

Kiribati

2005 Census

Volume 2: Analytical Report

January 2007

CONTENTS

Foreword	page vii
Acknowledgement	viii
Summary of main indicators	ix
Executive summary	xi
1 INTRODUCTION	1
2 POPULATION TREND, COMPOSITION AND STRUCTURE	2
2.1 Population trend	2
2.2 Population composition	5
2.3 Population structure	6
3 DEMOGRAPHIC COMPONENTS	12
3.1 Fertility	12
3.2 Mortality	19
3.3 Migration	26
3.3.1 Internal migration	26
3.3.2 International migration	30
4 SOCIAL CHARACTERISTICS	33
4.1 Marital status	33
4.2 Religion	36
4.3 Health	37
4.3.1 Smoking tobacco	37
4.3.2 Drinking alcohol	38
4.4 Educational characteristics	40
4.4.1 School enrolment	40
4.4.2 Educational attainment	40
4.4.3 Educational qualification	42
4.5 Labor market activity	43
4.5.1 Introduction	43
4.5.2 Employed - cash workers and village workers	44
4.5.3 Labour force participation rate and Employment-population ratio	
4.5.4 Employed cash workers by work status	
4.5.5 Employed cash workers by industry group	46
4.5.6 Employed cash workers by occupational group	46
4.5.7 Unemployed	47
4.5.8 Not in the labor force	48
5 HOUSEHOLD CHARACTERISTICS	50
5.1 Household size	50
5.2 Household composition	53
5.3 Household amenities and appliances	54
5.3.1 Private households by main source of drinking water, Kiribati, 2005	54
5.3.2 Private households by type of toilet facility used, Kiribati, 2005	54
5.3.3 Private households by source of lighting, Kiribati, 2005	54
5.3.4 Private households and availability of capital goods, Kiribati, 2005	58

CONTENTS (continue)

6 POPULATION PROJECTIONS	page 59
6.1 Projection Assumptions	59
6.2 Projection Results	66
7 IMPLICATIONS OF DEMOGRAPHIC TRENDS	73
7.1 Population Dynamics	73
7.2 Cross-Cutting Issues	76
Appendices	81
Glossary	90
Island Summary Information	93

LIST OF TABLES

	page
Table 1: Population size, growth, distribution and density by island/region, Kiribati: 1995 to 2005	3
Table 2: Population density (number of persons per sqkm) by island/region, Kiribati: 1995, 2000 and 2005	4
Table 3: Distribution of the population by age, dependency ratio, median age, and sex ratio, Kiribati: 2000 and 2005	9
Table 4: Female population 15 years and older by number of children ever born alive, Kiribati: 2005	12
Table 5: Reported number of births by age of women and year/period of birth of last born child, Kiribati: 2005	13
Table 6: Reported number of children born during 12 months before the census by age group of mother, Kiribati: 2005	13
Table 7: Number of reported deliveries, number of female family planning users, and estimated contraceptive prevalence rate, Kiribati: 2001-2005	16
Table 8: Estimated and adjusted Age Specific Fertility Rates (ASFR), Total Fertility Rate (TFR), Crude Birth Rate (CBR), and Mean Age at Childbearing (MAC), Kiribati: 2005	18
Table 9: Female population 15 years and older by number of children ever born, number of children still alive, and number of children dead, Kiribati: 2005	19
Table 10: Female population 15 years and older by proportion of children ever born still alive, and proportion now dead, Kiribati: 2005	20
Table 11: Mortality indicators, Kiribati: 2005	21
Table 12: Abridged Life Table based on 2005 census data, Kiribati Males: 2005	23
Table 13: Abridged Life Table based on 2005 census data, Kiribati Females: 2005	23
Table 14: Reported number of deliveries, number of deaths due to pregnancy or delivery, and maternal mortality rate, Kiribati: 2001-2004	25
Table 15: Population by place of enumeration and usual residence five years ago (in 2000), Kiribati: 2005	26
Table 16: Interregional migration during 5 years before the 2005 census, Kiribati: 2005	27
Table 17: Population by place of enumeration and place of birth, Kiribati: 2005	27
Table 18: Interregional lifetime migration, Kiribati: 2005	28
Table 19: Population by secondary or tertiary qualification, Kiribati: 2005	42
Table 20: Population 15 years and older by sex, rural-urban residence, labour force participation rate, and employment-population ratio, Kiribati: 2005	
Table 21: Population 15 years and older and unemployment status according to various unemployment concepts, Kiribati: 2005	48
Table 22: Number of private households, number of occupants, and average household size by island/region, Kiribati: 2000 and 2005	50
Table 23: Number of private households by household size and persons per household, Kiribati: 2005	52
Table 24: Population by household composition (relationship to head of household), Kiribati: 2005	53
Table 25: Population structure and indicators according to three different projections, Kiribati: 2025	69

LIST OF FIGURES

	page
Figure 1: Population size, Kiribati and South Tarawa: 1931 to 2005	2
Figure 2: Annual population growth rate by island/region, Kiribati: 2000-2005	3
Figure 3: Population composition, Kiribati: 2005	5
Figure 4: Sex ratio by island/region, Kiribati: 2005	6
Figure 5: Population pyramid, Kiribati: 2000 and 2005	7
Figure 6: Population pyramid, South Tarawa: 2000 and 2005	8
Figure 7: Population pyramid, Rural areas (Outer Islands): 2000 and 2005	8
Figure 8: Proportion of population by broad age groups by island/region, Kiribati, 2005	9
Figure 9: Median age by island/region, Kiribati: 2005	10
Figure 10: Age dependency ratio by island/region, Kiribati: 2005	11
Figure 11: Estimates of TFR based on 'own-children method', Kiribati: 1968-2005	15
Figure 12: Population size 10 years and younger by single years, and (approximate) year of birth, Kiribati: 2005	15
Figure 13: Reported number of deliveries and number of females of childbearing age using family planning, Kiribati: 2001-2005	16
Figure 14: Age specific fertility rates (ASFR), Kiribati: 1995-2005	17
Figure 15: Proportion of children ever born still alive by age of mother, Kiribati: 2005	20
Figure 16: Proportion of population 15 years and older with father/mother still alive, Kiribati, 2005	22
Figure 17: Population 15 years and older by marital status, Kiribati: 2005	33
Figure 18: Population 15 years and older by sex and proportion married, Kiribati: 2005	34
Figure 19: Population 15 years and older by sex and proportion never married (single), Kiribati: 2005	34
Figure 20: Population 15 years and older by sex and proportion widowed, Kiribati: 2005	35
Figure 21: Population by religion, Kiribati: 2005	36
Figure 22: Proportion of population 10 years and older that regularly smokes tobacco, Kiribati: 2005	37
Figure 23: Proportion of population 10 years and older that regularly drinks alcohol, Kiribati: 2005	39
Figure 24: Proportion of population 10 years and older that occasionally drinks alcohol, Kiribati: 2005	39
Figure 25: Population 5 years and older by sex and attending school, Kiribati: 2005	40
Figure 26: Population 15 years and older by sex and educational attainment (in percent), Kiribati: 2005	41
Figure 27: Population 15 years and older by sex and educational attainment (in percent), Kiribati: 1995	42
Figure 28: Population 15 years and older by sex and labor market activity, Kiribati: 2005	44
Figure 29: Population 15 years and older by urban-rural residence and labor market activity, Kiribati: 2005	45
Figure 30: Employed population 15 years and older by age and sex, Kiribati: 2005	45
Figure 31: Population 15 years and older by age and sex and labour force participation rate, Kiribati: 2005	45
Figure 32: Population 15 years and older by age and sex and employment-population ratio, Kiribati: 2005	45
Figure 33: Employed cash workers by work status and sex, Kiribati: 2005	45
Figure 34: Employed cash workers by industry, Kiribati: 2005	46

Figure 35:	Employed cash workers by occupation, Kiribati: 2005	47
Figure 36:	Unemployment rate by age and sex, Kiribati, 2005	48
Figure 37:	Average household size (number of persons per household) by island/region, Kiribati: 2005	51
Figure 38:	Distribution of households and population living in private households, by household size, Kiribati: 2005	52
Figure 39:	Proportion of private households and availability of capital goods	58
Figure 40:	Estimated past levels of fertility, and future fertility assumptions for projections, Kiribati: 1960-2025	61
Figure 41:	Estimated past levels of mortality, and future mortality assumptions for projections, Kiribati: 1995-2025	62
Figure 42:	Migration assumptions for population projections, Kiribati: 2005-2025	64
Figure 43:	Assumed age distribution of net migrants (in per cent of total number of migrants) used for the population projections, Kiribati: 2005-2025	65
Figure 44:	Past and future population trend according to 9 projection variants, Kiribati: 2005 - 2025	66
Figure 45:	Past and future population trend according to the High, Medium, and Low population scenario, Kiribati: 2005 - 2025	67
Figure 46:	Population aged 6-15 years (mandatory school age) according to the High, Medium and Low population scenarios, Kiribati: 2005, 2010, 2015, 2020, and 2025	68
Figure 47:	Population by broad age groups according to 3 scenarios, Kiribati: 2010	70
Figure 48:	Population by broad age groups according to 3 scenarios, Kiribati: 2015	70
Figure 49:	Population by broad age groups according to 3 scenarios, Kiribati: 2025	70
Figure 50:	Population pyramid, High population projection: 2005 and 2025	71
Figure 51:	Population pyramid, Medium population projection: 2005 and 2025	71
Figure 52:	Population pyramid, Low population projection: 2005 and 2025	71

LIST OF MAPS

	page
Map 1: Net migration, Kiribati: 2000-2005	29
Map 2: Percentage of households using various sources of drinking water by island in Kiribati: 2005	55
Map 3: Percentage of household using various types of sanitation by island in Kiribati: 2005	56
Map 4: Percentage of households using various sources of lighting by island in Kiribati: 2005	57

APPENDICES

	Page
A 1: Arriaga's approach for estimation of ASFR for two points in time and the age patterns of fertility (Arriaga-Brass), MORTPAK4.1, procedure FERTPF, United Nations	82
A 2: Estimates of Fertility Based on the Arriaga Method, PAS spreadsheets, procedure ARFE-2, US Census Bureau	83
A 3: Child mortality indices based on number of children ever born and still alive, using procedure CEBCS of MORTPAK 4.1 for MALES, Kiribati: 2005	84
A 4: Child mortality indices based on number of children ever born and still alive, using procedure CEBCS of MORTPAK 4.1 for FEMALES, Kiribati: 2005	85
A 5: Estimated number of deaths by age and sex for 2005, based on 2005 census population and calculated $m(x,n)$ -values from abridged life tables for males and females, Kiribati: 2005	86
A 6: Population 15 years and older by labor market activity, by sex, and by urban/rural residence, Kiribati: 2005	87
A 7: Total fertility rate (TFR) of Australia, France, New Zealand, United States of America, and average TFR of these 4 countries: 1975-2005	88
A 8: Projected population size according to 9 projection scenarios (combination of 3 different fertility and migration assumptions), Kiribati: 2010, 2015, and 2025	89

FOREWORD

Since 1967 the Secretariat of the Pacific Community (SPC) has assisted Pacific Island countries and territories in the areas of population data collection, demographic analysis and population development. With the generous support from bilateral and multilateral donors, most notably AusAID and UNFPA, SPC has been able to provide technical assistance on a range of population issues to our 22 Pacific Island member countries.

During the 1970s and 1980s activities concentrated on population censuses and surveys, covering all aspects from design, data collection and processing to analysis and dissemination, with a strong emphasis on training and institutional capacity building. While maintaining this service to our members, the programme's overall strategic objective was widened in 1990 to include data utilization, paying greater attention to the interrelationship between population and development. This emphasis emerged in direct response to growing demands from our member countries.

Evidence based decision-making and effective planning are essential to good governance. The objective guiding our programme's activities over the last decade has been the strengthening of national capacities in the collection, analysis and utilization of population data, and in fostering a greater understanding of the interdependence between population dynamics and development. To achieve this objective, technical information is communicated so that it can be understood and applied by both technical and non-technical users, in order to familiarise planners and policy-makers with some of the key features of the socio-economic and demographic situation of a country.

