,236

Table A2: Five year age groups – Medium variant (National)

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	3,404,462	1,737,100	1,667,362	3,999,410	2,020,776	1,978,634
5-9	3,129,896	1,584,319	1,545,577	3,312,878	1,688,452	1,624,426
10-14	2,854,231	1,430,577	1,423,654	3,097,352	1,567,043	1,530,309
15-19	2,573,069	1,272,023	1,301,046	2,825,578	1,414,987	1,410,591
20-24	2,290,438	1,105,250	1,185,188	2,537,799	1,251,759	1,286,040
25-29	2,003,419	955,440	1,047,979	2,252,493	1,083,877	1,168,616
30-34	1,699,607	803,180	896,427	1,967,166	935,947	1,031,219
35-39	1,438,859	679,601	759,258	1,665,237	785,200	880,037
40-44	1,180,761	564,366	616,395	1,404,309	661,789	742,520
45-49	970,910	465,892	505,018	1,145,932	546,030	599,902
50-54	769,252	370,190	399,062	933,268	445,531	487,737
55-59	616,707	295,481	321,226	728,002	348,118	379,884
60-64	473,648	224,362	249,286	570,616	270,642	299,974
65-69	379,903	175,356	204,547	419,501	196,219	223,282
70-74	305,836	135,092	170,744	313,256	142,378	170,878
75-79	251,447	103,569	147,878	223,087	96,514	126,573
80+	316,378	123,047	193,331	274,290	106,831	167,459
Total	24,658,823	12,024,845	12,633,978	27,670,174	13,562,093	14,108,081

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	4,266,420	2,157,448	2,108,972	4,468,390	2,261,667	2,206,723
5-9	3,906,758	1,972,250	1,934,508	4,183,120	2,114,316	2,068,803
10-14	3,282,945	1,672,460	1,610,485	3,876,471	1,956,300	1,920,171
15-19	3,069,445	1,551,656	1,517,789	3,256,562	1,657,779	1,598,783
20-24	2,790,127	1,394,296	1,395,831	3,034,395	1,530,967	1,503,427
25-29	2,499,187	1,229,550	1,269,637	2,751,391	1,371,747	1,379,643
30-34	2,215,195	1,063,601	1,151,594	2,461,455	1,208,602	1,252,853
35-39	1,930,809	916,739	1,014,070	2,177,959	1,043,725	1,134,234
40-44	1,628,550	766,321	862,229	1,891,943	896,653	995,291
45-49	1,366,041	641,974	724,067	1,587,666	745,308	842,358
50-54	1,104,286	523,766	580,520	1,319,761	617,660	702,101
55-59	886,717	420,527	466,190	1,052,487	496,190	556,297
60-64	676,001	320,374	355,627	826,772	388,829	437,944
65-69	508,188	238,184	270,004	605,375	283,693	321,683
70-74	348,800	160,802	187,998	425,838	196,893	228,946
75-79	231,082	103,050	128,032	260,308	117,926	142,382
80+	244,651	98,058	146,593	239,151	99,373	139,778
Total	30,955,202	15,231,056	15,724,146	34,419,044	16,987,629	17,431,415

Table A3: Regions five year age groups recorded and projected population by region, 2010-2050

Western Region						
Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	333,376	170,133	163,243	414,763	205,212	209,551
5-9	306,005	155,228	150,777	343,193	170,438	172,755
10-14	287,133	145,176	141,957	323,244	159,157	164,088
15-19	251,304	127,632	123,672	288,453	142,362	146,090
20-24	229,255	110,460	118,795	265,514	129,782	135,732
25-29	200,276	94,918	105,358	233,480	112,669	120,811
30-34	160,964	79,265	81,699	200,072	96,966	103,106
35-39	142,132	70,438	71,694	176,534	84,399	92,135
40-44	116,622	59,435	57,187	146,205	70,937	75,268
45-49	91,973	47,609	44,364	119,033	59,269	59,764
50-54	78,627	39,729	38,898	93,442	46,326	47,116
55-59	47,899	26,127	21,772	70,470	36,351	34,119
60-64	40,538	21,097	19,441	51,582	25,990	25,592
65-69	24,682	12,294	12,388	37,531	18,314	19,217
70-74	27,179	12,206	14,973	25,848	12,017	13,831
75-79	14,643	6,846	7,797	16,926	7,668	9,258
80+	23,413	9,181	14,232	21,725	8,248	13,477
Total	2,376,021	1,187,774	1,188,247	2,828,013	1,386,104	1,441,909

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	442,340	218,896	223,444	465,584	229,954	235,631
5-9	404,702	198,889	205,813	435,850	213,820	222,031
10-14	342,470	169,706	172,764	406,788	199,063	207,724
15-19	313,247	155,979	157,268	334,042	167,074	166,968
20-24	291,878	144,484	147,394	318,660	158,896	159,764
25-29	259,084	127,765	131,319	286,266	142,695	143,572
30-34	225,351	110,151	115,200	251,475	125,304	126,171
35-39	204,722	98,496	106,226	231,938	112,269	119,668
40-44	169,552	82,100	87,452	197,950	96,181	101,770
45-49	141,820	69,644	72,176	165,661	80,976	84,685
50-54	110,539	54,426	56,113	132,784	64,304	68,480
55-59	85,786	43,889	41,897	102,314	51,876	50,439
60-64	61,100	30,740	30,360	75,239	37,417	37,822
65-69	45,469	22,217	23,252	54,555	26,544	28,011
70-74	28,786	13,560	15,226	35,443	16,669	18,775
75-79	17,549	8,179	9,370	19,972	9,411	10,561
80+	19,365	7,560	11,805	19,080	7,705	11,375
Total	3,163,760	1,556,682	1,607,078	3,533,601	1,740,156	1,793,445

Central Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	313,458	159,522	153,936	347,457	179,673	167,784
5-9	282,827	142,769	140,058	282,602	146,369	136,233
10-14	275,549	139,658	135,891	276,453	143,021	133,432
15-19	244,020	119,095	124,925	249,376	124,065	125,311
20-24	195,729	92,178	103,551	201,544	101,103	100,441
25-29	162,630	73,498	89,132	168,169	81,421	86,748
30-34	132,339	60,685	71,654	145,930	69,276	76,654
35-39	118,873	54,300	64,573	131,134	60,738	70,396
40-44	100,753	46,570	54,183	112,396	51,896	60,500
45-49	83,934	38,568	45,366	96,655	44,824	51,831
50-54	78,775	34,625	44,150	83,195	37,717	45,478
55-59	50,729	23,794	26,935	66,602	30,889	35,713
60-64	45,878	20,411	25,467	51,912	23,475	28,437
65-69	30,245	13,018	17,227	40,673	18,077	22,596
70-74	33,817	13,219	20,598	28,332	12,152	16,180
75-79	19,085	7,517	11,568	19,448	7,849	11,599
80+	33,222	10,685	22,537	27,073	8,953	18,119
Total	2,201,863	1,050,112	1,151,751	2,328,950	1,141,499	1,187,451

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	370,813	191,997	178,816	389,853	201,832	188,021
5-9	333,326	171,108	162,218	358,569	184,077	174,492
10-14	293,189	152,776	140,413	347,662	179,325	168,337
15-19	271,001	136,175	134,826	288,686	145,959	142,727
20-24	221,772	112,760	109,012	241,906	124,089	117,817
25-29	186,740	92,494	94,246	206,112	103,372	102,740
30-34	164,433	78,836	85,597	183,222	89,742	93,479
35-39	152,125	71,008	81,117	172,110	80,993	91,117
40-44	130,428	60,172	70,256	152,059	70,536	81,523
45-49	115,330	52,767	62,563	134,586	61,393	73,193
50-54	98,524	44,390	54,134	118,356	52,482	65,873
55-59	81,194	37,360	43,834	96,804	44,188	52,616
60-64	61,532	27,816	33,716	75,764	33,881	41,883
65-69	49,294	21,968	27,326	59,088	26,265	32,823
70-74	31,538	13,736	17,802	38,785	16,898	21,887
75-79	20,119	8,385	11,734	22,842	9,654	13,188
80+	24,085	8,223	15,862	23,624	8,385	15,239
Total	2,605,444	1,281,971	1,323,473	2,910,028	1,433,072	1,476,956