The core theme of this report is the analysis of recent population growth and dynamics. In particular the level, trends, and patterns of fertility, mortality, and migration are discussed. The report includes a brief discussion of the likely impacts of some of these dynamics on wider cross-cutting issues such as the environment, health, education, and economic activity. Furthermore it presents a set of population projections in order to assist planners and policy-makers with scenarios of their future population size and structure. The report's aim is to assist decision makers cater effectively for the specific needs of different population groups at different points in time.

The SPC emphasizes the importance of close collaboration with national counterparts to ensure a transfer of knowledge to improve analytical methodologies, and plan and organize national reports. This emphasis will facilitate the long term sustainability of demographic analysis in the region.

This report is based on the 2005 population census and also draws on recent health administrative records. The profile was prepared by SPC's Statistics and Demography Programme, in close collaboration with the Kiribati Statistics Office.

Dr. Jimmie Rodgers
Director General
Secretariat of the Pacific Community

ACKNOWLEDGEMENT FROM KIRIBATI GOVERNMENT

Conducting a population census is generally a costly and time consuming activity however because of the need to know the population level and its characteristics for planning and policy formulation purposes, governments around the world, including the Kiribati government, have committed to undertake such an exercise every five years, or ten years in bigger countries. The population census certainly provides a comprehensive and very rich source of information on the demographic and socio-economic characteristics of the country.

But conducting a population census is not an end in itself—it is a means to the formulation of appropriate policies and strategies and this can be facilitated by having relevant and timely analyses and this is why the production of this analytical report is very important to the Kiribati government.

On behalf of the Kiribati government I want to extend words of thanks to SPC, in particular Andreas Demmke of the Statistics and Demography Programme, for this analytical report. I know it is not easy to decide on the topics to be included and the depth of the analysis to be undertaken given the wide range of information available as well as the range of different users of the census information but I think this report meets the objective of providing the basic demographic statistics as well as exposing interesting topics such as migration, labour force, education, etc. It is important to note that while there is room and scope for more in-depth analysis on the topics shown in this report, the idea behind this report is basically to provide key findings that planners and policy makers could easily understand and use. I acknowledge also with thanks the comments by Mr Jean-Louis Rallu of the UNFPA, Suva, on the draft of this report, particularly on the migration and labour force sections.

As in the past population censuses, the Kiribati government has relied on funding assistance from development partners to supplement its own budget allocation for the conduct of the population census. For the 2005 Population census, AusAID and UNFPA contributed funding assistance and on behalf of the Kiribati government I thank these two donors for their contributions.

On the local front I want to acknowledge the role of Ms Aritita Tekaieti in the conduct of the 2005 Population census as well as in the preparation of this report. I wish also to take this opportunity to thank all staff in the National Statistics Office as well as all census field officers who have taken part and contributed to the success of the 2005 Population Census.

Dr. Iete Rouatu
Director of Planning and Statistics
Ministry of Finance and Economic Development
Kiribati Government

Summary of main indicators

	<u>Total</u>	<u>Males</u>	<u>Females</u>
Total enumerated population (November 2005)	92,533	45,612	46,921
Urban population (South Tarawa)	40,311	19,435	20,876
Percent urban (%)	43.6		
Rate of growth (%) of total population, 2000-2005	1.8		
Rate of natural increase (CBR – CDR)	1.8		
Population density (number of persons per square km)			
Kiribati	127		
South Tarawa	2,558		
Median age (in years)	20.7	19.8	21.7
Per cent of population younger than 15 years of age	37	38	36
Per cent of population 15-24 years of age (youth)	21	21	20
Per cent of population 15-59 years of age	58	57	58
Per cent of population 60 years and older	5	5	6
Age dependency ratio	74		
Households			
Number of private households	13,999		
Number of persons in private households	88,644	43,749	44,895
Average household size	6.3		
Number of institutions (non-private households)	43		
Number of persons in institutions	3,889		
Labor market activity	36,969	20,013	16,956
Employed population (number)	34,715	18,883	15,832
Cash workers (number)	13,133	8,095	5,038
Village workers (number)	21,582	10,788	10,794
Unemployed (number)	2,254	1,130	1,124
Non-labor force	21,069	7,926	13,143
Students	7,323	3,496	3,827
Persons engaged in Home duties	6,077	793	5,284
Inactive persons	3,662	1,996	1,666
Retired persons	3,227	1,179	2,048
Disabled or sick persons	709	398	311
Prisoners	71	64	7

	<u>Total</u>	<u>Males</u>	<u>Females</u>
Labour force participation rate	63.6	71.5	56.3
Employment-population ratio	22.6	28.9	16.7
Unemployment rate (%)	6.1	5.6	6.6
Education			
School enrolment rates of 6-15 year olds (%)	91.0	89.1	93.0
Proportion of population 15 years and older with secondary or higher education	50.5	51.6	49.5
Proportion of total population with secondary or tertiary qualification	19.4	18.2	20.5
Fertility			
Number of births, 2005	2,462		
Crude Birth Rate (CBR), 2005	26.6		
Total Fertility Rate (TFR), 2004-2005			3.5
Teenage Fertility Rate, 2004-2005			39
Mean Age at Childbearing, 2005			29.6
Average age at first marriage (SMAM), 2005	23.4	24.6	22.2
Contraceptive prevalence rate/family planning users (as percentage of women aged 15-49, 2001-2005)			20.5
Mortality			
Number of deaths, 2005	806		
Crude Death Rate (CDR), 2005	8.7		
Life expectancy at birth, 2003	61.0	58.9	63.1
Infant Mortality Rate (IMR), 2003	52	53	51
Child mortality Rate (1q5), 2003	18	18	17
Under 5 mortality (q5), 2003	69	71	67
Maternal mortality rate, 2001-2004			158
International Migration (2000-2005)		negligible	

EXECUTIVE SUMMARY

The aim of this report is to provide an analysis of the 2005 Kiribati census data with a strong emphasis on demographic trends, patterns and levels.

The 2005 census determined that the total population was **92,533**. This compares to 84,494 persons in 2000 and is an increase of 9.5 per cent or 8,039 persons. This increase in population represents **an average annual rate of growth of 1.8** per cent.

However, an **increase of the population in North Tarawa** was most noticeable, as well as in the Line Islands, in particular **Tabuaeran** and **Kiritimati**. Several islands experienced negative growth – a population decline – such as Kanton, Beru, Tamana, Maiana, Butaritari, Abaiang, and Onotoa. In terms of numbers, the largest increase was on South Tarawa with an increase of 3,594 people.

South Tarawa's residents of 40,311 represent 44 per cent of the total Kiribati population. On the Outer Islands of the Gilbert Group lived 43,372 people, and another 8,850 in the Line and Phoenix Group Islands.

The average **population density was 127 persons per square kilometer**. This varies widely from island to island. While Kiritimati has only 13 persons per square km, South Tarawa has 2,558 persons per square km.

The census counted **13,999 private households** with 88,644 household members, which is **6.3 persons per household** on average. In South Tarawa 7.5 persons share 1 household on average. Almost a third (26,798) of all persons that live in private households live in households with 10 persons or more, and 7,191 persons live in households with 15 persons or more.

The long time trend of rural to urban (South Tarawa) migration has eased. The 2005 census data show a **net flow of persons from the Gilbert Group Islands towards the Line Islands** during the intercensal period 2000-2005.

The 2005 census enumerated 45,612 males and 46,921 females, which accounts to a **sex ratio of 97** males per 100 females.

Kiribati has a young population with a **median age of 20.7** years. More than one third (37 per cent) of the population were younger than 15 years of age, and only 5 per cent were 60 years and older.

The **age dependency ratio of 74** was calculated by using the 15-59 year old population as 'working age population'; for every 100 persons in the working ages, there were 74 persons in the dependent ages.

The **number of births was estimated at 2,462 in 2005**, and the **Total Fertility Rate (TFR)**, the average number of births per woman, declined quite dramatically from about

4.5 during the 1990s to about **3.5 in 2005**. The overall fertility decline can be attributed to all age groups of women, although the largest fertility decline was among women aged 25-29 years.

Census data and hospital records are consistent by showing a particular low number of births and deliveries during the 3-year period 2002-2004. The low number of births is consistent with a low population count of the 1-3 year olds in the census. This particular period was characterized by a relatively high percentage of family planning users among women of childbearing age. The **contraceptive prevalence rate was about 22 per cent** among this group, while it was below 20 per cent before and after 2002-2004.

Based on census data for the number of children ever born and still alive, the infant **mortality rate (IMR) was estimated at 52**; 53 for males and 51 for females. This estimate is significantly lower than in 1995 when the IMR was estimated at 67 and 56 for males and females respectively.

Based on the estimated childhood mortality rates, **life expectancies at birth were estimated at 58.9 and 63.1 years for males and females** respectively.

The estimated mortality indicators show more positive mortality indicators for females than for males, with females expected to live, on average, 4 years longer than males.

Based on hospital records, the average **maternal mortality rate** for the period 2001-2004 is calculated at **158 maternal deaths per 100,000 births**.

Net international migration was so small during the intercensal period 2000-2005, it was insignificant. However, this does not mean that there was no population movement during this time. For example, several hundred I-Kiribati repatriated from Nauru back to Kiribati during the last several years following the deterioration of Nauru's phosphate driven economy.

At the same time several hundred I-Kiribati left the country for New Zealand during the period 2000-2005, for the purpose of establishing permanent residence there. Under the so-called *Pacific Access Category*, **75 persons per year are allowed to migrate to New Zealand**, irrespective of socio-economic background.

Since the repatriation of I-Kiribati from Nauru to Kiribati was completed in 2006, and migration towards New Zealand continues, **net migration** can now be expected to be **negative**: there will be more departures than arrivals in Kiribati since a steady flow of migration seems to have established, at least towards New Zealand.

Women marry at younger ages than men. The average **age at marriage was 24.6 and 22.2 years for males and females** respectively.

With 55 per cent of the population affiliated to the **Roman Catholic Church**, it remains the dominant religious denomination of the population. The next largest group was the

Kiribati Protestant Church with 36 per cent of all persons, followed by the Mormons with 3 per cent. The only other religion with more than 2,000 members was the Bahai. All other religions had less than 2 per cent of the population as members

The 2005 census questionnaire included several questions on **smoking and drinking alcohol practices** of the population aged 10 years and older. Perhaps not surprisingly, the proportion of males smoking tobacco and drinking alcohol is higher than females at any age. According to information collected almost 70 per cent of the young adult male population aged 30-54 said that they are regular smokers. This compares to less than 50 per cent of the adult female population.

According to the 2005 census data less than 15 per cent of males and less than 2 per cent of females drank alcohol regularly. A considerably higher proportion claimed to drink alcohol *sometimes*. More than 40 per cent of males aged 20-34 drank alcohol *sometimes*. The proportion of teenage (15-19 years of age) male and female 'occasional drinkers' was 26 and 3 per cent respectively.

School enrolment data shows that almost 9 per cent of children in the age group 6–15 years (compulsory school age) were not enrolled in schools, and almost 20 per cent of 15 year olds were not attending school. This represents a **significant improvement compared to 1995** data when almost 15 per cent of the 6-15 year age group did not attend school. Female school enrollment rates were higher than males.

Data on **educational attainment** confirm that educational levels have increased considerably since 1995. While only 27.1 and 20.6 per cent of males and females had secondary or higher education in 1995, this percentage has increased to 51.6 and 49.5 for males and females in 2005.

The proportion of the population with **secondary or tertiary qualifications** was 18.2 per cent of males and 20.5 per cent of females

Although a high percentage (64 per cent) of the Kiribati population 15 years and older was **economically active**, only a relatively small proportion (23 per cent) was **regularly employed and received a regular cash income**; 29 per cent of males and 17 per cent of females. More than half (53 per cent) of the employed cash workers were employed in the **Public Administration**.