Greater Accra Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	469,851	238,213	231,638	551,234	279,694	271,540
5-9	397,499	198,577	198,922	420,390	212,275	208,115
10-14	386,282	183,246	203,036	409,964	195,602	214,362
15-19	388,403	180,173	208,230	420,237	195,634	224,603
20-24	458,075	215,803	242,272	499,602	246,638	252,964
25-29	443,383	209,640	233,743	486,954	241,980	244,973
30-34	357,070	175,564	181,506	417,986	208,839	209,147
35-39	282,420	139,524	142,896	330,329	162,621	167,708
40-44	220,520	109,928	110,592	260,552	127,652	132,901
45-49	165,522	80,923	84,599	202,031	98,033	103,998
50-54	136,577	65,046	71,531	152,962	73,819	79,143
55-59	91,902	44,852	47,050	127,859	60,713	67,146
60-64	70,440	34,067	36,373	84,487	40,838	43,650
65-69	45,004	21,299	23,705	64,317	30,861	33,456
70-74	38,855	17,554	21,301	34,769	16,820	17,949
75-79	23,485	10,264	13,221	25,455	11,185	14,270
80+	34,766	13,552	21,214	30,145	11,844	18,301
Total	4,010,054	1,938,225	2,071,829	4,519,273	2,215,047	2,304,226

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	586,502	297,411	289,091	616,139	311,678	304,461
5-9	494,487	246,936	247,551	531,537	264,828	266,709
10-14	433,261	207,917	225,344	513,882	243,291	270,591
15-19	455,084	213,675	241,409	484,282	228,316	255,966
20-24	547,989	273,723	274,266	597,191	300,294	296,897
25-29	539,407	273,541	265,866	595,055	304,763	290,292
30-34	469,808	236,494	233,315	523,578	268,376	255,202
35-39	382,241	189,190	193,050	432,318	215,121	217,197
40-44	301,449	147,280	154,169	351,295	172,116	179,179
45-49	240,235	114,834	125,400	280,135	133,193	146,942
50-54	180,562	86,454	94,108	216,597	101,896	114,700
55-59	155,401	73,072	82,330	185,141	86,161	98,980
60-64	99,849	48,153	51,696	122,788	58,469	64,319
65-69	77,739	37,319	40,420	93,113	44,482	48,631
70-74	38,648	18,920	19,728	47,496	23,201	24,295
75-79	26,313	11,894	14,419	29,882	13,650	16,232
80+	26,829	10,824	16,005	26,406	11,005	15,401
Total	5,055,805	2,487,637	2,568,168	5,646,833	2,780,838	2,865,995

Volta Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	297,462	149,892	147,570	350,393	178,020	172,373
5-9	266,026	135,489	130,537	282,564	146,481	136,083
10-14	249,337	128,578	120,759	265,834	138,803	127,031
15-19	222,553	115,697	106,856	241,887	127,068	114,819
20-24	179,449	86,049	93,400	196,684	99,568	97,116
25-29	152,521	68,834	83,687	167,805	80,473	87,332
30-34	128,752	58,483	70,269	151,095	70,461	80,634
35-39	113,090	52,204	60,886	132,782	61,612	71,170
40-44	101,280	46,289	54,991	120,247	54,417	65,830
45-49	87,382	40,158	47,224	107,071	49,234	57,837
50-54	80,340	36,811	43,529	90,256	42,270	47,986
55-59	52,416	24,254	28,162	73,262	33,217	40,045
60-64	50,287	22,584	27,703	60,515	27,383	33,132
65-69	32,362	14,273	18,089	46,359	20,917	25,442
70-74	41,164	15,958	25,206	36,640	15,458	21,182
75-79	25,618	10,219	15,399	27,824	11,255	16,569
80+	38,213	13,626	24,587	33,185	12,036	21,149
Total	2,118,252	1,019,398	1,098,854	2,384,404	1,168,674	1,215,730