Village work (subsistence farmers or fishermen) such as growing or gathering produce or fishing to feed their families was the main activity of 39 and 36 per cent of males and females 15 years and older. The proportion of village workers (of 51 per cent) was much higher in the rural (Outer Islands) areas, than in South Tarawa (urban), where only 20 per cent were village workers.

The **unemployment rate was 6.1 per cent** of the total labour force. The level of unemployment for males was 5.6 per cent and 6.6 per cent for females. In the urban areas, the unemployment level was recorded at 10.9 per cent compared with 2.8 per cent

in the rural areas. However, **including village workers as part of the unemployed**, on the grounds that these persons would look for work if they believed cash work was available in their labour market community, the total unemployment level would increase to 23,836 persons or an **unemployment rate of 64.5 per cent** (59.6 per cent for males and 70.3 per cent for females).

Seventy per cent of all households obtained their **drinking water** from an open well.

The most frequently recorded **toilet facility** used by half of all Kiribati households was *beach (lagoon side)*, followed by a *latrine* (a third of the total households use this), and another 30 per cent used the *sea (ocean side)*, and 27 per cent the *bush*.

The most common means of **lighting** in Kiribati is the *pressure lamp* (62 per cent of households uses this) followed by the *public electric generator* (40 per cent uses this). However, the public generator was mainly used in South Tarawa and Kiritimati.

Regarding availability of **food, communication, and transport equipment**, every fifth household owned a **fridge**, 7 per cent of all households owned a **car**, a home **phone** was available to 57 per cent of all households, and only every tenth (11 per cent) of all households owned a **TV**.

According to the **population projections** prepared for this report, the population of Kiribati in 2025 will increase to about 130,000 people.

The population will have aged with a decreasing proportion of the young population aged 15 years and younger, and a doubling of the population aged 60 years and older. It is especially the working age population 15-59 year of age that will increase to about 79,000 people.

The analysis of census data provides timely and accurate information about demographic trends, patterns, and levels. Through census data analysis, Governments acquire comprehensive and consistent information on their country's population structure, population processes and socio-economic characteristics. The population data provided in this report can be an effective tool for planning and policy makers. Because policies are aimed at achieving goals in the future, knowledge about future population trends is required. Understanding and anticipating population changes enables development planners to formulate effective development programmes in areas as diverse as health, environment, poverty reduction, social progress, and economic growth.

1 INTRODUCTION

This report provides an analysis of the Kiribati 2005 census data and, where possible, it presents comparisons with the 2000 and earlier census data.

Kiribati consists of three groups of 33 coral atolls, the Gilbert Islands, the Phoenix Islands, the Line Islands and one isolated volcanic island, Banaba or Ocean Island, spread over an area of five million square kilometers of the Central Pacific Ocean with a total land area of 810.5 sq. km. Administered formerly by Britain, Kiribati became independent on 12 July 1979. Tarawa, the capital and most populous island is about 1,800 km north of Suva, Fiji.

The report is a collaborative effort of the National Statistics Office of Kiribati, in particular with the Census Commissioner, Ms Aritita Tekaieti, and SPC's Statistics & Demography Programme. For this purpose, Ms Tekaieti visited SPC in Noumea from 7-28 October 2006. Iete Rouatu, the Director of Planning and Statistics, Ministry of Finance, Kiribati, reviewed and commented on the final draft of this report.

The report is based on information presented in Volume I of the Census report which provides a collection of basic tables: information on each topic of information collected in the 2005 Kiribati census.

The purpose of this report (Volume II) is twofold:

- to provide a general overview of the vast amount of detailed information that is available from the 2005 and earlier census enumerations, and
- to generate interest, curiosity, and a desire for more detailed information.

Such information is provided in Volume I, Basic Information. Otherwise data users are encouraged to contact either the Kiribati Statistics Office or SPC's Statistics & Demography Programme for further information.

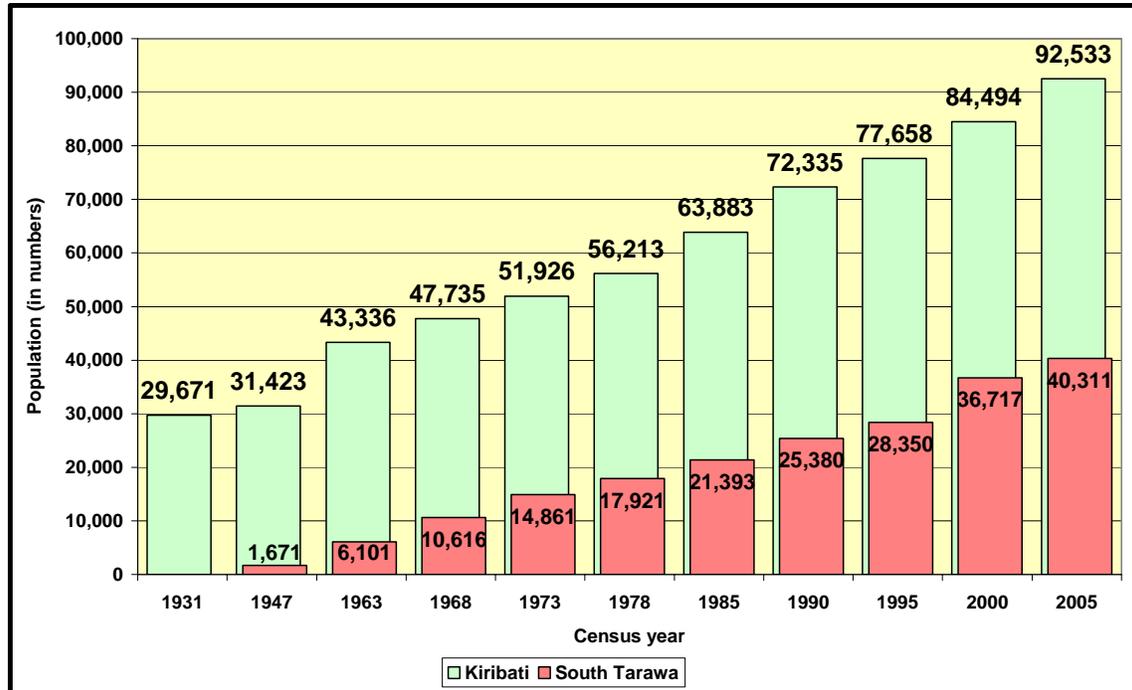
Kiribati Statistics Office:	SPC's Statistics & Demography Programme
Ministry of Finance & Economic Development P.O.Box 67 Bairiki, Tarawa Kiribati Telephone: +686 21816 Facsimile: +686 21307 E-mail: statistics@mfep.gov.ki	Secretariat of the Pacific Community BP D5, 98848 Noumea Cedex New Caledonia Telephone: +687 26 20 00 Facsimile: +687 26 38 18 E-mail: Stats&Demog@spc.int http://www.spc.int

2 POPULATION TREND, COMPOSITION AND STRUCTURE

2.1 Population trend

The population of Kiribati, as enumerated on 7 November 2005, was 92,533 people: 45,612 males and 46,921 females. This is an increase of 8,039 persons in 5 years compared to the 2000 census (84,494) with an annual rate of growth of 1.8 per cent.

Figure 1: Population size, Kiribati and South Tarawa: 1931 to 2005



Note: 1931 data for South Tarawa is not available

Kiribati's population has steadily increased since the 1930s when the first census was conducted (Figure 1). With a population of just under 30,000 people in 1931, 56,000 people in 1978, and over 90,000 in the year 2005, the Kiribati population more than tripled in size during the last 74 years.

Population growth varied extensively by island and group of islands (Table 1, Figure 2). While the overall growth rate of Kiribati was 1.8 per cent per annum, the Gilbert Group islands grew only at a rate of 1.4 per cent while the Line & Phoenix group islands grew at a very rapid rate of 6.7 per cent per annum.

Islands that experienced significant population increase include: South Tarawa (3,594); Kiritimati (1,684); Tabuaeran (782); Makin (694); Abemama (262); and North Tabiteuea (235).

There were several islands that experienced a population loss, expressed by its negative growth rates, such as Butaritari, Abaiang, Maiana, Beru, Onotoa, Tamana, and Kanton.

The island with the fastest growth was Kiritimati with an average annual growth rate of 8.0 per cent.

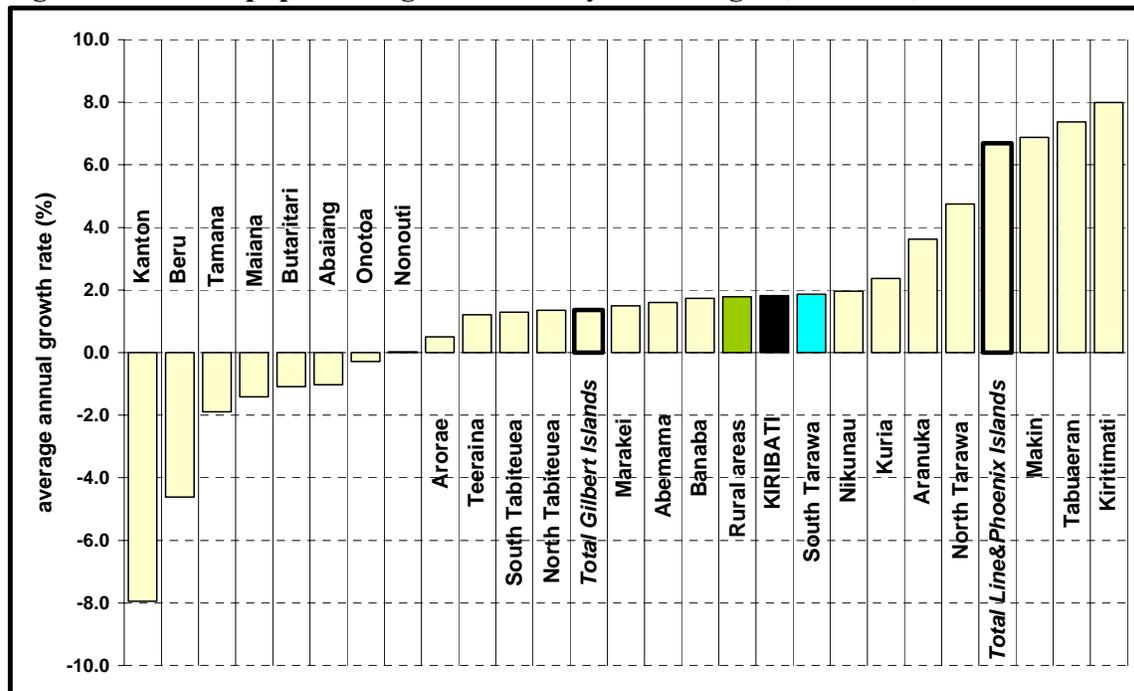
Table 1: Population size, growth, distribution and density by island/region, Kiribati: 1995, 2000, and 2005