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	373,619	190,115	183,504	392,260	199,621	192,639
5-9	332,998	171,136	161,862	357,721	183,892	173,830
10-14	281,712	148,180	133,532	333,556	173,728	159,828
15-19	262,794	139,389	123,405	279,654	149,229	130,425
20-24	216,269	110,980	105,289	235,599	121,989	113,610
25-29	186,140	91,365	94,775	205,140	101,990	103,149
30-34	170,082	80,135	89,947	189,183	91,115	98,068
35-39	153,908	71,989	81,919	173,884	82,014	91,870
40-44	139,414	63,055	76,359	162,294	73,832	88,462
45-49	127,656	57,921	69,735	148,763	67,311	81,452
50-54	106,778	49,720	57,058	128,034	58,714	69,320
55-59	89,251	40,153	49,098	106,273	47,436	58,837
60-64	71,667	32,428	39,239	88,116	39,451	48,665
65-69	56,141	25,403	30,738	67,198	30,336	36,862
70-74	40,742	17,461	23,281	50,032	21,455	28,577
75-79	28,764	12,020	16,744	32,610	13,823	18,787
80+	29,544	11,048	18,496	28,993	11,254	17,739
Total	2,667,479	1,312,496	1,354,983	2,979,311	1,467,190	1,512,121

Eastern Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	358,964	183,274	175,690	422,633	213,704	208,929
5-9	328,526	168,039	160,487	348,707	178,364	170,343
10-14	323,564	167,665	155,899	344,685	177,721	166,964
15-19	279,234	144,066	135,168	303,243	155,362	147,881
20-24	221,624	104,571	117,053	242,709	118,776	123,933
25-29	193,386	89,334	104,052	213,075	102,511	110,564
30-34	160,582	75,888	84,694	188,708	89,743	98,965
35-39	146,892	69,418	77,474	172,632	80,423	92,209
40-44	129,241	62,014	67,227	153,502	71,573	81,929
45-49	111,096	53,230	57,866	136,212	64,071	72,141
50-54	102,535	48,238	54,297	115,309	54,397	60,912
55-59	67,498	33,007	34,491	94,311	44,380	49,931
60-64	59,224	28,649	30,575	71,328	34,114	37,214
65-69	37,379	17,459	19,920	53,645	25,119	28,526
70-74	45,712	19,624	26,088	40,970	18,674	22,296
75-79	27,248	11,716	15,532	29,682	12,673	17,009
80+	40,449	14,347	26,102	35,291	12,448	22,843
Total	2,633,154	1,290,539	1,342,615	2,966,642	1,454,053	1,512,589

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	450,389	228,016	222,373	466,675	239,127	227,548
5-9	410,762	208,196	202,566	435,491	223,441	212,049
10-14	365,026	189,556	175,470	426,687	221,966	204,721
15-19	329,174	170,270	158,904	345,770	182,067	163,702
20-24	266,602	132,270	134,332	286,503	145,215	141,288
25-29	236,241	116,279	119,962	256,909	129,644	127,264
30-34	212,344	101,974	110,370	233,101	115,804	117,297
35-39	199,996	93,881	106,115	222,825	106,827	115,998
40-44	177,875	82,860	95,015	204,194	96,901	107,293
45-49	162,277	75,311	86,966	186,425	87,414	99,011
50-54	136,337	63,929	72,408	161,148	75,400	85,747
55-59	114,801	53,598	61,203	134,737	63,243	71,494
60-64	84,427	40,363	44,064	102,312	49,046	53,267
65-69	64,931	30,475	34,456	76,628	36,351	40,277
70-74	45,576	21,077	24,499	55,178	25,865	29,313
75-79	30,706	13,519	17,187	34,327	15,530	18,797
80+	31,388	11,416	19,972	30,287	11,614	18,672
Total	3,318,853	1,632,990	1,685,863	3,659,196	1,825,456	1,833,740

Ashanti Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	638,464	324,983	313,481	740,185	376,768	363,417
5-9	588,287	298,139	290,148	614,862	314,644	300,218
10-14	577,167	287,944	289,223	605,587	303,496	302,091
15-19	514,803	253,131	261,672	550,617	271,439	279,178
20-24	473,522	222,112	251,410	510,526	250,883	259,643
25-29	413,165	189,549	223,616	448,076	216,297	231,779
30-34	335,754	158,786	176,968	388,347	186,726	201,621
35-39	284,107	135,035	149,072	328,564	155,567	172,997
40-44	231,454	113,411	118,043	270,413	130,157	140,256
45-49	179,600	86,001	93,599	216,677	102,920	113,757
50-54	157,382	73,544	83,838	174,223	82,463	91,760
55-59	99,984	48,758	51,226	137,409	65,169	72,240
60-64	82,230	39,789	42,441	97,441	47,100	50,341
65-69	51,432	23,398	28,034	72,536	33,452	39,084
70-74	63,693	26,675	37,018	56,114	25,239	30,875
75-79	35,155	15,171	19,984	37,616	16,308	21,308
80+	54,181	19,626	34,555	46,406	16,925	29,481
Total	4,780,380	2,316,052	2,464,328	5,295,599	2,595,553	2,700,046

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	789,682	402,141	387,541	843,871	429,195	414,676
5-9	725,092	367,399	357,693	792,814	401,268	391,545
10-14	641,905	323,819	318,086	773,740	385,785	387,955
15-19	598,148	297,588	300,560	647,464	323,763	323,701
20-24	561,449	279,482	281,967	622,151	312,176	309,975
25-29	497,388	245,429	251,959	557,793	278,420	279,374
30-34	437,532	212,248	225,284	495,566	245,248	250,318
35-39	381,128	181,664	199,464	438,291	210,322	227,969
40-44	313,706	150,735	162,971	371,777	179,351	192,426
45-49	258,409	121,014	137,395	306,531	142,952	163,580
50-54	206,233	96,944	109,289	251,615	116,337	135,278
55-59	167,449	78,730	88,719	203,010	94,580	108,430
60-64	115,467	55,745	59,722	144,468	68,950	75,518
65-69	87,897	40,601	47,296	107,206	49,337	57,869
70-74	62,485	28,494	33,991	78,086	35,581	42,506
75-79	38,975	17,406	21,569	45,054	20,361	24,693
80+	41,350	15,526	25,824	41,335	16,085	25,250
Total	5,924,294	2,914,964	3,009,330	6,720,773	3,309,710	3,411,063

Brong Ahafo

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	327,551	166,930	160,621	387,176	193,119	194,057
5-9	311,104	159,444	151,660	331,456	167,923	163,533
10-14	294,036	150,551	143,485	314,455	158,344	156,111
15-19	253,449	131,054	122,395	276,279	140,231	136,048
20-24	213,694	102,007	111,687	235,088	114,952	120,136
25-29	182,328	83,978	98,350	201,777	95,604	106,173
30-34	148,370	69,748	78,622	175,170	81,827	93,343
35-39	127,466	61,699	65,767	150,454	70,915	79,539
40-44	106,337	52,540	53,797	126,781	60,158	66,623
45-49	83,886	41,691	42,195	103,247	49,784	53,463
50-54	74,238	36,650	37,588	83,856	41,004	42,852
55-59	45,501	23,599	21,902	63,706	31,474	32,232
60-64	39,205	19,787	19,418	47,398	23,373	24,025
65-69	23,171	11,389	11,782	33,405	16,250	17,155
70-74	32,021	14,003	18,018	28,867	13,221	15,646
75-79	20,213	8,595	11,618	22,156	9,223	12,933
80+	28,413	11,606	16,807	24,940	9,990	14,950
Total	2,310,983	1,145,271	1,165,712	2,606,211	1,277,392	1,328,819