Island/region	Census total population			Population change					
				(in numbers)		(in %)		annual growth rate	
	1995	2000	2005	1995-2000	2000-2005	1995-2000	2000-2005	1995-2000	2000-2005
Banaba	339	276	301	-63	25	-18.6	9.1	-4.1	1.7
Makin	1,830	1,691	2,385	-139	694	-7.6	41.0	-1.6	6.9
Butaritari	3,909	3,464	3,280	-445	-184	-11.4	-5.3	-2.4	-1.1
Marakei	2,724	2,544	2,741	-180	197	-6.6	7.7	-1.4	1.5
Abaiang	6,020	5,794	5,502	-226	-292	-3.8	-5.0	-0.8	-1.0
North Tarawa	4,004	4,477	5,678	473	1,201	11.8	26.8	2.2	4.8
South Tarawa	28,350	36,717	40,311	8,367	3,594	29.5	9.8	5.2	1.9
Maiana	2,184	2,048	1,908	-136	-140	-6.2	-6.8	-1.3	-1.4
Abemama	3,442	3,142	3,404	-300	262	-8.7	8.3	-1.8	1.6
Kuria	971	961	1,082	-10	121	-1.0	12.6	-0.2	2.4
Aranuka	1,015	966	1,158	-49	192	-4.8	19.9	-1.0	3.6
Nonouti	3,042	3,176	3,179	134	3	4.4	0.1	0.9	0.0
North Tabiteuea	3,383	3,365	3,600	-18	235	-0.5	7.0	-0.1	1.4
South Tabiteuea	1,404	1,217	1,298	-187	81	-13.3	6.7	-2.9	1.3
Beru	2,784	2,732	2,169	-52	-563	-1.9	-20.6	-0.4	-4.6
Nikunau	2,009	1,733	1,912	-276	179	-13.7	10.3	-3.0	2.0
Onotoa	1,918	1,668	1,644	-250	-24	-13.0	-1.4	-2.8	-0.3
Tamana	1,181	962	875	-219	-87	-18.5	-9.0	-4.1	-1.9
Arorae	1,248	1,225	1,256	-23	31	-1.8	2.5	-0.4	0.5
Gilbert Group islands	71,757	78,158	83,683	6,401	5,525	8.9	7.1	1.7	1.4
Teeraina	978	1,087	1,155	109	68	11.1	6.3	2.1	1.2
Tabuaeran	1,615	1,757	2,539	142	782	8.8	44.5	1.7	7.4
Kiritimati	3,225	3,431	5,115	206	1,684	6.4	49.1	1.2	8.0
Kanton	83	61	41	-22	-20	-26.5	-32.8	-6.2	-7.9
Line & Phoenix Group islands	5,901	6,336	8,850	435	2,514	7.4	39.7	1.4	6.7
Rural	49,308	47,777	52,222	-1,531	4,445	-3.1	9.3	-0.6	1.8
Urban	28,350	36,717	40,311	8,367	3,594	29.5	9.8	5.2	1.9
TOTAL	77,658	84,494	92,533	6,836	8,039	8.8	9.5	1.7	1.8

Rural: Outer islands = All islands except South Tarawa;

Urban: South Tarawa

Figure 2: Annual population growth rate by island/region, Kiribati, 2000-2005



The proportion of the Kiribati population living in the Gilbert Group islands in 2005 was 90%, and steadily decreased since 1985 when almost 96 per cent lived there. The proportion of the total Kiribati population living in the Line & Phoenix Group was almost 10 per cent and has continuously increased since 1985 when only 4.2 per cent lived there.

Almost 44 per cent of the population of Kiribati lived in South Tarawa in 2005. Its population increased from 25,380 in 1990, and 36,717 in 2000, to 40,311 in 2005. In terms of numbers, the increase on South Tarawa of 3,594 is by far the largest increase in the whole of Kiribati. The noted increase for Kiritimati island, for comparison purposes, is just 1,684.

According to the 2005 census data, the average population density of the total population of Kiribati was 127 persons per square kilometer, representing an increase from 107 and 116 in 1995 and 2000, respectively (Table 2).

The population density varied widely by island (group). While there were almost 300 people per km² in the Gilbert Group, only 20 people per km² inhabited the Line and Phoenix Islands.

Table 2: Population density (number of persons per sqkm) by island/region, Kiribati: 1995, 2000 and 2005

Island/region	land area (sq.km)	Population density		
		1995	2000	2005
Banaba	6.29	54	44	48
Makin	7.89	232	214	302
Butaritari	13.49	290	257	243
Marakei	14.13	193	180	194
Abaiang	17.48	344	331	315
North Tarawa	15.26	262	293	372
South Tarawa	15.76	1,799	2,330	2,558
Maiana	16.72	131	122	114
Abemama	27.37	126	115	124
Kuria	15.48	63	62	70
Aranuka	11.61	87	83	100
Nonouti	19.85	153	160	160
North Tabiteuea	25.78	131	131	140
South Tabiteuea	11.85	118	103	110
Beru	17.65	158	155	123
Nikunau	19.08	105	91	100
Onotoa	15.62	123	107	105
Tamana	4.73	250	203	185
Arorae	9.48	132	129	132
Gilbert Group total	285.52	251	274	293
Teeraina	9.55	102	114	121
Tabuaeran	33.73	48	52	75
Kiritimati	388.39	8	9	13
Kanton	9.15	9	7	4
Line & Phoenix Group total	440.82	13	14	20
Kiribati	726.34	107	116	127

* note: the stated total Kiribati area excludes 84.2 sqkm of uninhabited islands

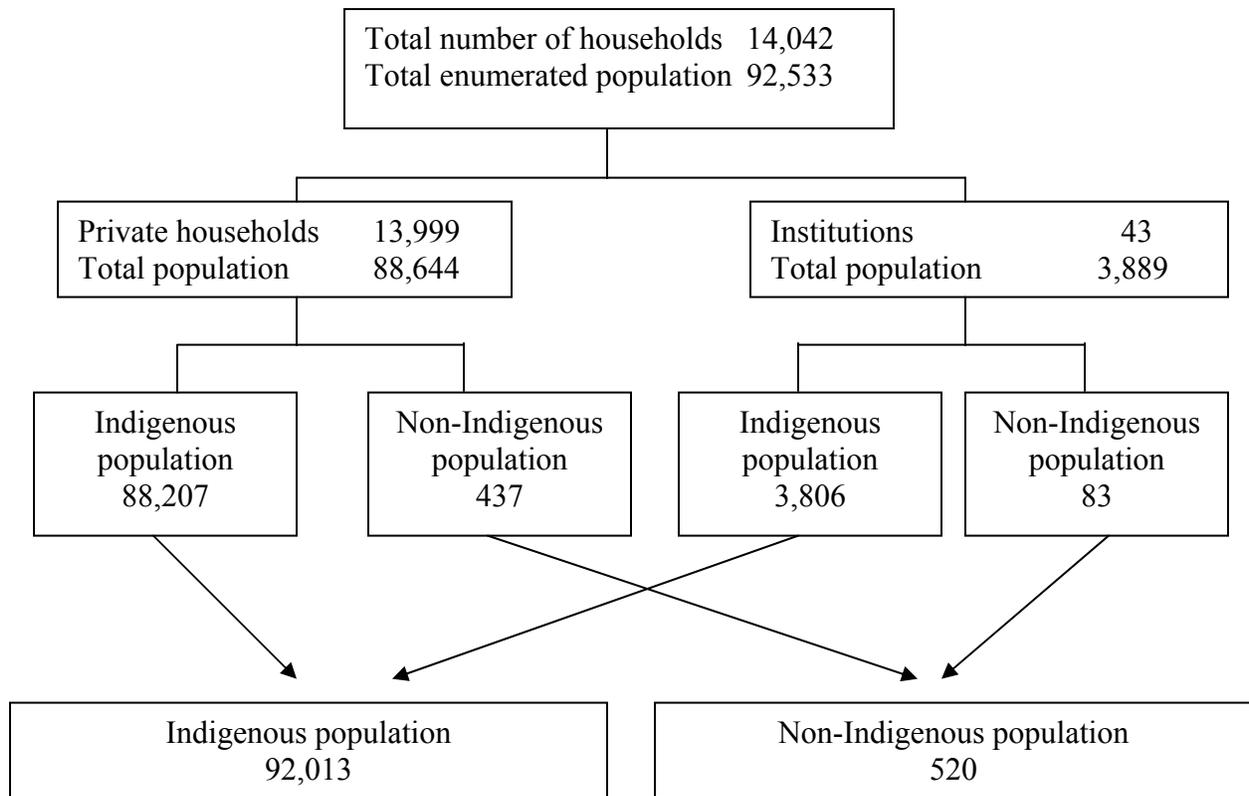
This discrepancy is explained by the very high density of South Tarawa of 2,558 people/km² and on the other hand the very low density of the biggest of Kiribati's islands: Kiritimati has only 13 people per km².

2.2 Population composition

The total enumerated population of 92,533 people included 92,013 indigenous people, and 520 non-indigenous people such as Tuvaluans, Fijian, Australian and New Zealanders, and other Pacific islanders (Figure 3).

Of the enumerated population, 88,644 people lived in 13,999 private households, and 3,889 people in 43 institutions such as prisons, hotels, hospitals, dormitories, and maneabas (meeting houses).

Figure 3: Population composition, Kiribati, 2005



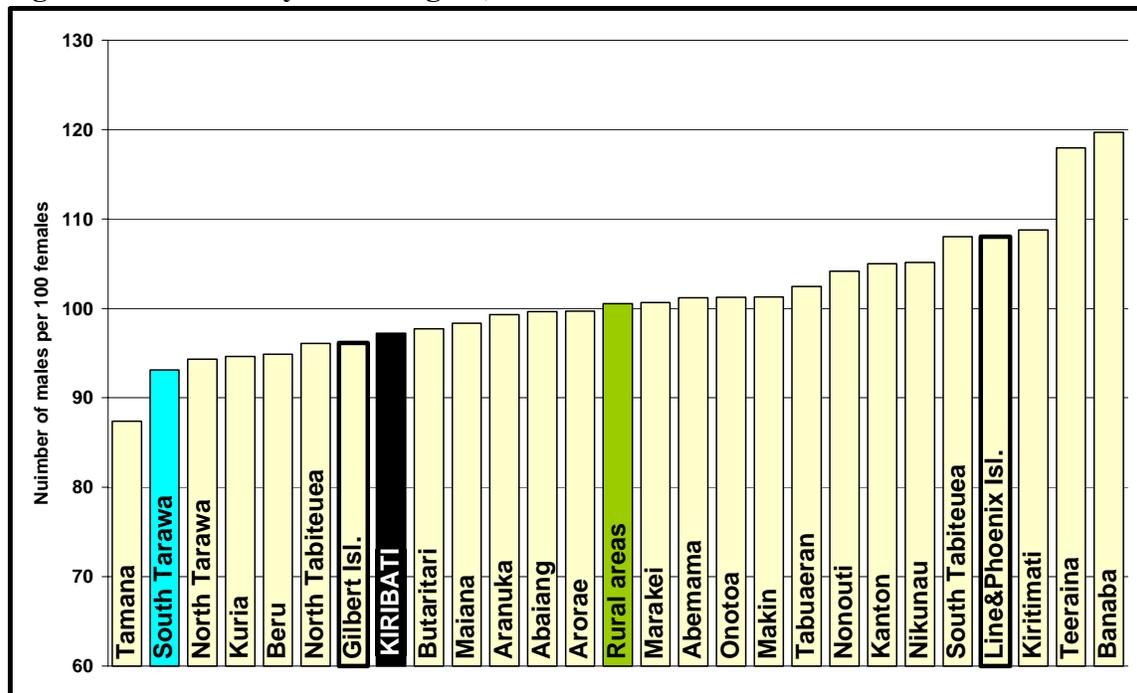
2.3 Population structure

The enumerated 2005 population consisted of 45,612 males and 46,921 females, a surplus of 1,309 females, resulting in a sex ratio of 97, which means that there were 97 males per 100 females. However, sex ratios varied widely by island/region (Figure 4).

A sex ratio of 100 means that there were equal numbers of males and females. A sex ratio lower than 100 means that there were less males than females, and a sex ratio higher than 100 means that there were more males than females.

From figure 4 it becomes clear that there was a significant surplus of females in South Tarawa, and a noticeable surplus of males in the Line and Phoenix Islands.