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	413,466	206,354	207,112	435,388	217,010	218,379
5-9	391,299	196,294	195,005	421,598	211,255	210,342
10-14	333,649	169,133	164,516	396,382	198,603	197,779
15-19	300,502	153,910	146,592	320,645	165,034	155,611
20-24	258,773	128,197	130,576	282,652	141,136	141,516
25-29	224,114	108,600	115,514	247,694	121,420	126,274
30-34	197,502	93,114	104,388	220,352	106,038	114,314
35-39	174,689	82,904	91,785	197,983	94,598	103,385
40-44	147,220	69,746	77,474	171,943	81,794	90,149
45-49	123,227	58,601	64,626	144,021	68,207	75,814
50-54	99,338	48,257	51,081	119,407	57,076	62,331
55-59	77,681	38,065	39,616	92,726	45,041	47,685
60-64	56,218	27,694	28,524	69,276	33,745	35,531
65-69	40,521	19,745	20,776	48,642	23,616	25,026
70-74	32,184	14,943	17,241	39,645	18,390	21,256
75-79	22,956	9,853	13,103	26,115	11,349	14,766
80+	22,282	9,175	13,107	21,986	9,360	12,626
Total	2,915,622	1,434,587	1,481,035	3,256,457	1,603,673	1,652,784

Northern Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	423,024	214,090	208,934	501,896	248,672	253,224
5-9	393,594	201,107	192,487	420,874	212,649	208,225
10-14	293,995	154,824	139,171	315,445	163,437	152,008
15-19	261,935	138,919	123,016	286,462	149,200	137,262
20-24	210,682	98,318	112,364	232,523	111,193	121,330
25-29	187,414	81,499	105,915	207,876	93,114	114,762
30-34	155,581	68,182	87,399	184,420	80,278	104,142
35-39	120,728	56,294	64,434	143,165	64,933	78,232
40-44	104,120	49,922	54,198	124,742	57,365	67,377
45-49	73,348	37,777	35,571	90,528	45,269	45,259
50-54	67,123	34,653	32,470	76,080	38,910	37,170
55-59	33,004	17,972	15,032	46,269	24,050	22,219
60-64	46,129	22,989	23,140	55,989	27,259	28,730
65-69	23,974	12,070	11,904	34,687	17,287	17,400
70-74	33,896	16,281	17,615	30,788	15,431	15,357
75-79	17,356	8,791	8,565	19,043	9,466	9,577
80+	33,558	16,199	17,359	29,501	14,002	15,499
Total	2,479,461	1,229,887	1,249,574	2,800,288	1,372,515	1,427,773

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	536,747	266,296	270,451	567,747	281,203	286,545
5-9	497,596	249,124	248,472	538,528	269,214	269,314
10-14	335,260	174,956	160,304	399,938	206,286	193,651
15-19	312,119	164,114	148,005	334,572	176,699	157,874
20-24	256,244	124,278	131,966	281,097	137,384	143,714
25-29	230,952	106,006	124,946	256,253	119,007	137,246
30-34	208,099	91,553	116,546	232,936	104,689	128,247
35-39	166,415	76,075	90,340	189,414	87,163	102,251
40-44	145,064	66,655	78,409	170,167	78,490	91,677
45-49	108,151	53,404	54,747	126,950	62,413	64,537
50-54	90,231	45,891	44,340	108,869	54,502	54,367
55-59	56,480	29,151	27,329	67,690	34,635	33,055
60-64	66,506	32,370	34,136	82,333	39,606	42,727
65-69	42,138	21,049	21,089	50,806	25,280	25,526
70-74	34,411	17,479	16,932	42,576	21,599	20,977
75-79	19,847	10,138	9,709	22,717	11,724	10,993
80+	26,485	12,888	13,597	26,365	13,202	13,163
Total	3,132,742	1,541,423	1,591,319	3,498,958	1,723,095	1,775,863