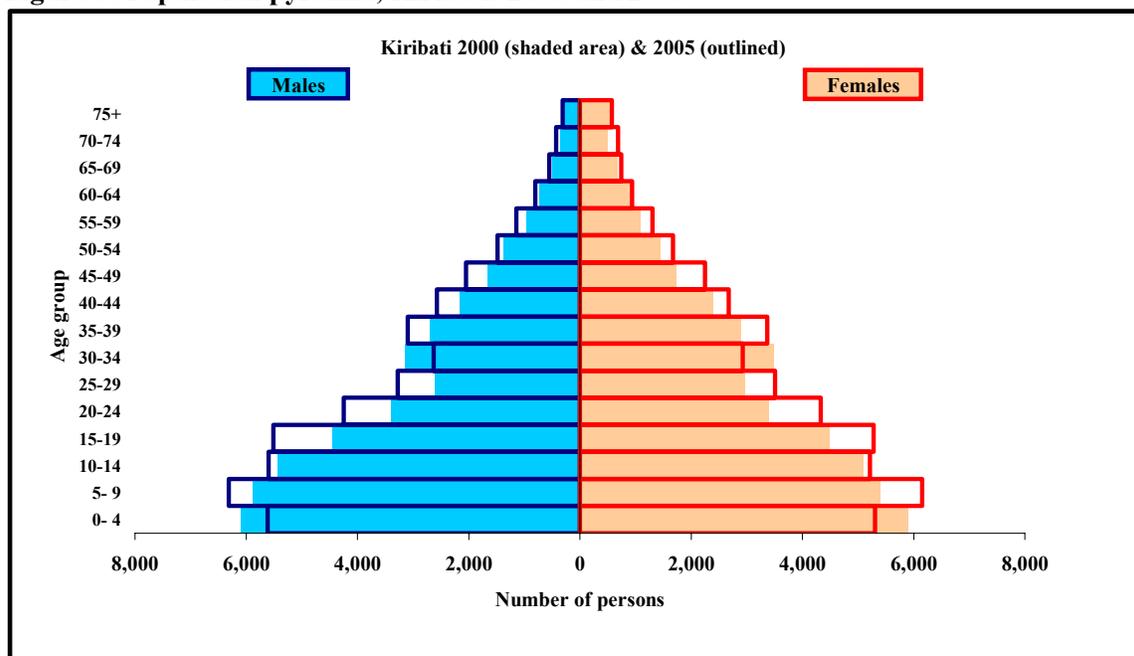
Figure 4: Sex ratio by island/region, Kiribati: 2005



A population pyramid (Figure 5, 6 and 7) shows the number of males and females in 5-year age groups, starting with the youngest age group at the bottom, and increasing with age towards the top of the pyramid. The number of males is depicted to the left and the number of females to the right side of the center of the pyramid.

The shaded area shows the population count of the 2000 census, while the thickly outlined area shows the population count of the 2005 census. Note that the people counted in the 2000 census were 5 years older in the 2005 census, if they were present in Kiribati and enumerated during both censuses.

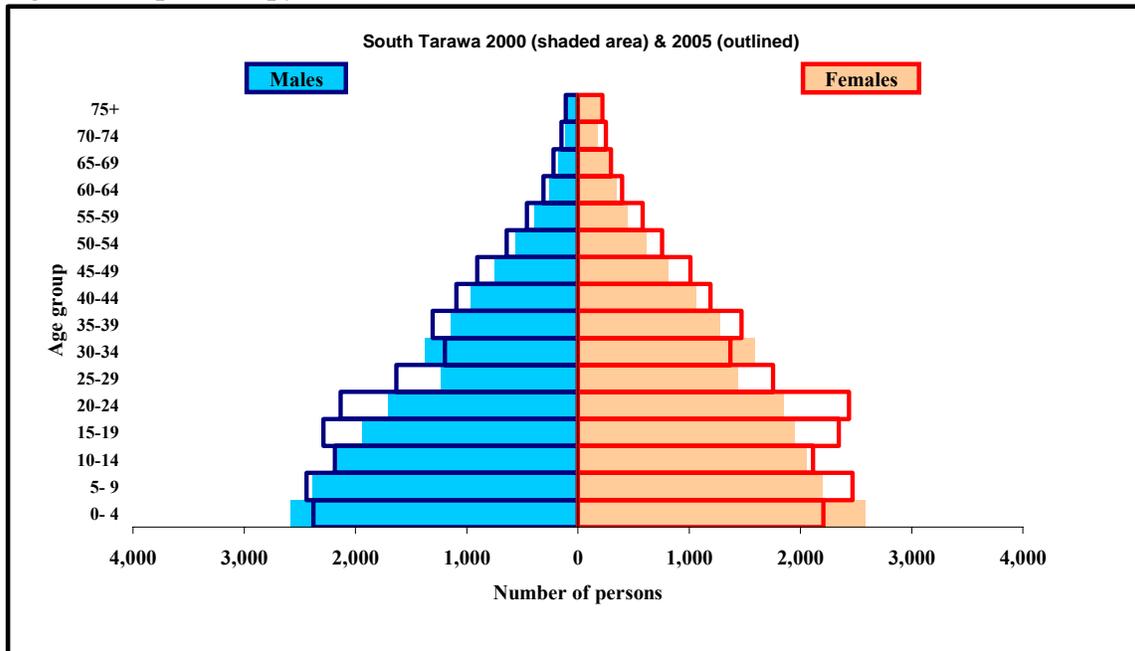
Figure 5: Population pyramid, Kiribati: 2000 and 2005



A distinct feature of the Kiribati population pyramid is the indent of the 30–34 year age groups, meaning that these age groups are much smaller in number than the younger and older age groups. By comparing the 2005 population pyramid with pyramids of earlier censuses it can be seen that the older the census, the further this indent moves towards the younger ages. In the early 1970s, the Kiribati government launched a quite vigorous and seemingly successful family planning programme in Kiribati, which resulted in a relatively low number of births during those years and therefore small birth cohorts (Figure 11). The relatively small number of people who were born during the period 1970 to 1975 was 30–34 years old in 2005.

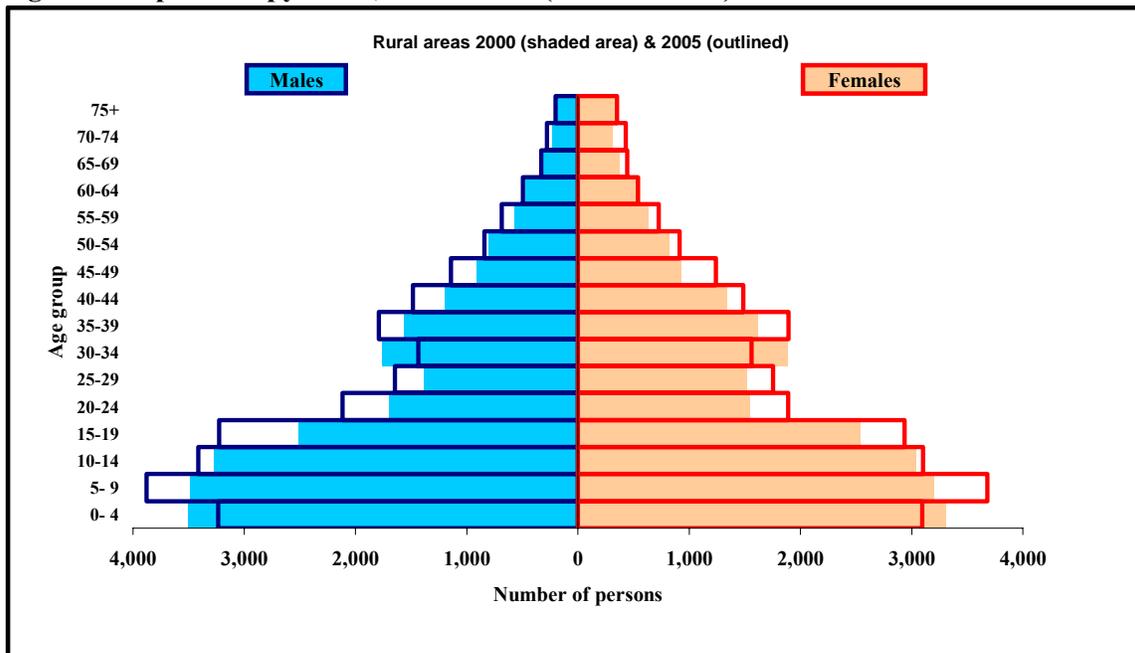
The narrowing of the population bar of the 0-4 year olds compared to the 5-9 year olds shows a smaller number of people aged 0-4 relative to the 5-9 year olds, the result of a renewed fertility decline (reduction of the number of annual births) during the period 2000-2003 (Figure 11).

Figure 6: Population pyramid, South Tarawa: 2000 and 2005



The most obvious difference in shape between the South Tarawa population pyramid (Figure 6), and that of the Rural Areas (Figure 7), is the distinctly smaller proportion of people aged 20-29 years in the rural areas. This may be the result of migration of young people from the outer islands (rural areas) to South Tarawa and/or to overseas.

Figure 7: Population pyramid, Rural areas (Outer Islands): 2000 and 2005

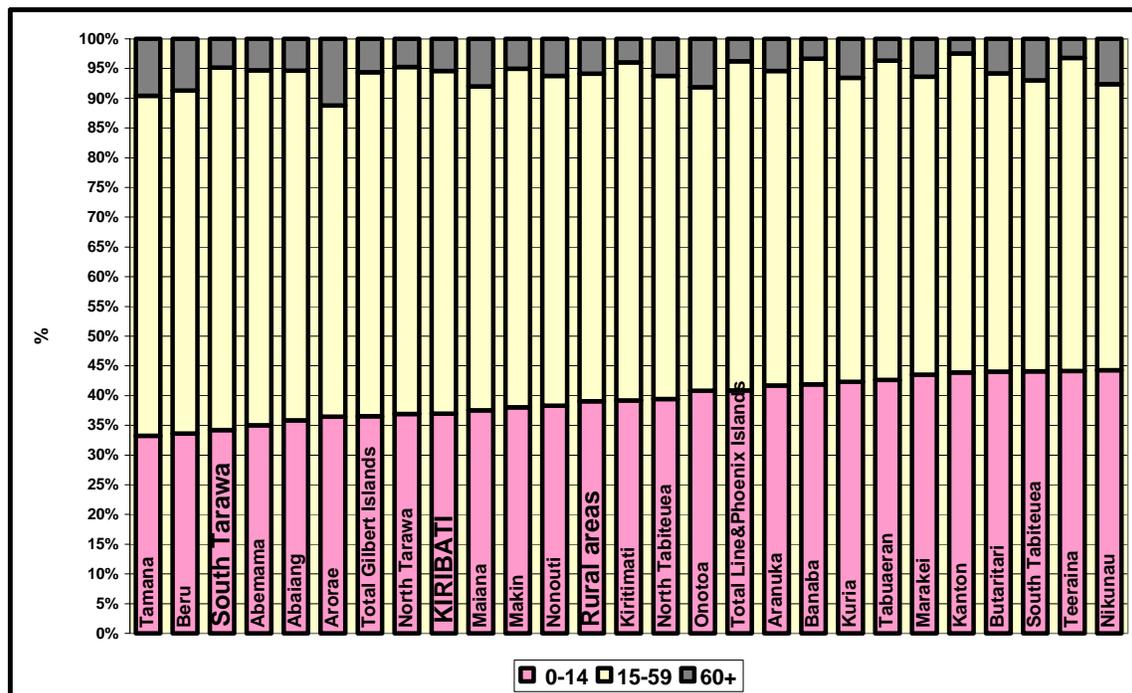


Kiribati's population has a young age structure with 37 per cent of Kiribati's population younger than 15 years of age and only 5 per cent are older than 60 years (Table 3 and Figure 8). This also illustrated by the median age, which was 20.7 years (Table 3 and Figure 9). This means that half of Kiribati's population was younger and the other half older than 20.7 years.

Table 3: Distribution of the population by age, dependency ratio, median age, and sex ratio, Kiribati: 2000 and 2005

Indicators	Kiribati		South Tarawa		Rural areas	
	2000	2005	2000	2005	2000	2005
Proportion of population by broad age group (in %)						
Age group 0-14	40	37	38	34	41	39
Age group 15-59	55	58	57	61	53	55
Age group 60+	5	5	5	5	6	6
Age dependency ratio (15-59)	83	74	74	64	90	82
Median age (years)	19.7	20.7	20.7	21.9	19.0	19.6
Sex ratio (males per 100 females)	97	97	94	93	99	101

Figure 8: Proportion of population by broad age groups by island/region, Kiribati: 2005

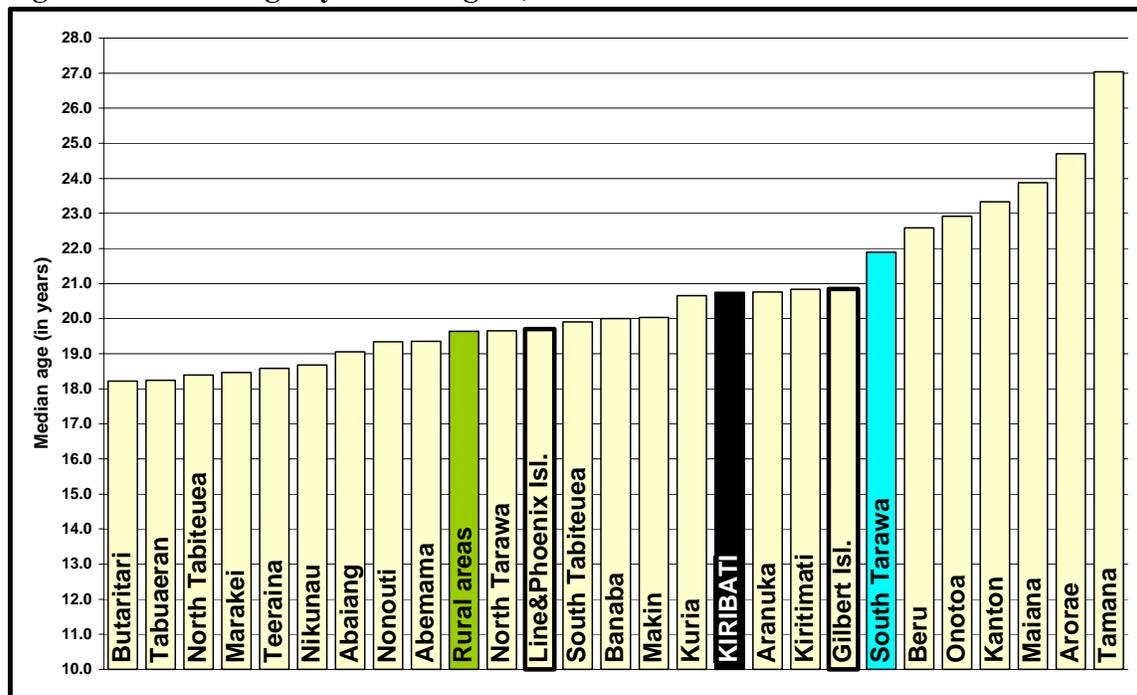


There is, of course, a direct link between the size and proportion of young people (Figure 8), and the median age (Figure 9).

Compared to the 2000 census, the population has aged slightly, when the median age was only 19.7 years (Table 3). This was the result of a decreasing proportion of people aged 0-14 years between 2000 and 2005 (due to a reduction in the average number of births per woman), and at the same time an increase of the proportion of people 15-59 years of age.

Again, the age structure of the different island population varied widely: Butaritari, Tabuaeran, North Tabiteuea, Marakei, Teeraina, and Nikunau had a median age of less than 19 years. In contrast, South Tarawa had a median age of almost 22 years, and Kanton, Maiana, Arorae, and Tamana a median age of older than 23 years.

Figure 9: Median age by island/region, Kiribati: 2005



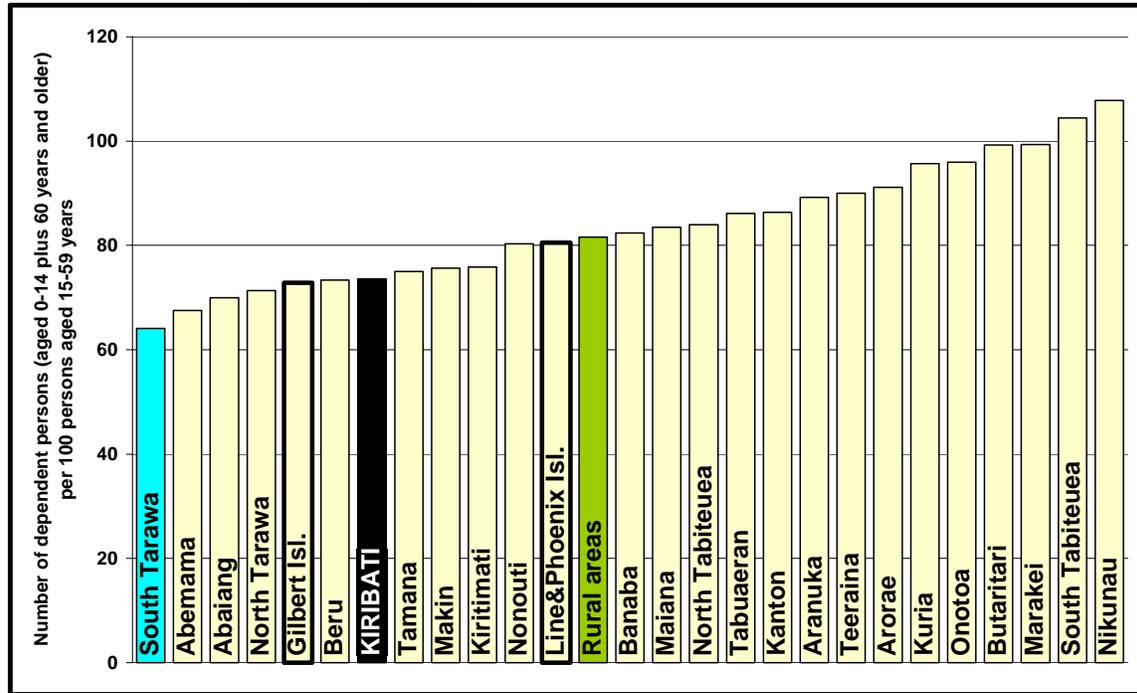
A common way to describe a population’s age structure is via the age dependency ratio, which describes the proportion of the economically-dependent component of a country’s population to its productive component. This is conventionally expressed as the ratio of the young (0–14) plus the old (60+), to the population in the working ages (15–59).

Kiribati’s dependency ratio in 2005 was 74: this means that for every 100 persons in the working ages, there were 74 persons in the dependent ages (Table 3 and Figure 10). The higher the dependency ratio, the higher the number of people that need to be cared for by the working-age population and, it needs to be added, of this group only those who actually work and earn a living. The dependency ratio has decreased since the 2000 census when it was 83. In 1995 it was 87. Based on the population structure (proportion

of people per age group, Figure 8) of the different island populations, the age dependency ratios of the different islands vary accordingly.

The most favorable dependency ratio can be found in South Tarawa with only 64 dependent persons per 100 persons in their working ages. The dependency ratios were generally higher in the rural areas. Especially South Tabiteuea and Nikunau showed very high age dependency ratios of more than 100, meaning that there were more young (0-14 year) and old people (60 years and older), than persons aged 15-59 years.

Figure 10: Age dependency ratio by island/region, Kiribati: 2005



3 DEMOGRAPHIC COMPONENTS

3.1 Fertility

In order to determine the level and pattern of fertility in Kiribati, all women older than 15 years of age were asked the following questions:

- How many children has this woman born alive?
- When was the last child born?

The total number of children born alive to 30,253 women aged 15 years and older was 77,920 (Table 4). The average number of children born alive to all women (average parity) was 2.6 children per woman.

Table 4: Female population 15 years and older by number of children ever born alive, Kiribati: 2005

Age of women	Number of women	Number of children ever born			Average number of children ever born		
		Males	Females	Total	Males	Females	Total
15-19	5,282	214	176	390	0.04	0.03	0.07
20-24	4,327	1,415	1,337	2,752	0.33	0.31	0.64
25-29	3,508	2,805	2,730	5,535	0.80	0.78	1.58
30-34	2,930	3,937	3,841	7,778	1.34	1.31	2.65
35-39	3,364	6,165	5,884	12,049	1.83	1.75	3.58
40-44	2,678	5,575	5,434	11,009	2.08	2.03	4.11
45-49	2,252	5,249	4,873	10,122	2.33	2.16	4.49
50-54	1,671	3,837	3,563	7,400	2.30	2.13	4.43
55-59	1,307	3,092	2,962	6,054	2.37	2.27	4.63
60-64	938	2,297	2,237	4,534	2.45	2.38	4.83
65-69	741	1,956	1,877	3,833	2.64	2.53	5.17
70-74	683	1,720	1,733	3,453	2.52	2.54	5.06
75+	572	1,523	1,488	3,011	2.66	2.60	5.26
Total	30,253	39,785	38,135	77,920	1.32	1.26	2.58

The *average parity* increases with the age of women. While the 15-19 year old women had on average only 0.07 children, women aged 45-49 had 4.5 children, and women older than 65 years of age had on average more than 5 children. The *average parities* of women older than 49 years is also called the '*Completed Fertility Rate*', a cohort measure demonstrating how many children a certain cohort of women who completed their childbearing actually produced during those years.

Based on the question on the date of birth of the last born child, the number of births per year/period can be calculated (Table 5).

Table 5: Reported number of births by age of women and year/period of birth of last born child, Kiribati: 2005

Age group of women	Number of women	Number of births								
		before 1990	1990-1995	1996-2000	2001	2002	2003	2004	2005	NS
15-19	5,282	0	0	11	7	13	31	104	153	8
20-24	4,327	0	10	129	75	170	255	494	573	23
25-29	3,508	4	54	438	231	289	346	556	505	20
30-34	2,930	26	146	639	221	249	308	416	399	24
35-39	3,364	107	339	934	208	309	295	404	313	26
40-44	2,678	242	474	929	149	151	138	179	102	30
45-49	2,252	497	629	702	69	51	26	24	18	24
50-54	1,671	712	539	218	6	3	3	1	1	19
55-59	1,307	899	221	46	0	0	0	0	0	20
60-64	938	744	66	0	0	0	0	0	0	24
65-69	741	646	4	0	0	0	0	0	0	22
70-74	683	565	0	0	0	0	0	0	0	24
75+	572	462	0	0	0	0	0	0	0	23
Total	30,253	4,904	2,482	4,046	966	1,235	1,402	2,178	2,064	287

During the 2005 census enumeration, women reported that 2,397 children were born during the one-year period before the census, between November 2004 and November 2005 (Table 6).

Table 6: Reported number of children born during 12 months before the census by age group of mother, Kiribati: 2005

Age group of women	Number of women	Number of births*
15-19	5,282	162
20-24	4,327	638
25-29	3,508	600
30-34	2,930	477
35-39	3,364	369
40-44	2,678	132
45-49	2,252	19
Total	24,341	2,397

* Note: 195 not stated cases were distributed proportionately

In order to estimate the level of fertility in Kiribati, this analysis relies on indirect estimation techniques, based on census data of the number of children ever born by age of women and the number of children born during the year before the census by age of women as reported in the census. The demographic indicator most commonly used to describe a country's fertility situation is called the *Total Fertility Rate (TFR)*. This measure is an indication of the average number of children a woman gives birth to during her reproductive life (15–49 years of age). It is calculated from the number of live births by age of women in a given year; the *age specific fertility rates (ASFRs)*.

The estimates of the level of fertility are based on 2000 and 2005 census data, to which the Arriaga¹ method was applied, which measures fertility based on data in two points in time. The software PAS of the US Bureau of Census, procedure *ARFE-2*, and MORTPAK 4.1, procedure *FERTPF* of the United Nations were used (Appendix 1 and 2).

The **TFR** for Kiribati has been estimated at about **3.5** in 2004-2005 which is a decline of about 1 child since 1995 when the average number of children born per woman was about 4.5. This fertility trend based on most recent and past census data, point to a significant fertility decline in Kiribati.

Both above mentioned methods produce virtually identical results, which are also consistent with estimates derived by Mr. Michael Levin of the US Census Bureau using the *own-children method* (Figure 11).