Upper East Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	145,313	74,794	70,519	169,914	87,870	82,044
5-9	152,242	78,016	74,226	160,518	83,434	77,084
10-14	137,064	71,453	65,611	145,060	76,308	68,752
15-19	115,952	60,310	55,642	125,083	65,528	59,555
20-24	82,512	40,214	42,298	89,828	46,023	43,805
25-29	67,824	30,651	37,173	74,074	35,438	38,636
30-34	57,984	25,615	32,369	67,518	30,521	36,997
35-39	51,323	22,693	28,630	59,822	26,489	33,333
40-44	45,514	19,402	26,112	53,694	22,560	31,134
45-49	37,717	16,564	21,153	45,888	20,086	25,802
50-54	35,251	15,459	19,792	39,293	17,563	21,730
55-59	21,210	9,821	11,389	29,432	13,304	16,128
60-64	25,058	10,407	14,651	29,939	12,485	17,454
65-69	16,020	6,765	9,255	22,774	9,807	12,967
70-74	22,694	9,002	13,692	20,092	8,632	11,460
75-79	14,509	6,413	8,096	15,664	6,988	8,676
80+	18,358	8,826	9,532	15,880	7,716	8,164
Total	1,046,545	506,405	540,140	1,164,471	570,751	593,720

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	181,380	94,078	87,302	174,135	91,548	82,587
5-9	189,371	97,727	91,644	186,009	97,319	88,690
10-14	153,909	81,671	72,238	166,653	88,738	77,915
15-19	136,042	72,063	63,979	132,435	71,501	60,935
20-24	98,898	51,427	47,471	98,547	52,389	46,158
25-29	82,247	40,335	41,912	82,834	41,729	41,104
30-34	76,049	34,799	41,250	77,198	36,670	40,528
35-39	69,380	31,029	38,351	71,518	32,761	38,757
40-44	62,306	26,208	36,098	66,125	28,440	37,684
45-49	54,788	23,692	31,096	58,246	25,516	32,729
50-54	46,535	20,710	25,825	50,940	22,667	28,274
55-59	35,886	16,122	19,764	38,997	17,652	21,345
60-64	35,487	14,824	20,663	39,803	16,713	23,090
65-69	27,596	11,940	15,656	30,134	13,213	16,920
70-74	22,363	9,774	12,589	25,056	11,130	13,926
75-79	16,247	7,482	8,765	16,836	7,974	8,862
80+	14,236	7,100	7,136	12,870	6,703	6,167
Total	1,302,719	640,980	661,739	1,328,336	662,664	665,671

Upper West Region

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	97,943	49,956	47,987	113,934	58,381	55,553
5-9	102,842	52,824	50,018	107,841	56,156	51,684
10-14	91,913	48,430	43,483	96,893	51,563	45,330
15-19	78,336	41,035	37,301	84,166	44,447	39,720
20-24	58,949	29,015	29,934	63,837	32,993	30,844
25-29	47,184	21,312	25,872	51,224	24,468	26,756
30-34	41,413	18,085	23,328	47,912	21,384	26,529
35-39	34,372	15,163	19,209	39,850	17,600	22,251
40-44	30,509	13,109	17,400	35,829	15,187	20,642
45-49	23,640	10,454	13,186	28,586	12,584	16,002
50-54	22,250	9,845	12,405	24,758	11,207	13,551
55-59	13,552	6,398	7,154	18,589	8,510	10,079
60-64	16,860	7,270	9,590	20,060	8,691	11,369
65-69	9,602	4,279	5,323	13,451	6,031	7,420
70-74	12,299	4,990	7,309	10,883	4,798	6,086
75-79	8,641	3,617	5,024	9,231	3,874	5,357
80+	11,805	5,400	6,405	10,170	4,710	5,459
Total	702,110	341,182	360,928	777,214	382,582	394,632