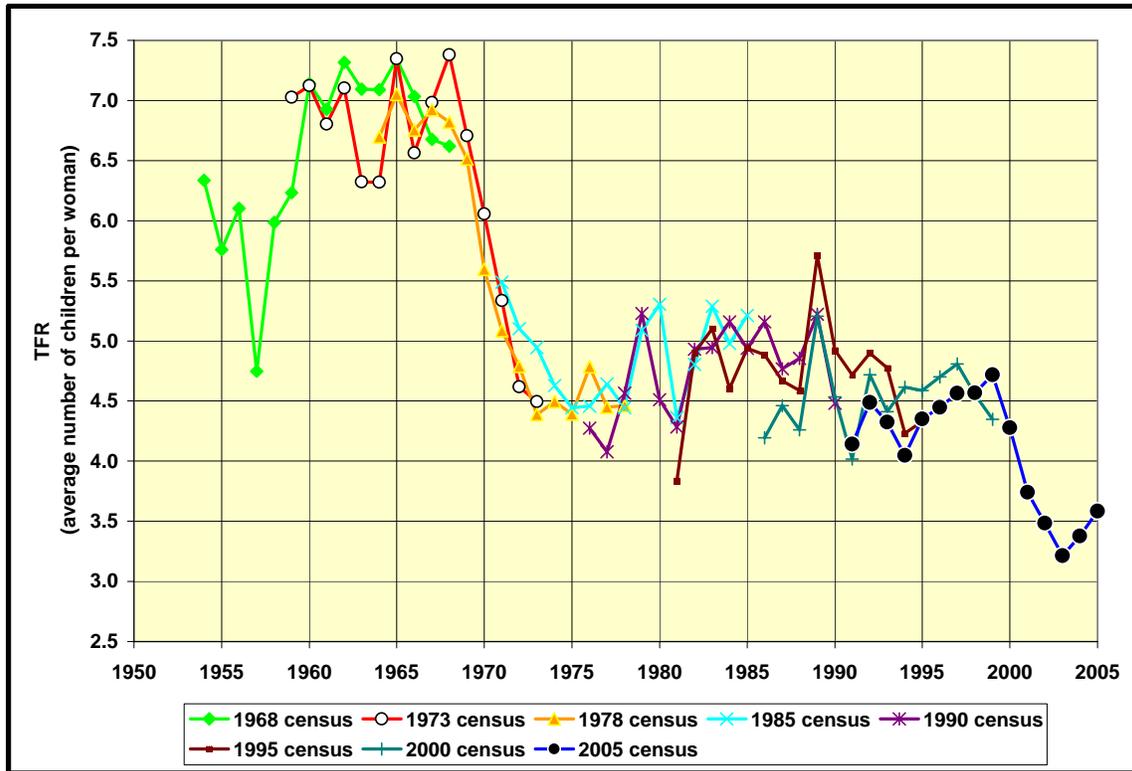
The *own children method* is a procedure for deriving age specific fertility rates for a ten or fifteen year period from a special census tabulation of children classified by age and age of mother, both ages being given in single years at the time of the census. Age of mother can be determined only for those children who are enumerated in the same household as their mother, i.e., who are “own children” of a woman present in some enumerated household, hence the name of the method.

¹ Many censuses and surveys include questions related specifically to fertility, for example, the numbers of children women have had and whether they had a birth in the year preceding the inquiry.

The method seeks to adjust the level of observed age-specific fertility rates, which are assumed to represent the true age pattern of fertility, to agree with the level of fertility indicated by the average parities (average number of children ever born) of women in age groups lower than 30 or 35, which are assumed to be accurate. During successful application of this method, the age pattern of the period fertility rates is combined with the level implied by the average parities of younger women to derive a set of fertility rates that is generally more reliable than either of its constituent parts.

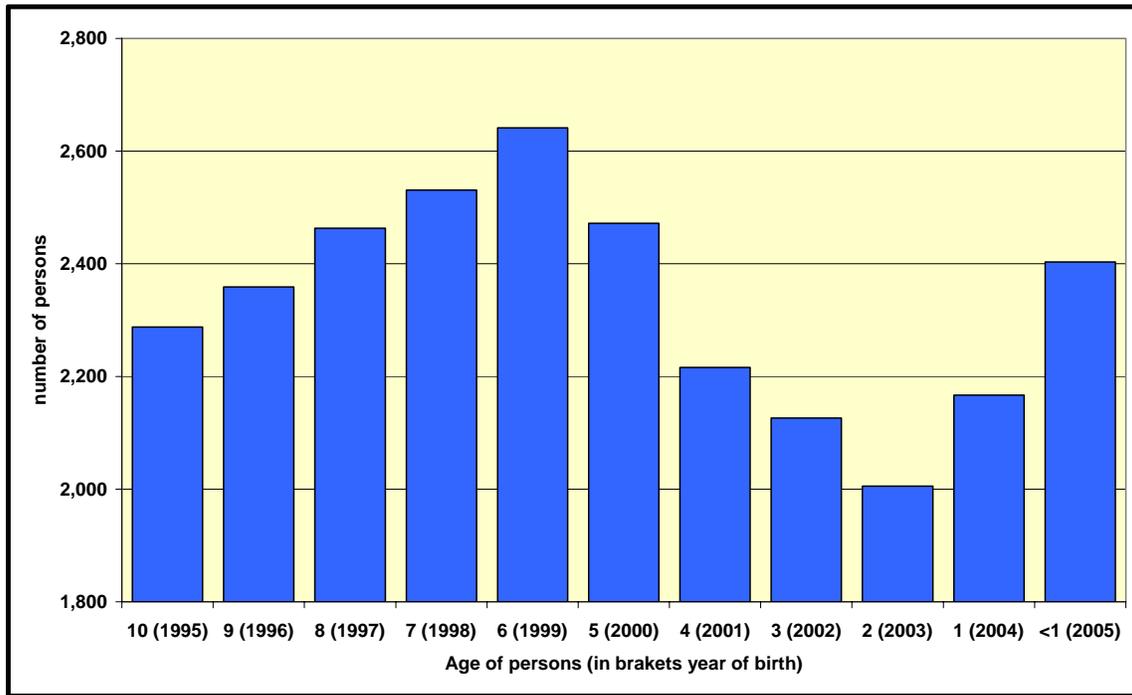
Responses to such questions can be used to estimate fertility indirectly. Some techniques to do this include the P/F (Parity/Fertility) ratio method developed by Brass, based on the average number of children ever born to women in 5-year age groups and women’s age pattern of fertility derived from births in the year preceding the census or survey; and the Arriaga technique, which is similar to the P/F ratio method but links data for more than one date. While the Brass P/F ratio method assumes constant fertility in the past, the Arriaga method does not.

Figure 11: Estimates of TFR based on 'own-children method', Kiribati: 1968-2005



Source: unpublished data, Mr. Michael Levin, US Census Bureau

Figure 12: Population size 10 years and younger by single years, and (approximate) year of birth, Kiribati: 2005



By investigating the 2005 census population structure in more detail (Figure 12), it is interesting to see that there was a distinctive dent at ages 1-3. There were especially few 2 year olds counted in the 2005 census. This was clearly caused by relatively low number of births during the 1-3 year period before the 2005 census, corresponding to the number of births/deliveries registered during the period 2002-2004 (Table 7). A particularly low number of births (deliveries) were registered in the year 2003, which corresponds to the low number of 2-year olds counted in the census. This ‘dip’ can also be clearly seen in Figure 11, the blue line that represents the ‘2005 census’ data. It shows a sharp decrease in the TFR from 1999 to 2003, before it increases in 2004 and 2005. The TFR in the year 2003 is estimated at only 3.2, the lowest fertility rate for Kiribati recorded so far.

Table 7: Number of reported deliveries, number of female family planning users, and estimated contraceptive prevalence rate, Kiribati: 2001-2005

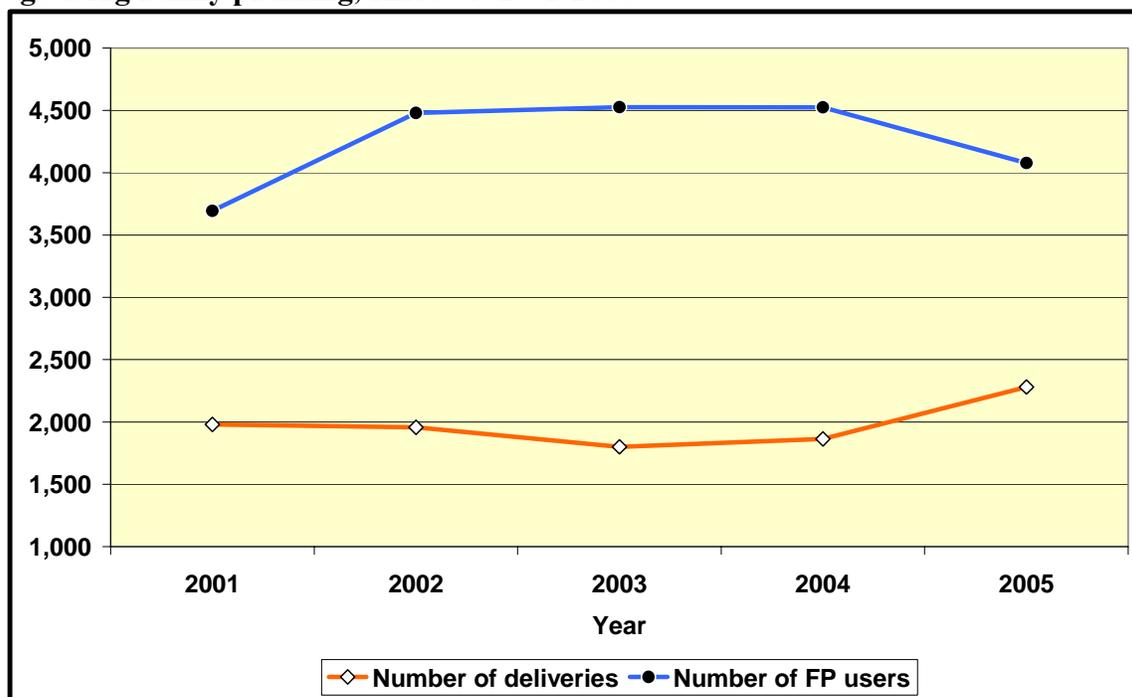
Year	2001	2002	2003	2004	2005
Number of deliveries	1,980	1,957	1,800	1,864	2,281
Number of family planning users	3,694	4,479	4,526	4,525	4,078
Contraceptive prevalence rate*	18.5	22.1	22.0	21.6	18.5

Source: Ministry of Health, Government of Kiribati

*incl. male sterilization

The number of births (deliveries) seems to correlate with the number of family planning users (Figure 13).