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	121,482	62,143	59,339	116,736	60,501	56,236
5-9	127,125	65,442	61,683	125,002	65,201	59,801
10-14	102,564	54,747	47,817	111,183	59,514	51,668
15-19	91,333	48,493	42,840	89,012	48,138	40,875
20-24	70,254	36,697	33,557	70,088	37,399	32,688
25-29	56,874	27,735	29,139	57,335	28,707	28,628
30-34	53,994	24,298	29,696	54,844	25,615	29,229
35-39	46,205	20,503	25,702	47,679	21,658	26,021
40-44	41,537	17,511	24,026	44,139	19,012	25,128
45-49	34,148	14,787	19,361	36,348	15,933	20,415
50-54	29,210	13,043	16,167	32,013	14,282	17,730
55-59	22,789	10,389	12,400	24,794	11,378	13,416
60-64	23,748	10,240	13,508	26,674	11,552	15,122
65-69	16,463	7,469	8,994	18,007	8,269	9,738
70-74	12,067	5,358	6,709	13,541	6,105	7,436
75-79	9,606	4,174	5,432	9,952	4,450	5,502
80+	9,086	4,297	4,789	8,205	4,058	4,147
Total	868,484	427,326	441,158	885,552	441,774	443,778

Table A4: Population by age and sex-low variant

Age Group	2010			2015		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	3,404,462	1,737,100	1,667,362	3,964,163	2,002,962	1,961,201
5-9	3,129,896	1,584,319	1,545,577	3,312,879	1,688,451	1,624,427
10-14	2,854,231	1,430,577	1,423,654	3,097,352	1,567,043	1,530,310
15-19	2,573,069	1,272,023	1,301,046	2,825,577	1,414,987	1,410,591
20-24	2,290,438	1,105,250	1,185,188	2,537,800	1,251,760	1,286,040
25-29	2,003,419	955,440	1,047,979	2,252,493	1,083,877	1,168,616
30-34	1,699,607	803,180	896,427	1,967,166	935,947	1,031,219
35-39	1,438,859	679,601	759,258	1,665,238	785,200	880,038
40-44	1,180,761	564,366	616,395	1,404,308	661,788	742,520
45-49	970,910	465,892	505,018	1,145,933	546,031	599,902
50-54	769,252	370,190	399,062	933,267	445,530	487,737
55-59	616,707	295,481	321,226	728,001	348,118	379,883
60-64	473,648	224,362	249,286	570,616	270,642	299,974
65-69	379,903	175,356	204,547	419,501	196,219	223,282
70-74	305,836	135,092	170,744	313,254	142,377	170,877
75-79	251,447	103,569	147,878	223,087	96,515	126,572
80+	316,378	123,047	193,331	274,290	106,831	167,459
Total	24,658,823	12,024,845	12,633,978	27,634,926	13,544,278	14,090,648

Age Group	2020			2025		
	Both sexes	Male	Female	Both sexes	Male	Female
0-4	4,162,009	2,104,644	2,057,365	4,280,500	2,166,564	2,113,936
5-9	3,872,479	1,954,942	1,917,536	4,080,900	2,062,647	2,018,254
10-14	3,282,945	1,672,460	1,610,485	3,842,461	1,939,133	1,903,328
15-19	3,069,445	1,551,656	1,517,789	3,256,562	1,657,779	1,598,783
20-24	2,790,127	1,394,296	1,395,831	3,034,395	1,530,967	1,503,427
25-29	2,499,188	1,229,551	1,269,637	2,751,391	1,371,747	1,379,643
30-34	2,215,196	1,063,601	1,151,594	2,461,455	1,208,602	1,252,853
35-39	1,930,809	916,739	1,014,070	2,177,959	1,043,725	1,134,234
40-44	1,628,550	766,322	862,229	1,891,943	896,653	995,291
45-49	1,366,040	641,973	724,066	1,587,666	745,308	842,358
50-54	1,104,287	523,766	580,520	1,319,761	617,660	702,101
55-59	886,717	420,527	466,190	1,052,487	496,190	556,297
60-64	676,001	320,374	355,627	826,772	388,829	437,944
65-69	508,187	238,183	270,003	605,375	283,693	321,683
70-74	348,799	160,802	187,997	425,838	196,893	228,946
75-79	231,082	103,050	128,032	260,308	117,926	142,382
80+	244,651	98,058	146,593	239,151	99,373	139,778
Total	30,816,511	15,160,945	15,655,566	34,094,925	16,823,689	17,271,236