Figure 13: Reported number of deliveries and number of females of childbearing age using family planning, Kiribati: 2001-2005



Source: Ministry of Health, Government of Kiribati

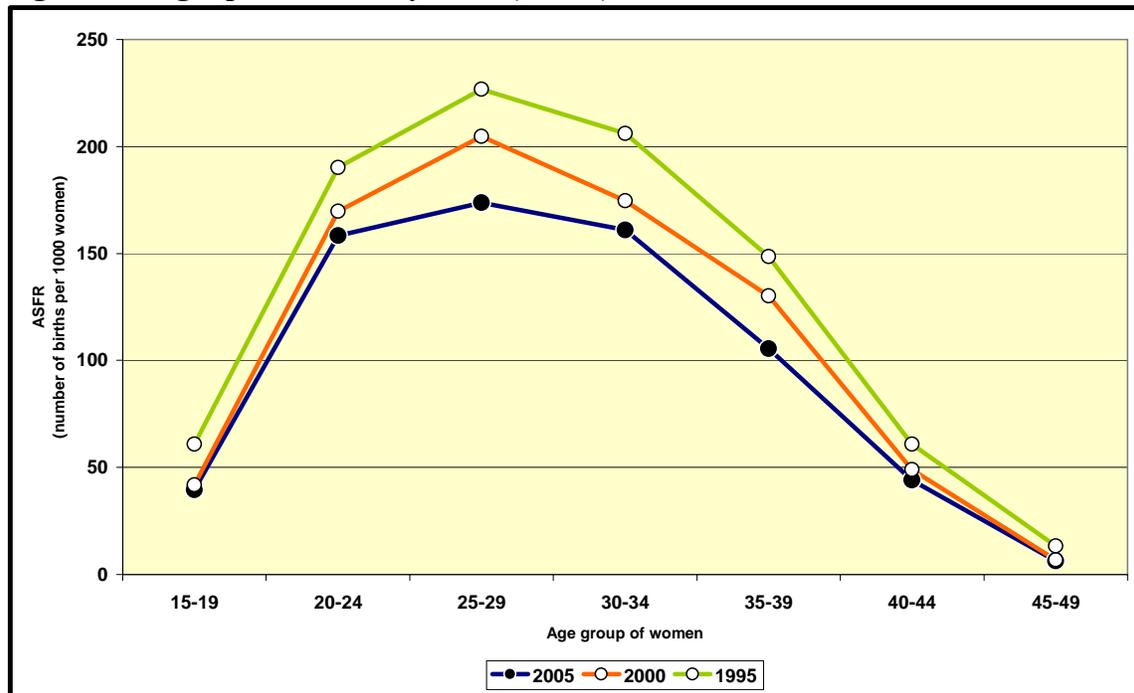
The period 2002-2004 was characterized by a relatively high percentage of family planning users among women of childbearing age. The contraceptive prevalence rate was about 22 per cent among this group, while it was below 20 per cent before and after 2002-2004: the higher the number of family planning users, the lower the number of births.

The decrease of the level of fertility (TFR) during the 10 year period 1995-2005 can also be depicted by the age group of women, and the age specific fertility rates (ASFR). Figure 14 shows the number of births per 1000 women by age group. While the level of fertility declined at all age groups of women between 1995 and 2005, the most prominent decline occurred at age group 25-29 years. Nevertheless, women aged 25-29 continue to be the most fertile age group in 2005, although fertility levels of women aged 20-24 and 30-34 years are not much lower.

Fertility levels of the 45-49 year age group were very low, followed by women aged 15-19 years, and women aged 40-44 years.

Teenage women aged 15-19 gave birth to an estimated 206 children during the one-year period before the 2005 census (Table 8) which translates into a *teenage fertility rate* of 39 (39 births per 1000 women aged 15-19 years).

Figure 14: Age specific fertility rates (ASFR), Kiribati: 1995-2005



ASFR: number of births per 1000 women by age group

The number of births by age of women, and therefore the total number of births during the one-year period before the 2005 census, can be calculated by multiplying the

estimated ASFR by the enumerated number of women by age group in the census, and summing the number of births by age group of women.

The *crude birth rate (CBR)* can then be calculated by dividing the estimated number of births (2,462) by the total 2005 census population (92,533), multiplied by 1000:

$$\text{CBR} = 2,462/92,533 \times 1000 = \mathbf{26.6}$$
 (there were 26.6 births per 1000 population)

Table 8: Estimated and adjusted Age Specific Fertility Rates (ASFR), Total Fertility Rate (TFR), Crude Birth Rate (CBR), and Mean Age at Childbearing (MAC), Kiribati: 2005

Age group of women	Number of women	Estimated ASFR	Estimated number of births = (Estimated ASFR x Number of women)
15-19	5,282	0.039	208
20-24	4,327	0.158	685
25-29	3,508	0.174	610
30-34	2,930	0.161	472
35-39	3,364	0.106	355
40-44	2,678	0.044	118
45-49	2,252	0.006	14
Total	24,341		2,462
TFR		3.44	children per woman
CBR		26.6	births per 1000 population
MAC		29.6	years

An estimate of the accuracy and consistency of the census reporting, and also an indication of a plausible estimate of the level of fertility can be obtained by comparing the estimated number of births that occurred during the year before the census with the number of enumerated children aged younger than 1 year of age (because they were born during the 1-year period before the census):

The census enumerated 2,403 children aged less than 1 year of age. This figure is consistent with the reported number of births (2,397) during the year before the census based on information provided by interviewed women aged 15-49. It is furthermore consistent with the adjusted estimated number of births of 2,462 during the year before the census, especially considering that some of the children born during the year before the census have died before the census enumeration (number of infant deaths). Therefore it can be expected that the enumerated number of children aged younger than 1 year are slightly less than the actual number of births during the year before the census.

3.2 Mortality

The questions that related to mortality in the 2005 census were:

- How many live births a woman has ever had, and how many of those born were still alive and/or have died;
- Whether a respondents father and/or mother was still alive (orphanhood);
- Whether a respondent's marital status was 'widowed' (widowhood).

From all children that were ever born to women 15 years and older (77,920), 88.8 per cent (69,166) were still alive, and 8,754 children have died (Table 9).

The proportion of surviving females was higher than that of males (Table 10). While 90.0 per cent of all female children ever born were still alive, only 87.6 per cent of all male children have survived.

The proportion of surviving children decreases with the age of women (Table 10 and Figure 15). While 95.6 per cent of all children were still alive that were ever born to women 15-19, only 89.1 per cent of children born to women aged 45-49 were still alive, and only 74.3 per cent of children born to women aged 75 years and older.

This general trend has to be explained by the fact that with increasing age of mothers also increases the age of her children, and with increasing age increases the proportion of a birth cohort that have died.

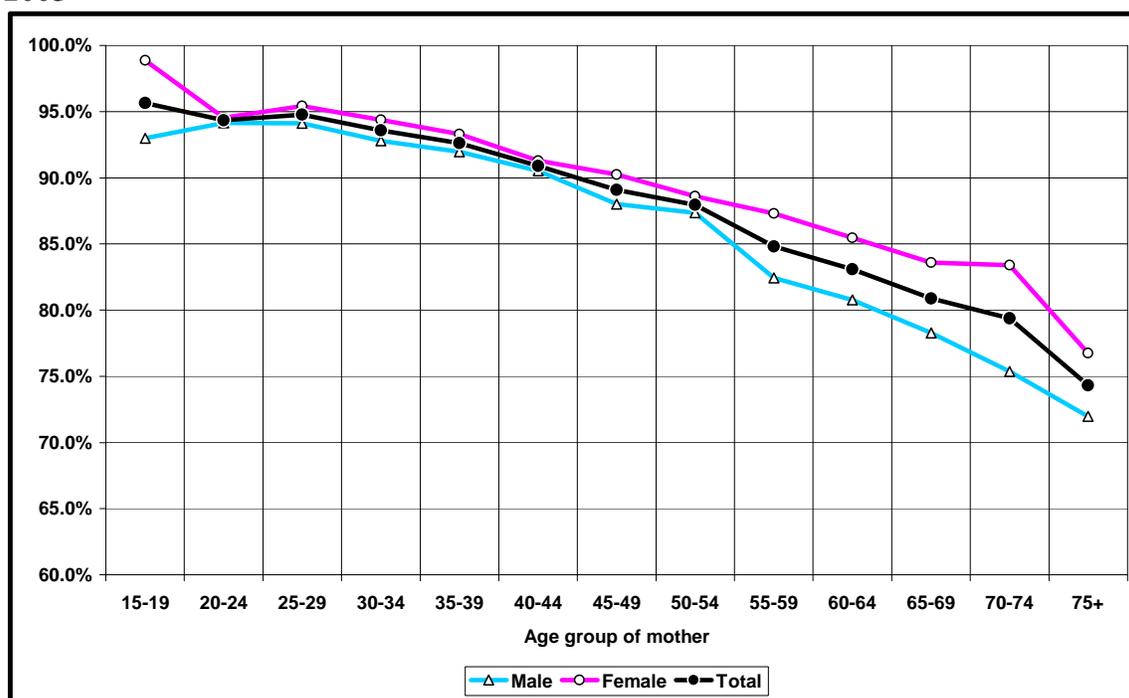
Table 9: Female population 15 years and older by number of children ever born, number of children still alive, and number of children dead, Kiribati: 2005

Age of women	Number of women	Number of children ever born			Number of children still alive			Number of children dead		
		Males	Females	Total	Males	Females	Total	Males	Females	Total
15-19	5,282	214	176	390	199	174	373	15	2	17
20-24	4,327	1,415	1,337	2,752	1,332	1,264	2,596	83	73	156
25-29	3,508	2,805	2,730	5,535	2,640	2,605	5,245	165	125	290
30-34	2,930	3,937	3,841	7,778	3,653	3,625	7,278	284	216	500
35-39	3,364	6,165	5,884	12,049	5,670	5,490	11,160	495	394	889
40-44	2,678	5,575	5,434	11,009	5,046	4,961	10,007	529	473	1,002
45-49	2,252	5,249	4,873	10,122	4,619	4,398	9,017	630	475	1,105
50-54	1,671	3,837	3,563	7,400	3,352	3,157	6,509	485	406	891
55-59	1,307	3,092	2,962	6,054	2,549	2,586	5,135	543	376	919
60-64	938	2,297	2,237	4,534	1,855	1,912	3,767	442	325	767
65-69	741	1,956	1,877	3,833	1,531	1,569	3,100	425	308	733
70-74	683	1,720	1,733	3,453	1,296	1,445	2,741	424	288	712
75+	572	1,523	1,488	3,011	1,096	1,142	2,238	427	346	773
Total	30,253	39,785	38,135	77,920	34,838	34,328	69,166	4,947	3,807	8,754

Table 10: Female population 15 years and older by proportion of children ever born still alive, and proportion now dead, Kiribati: 2005

Age of women	Number of women	Proportion of children ever born still alive (%)			Proportion of children ever born now dead (%)		
		Males	Females	Total	Males	Females	Total
15-19	5,282	93.0	98.9	95.6	7.0	1.1	4.4
20-24	4,327	94.1	94.5	94.3	5.9	5.5	5.7
25-29	3,508	94.1	95.4	94.8	5.9	4.6	5.2
30-34	2,930	92.8	94.4	93.6	7.2	5.6	6.4
35-39	3,364	92.0	93.3	92.6	8.0	6.7	7.4
40-44	2,678	90.5	91.3	90.9	9.5	8.7	9.1
45-49	2,252	88.0	90.3	89.1	12.0	9.7	10.9
50-54	1,671	87.4	88.6	88.0	12.6	11.4	12.0
55-59	1,307	82.4	87.3	84.8	17.6	12.7	15.2
60-64	938	80.8	85.5	83.1	19.2	14.5	16.9
65-69	741	78.3	83.6	80.9	21.7	16.4	19.1
70-74	683	75.3	83.4	79.4	24.7	16.6	20.6
75+	572	72.0	76.7	74.3	28.0	23.3	25.7
Total	30,253	87.6	90.0	88.8	12.4	10.0	11.2

Figure 15: Proportion of children ever born still alive by age of mother, Kiribati: 2005



Because the registration of vital events in Kiribati is incomplete, especially events related to deaths, estimates of the level of mortality have to rely on indirect estimation techniques.

Using above census data on children ever born and children surviving by age group of mother, the following mortality indices have been obtained using the United Nations software package MORTPAK4.1, procedures *CEBCS* (Table 11 and Appendix 3 and 4).

Table 11: Mortality indicators, Kiribati: 2005

Indicator	Total	Males	Females
Infant mortality rate (IMR)	52	53	51
Child mortality rate (4q1)	17.5	18.0	17.0
Under 5 mortality (q5)	69	71	67
Life expectancy at birth, E(0)	61.0	58.9	63.1
Crude death rate (CDR)	8.7	9.2	8.3

The infant mortality rate (IMR) was estimated at 53 and 51 for males and females, respectively which is a decrease compared to 1995 indicators when the IMR was 67 and 56 for males and females. The IMR measures the number of deaths of children under one year of age per 1000 live births.

Child mortality, the probability of dying between age 1 and age 5, was estimated at 18 male deaths and 17 female deaths per 1000 persons of that age. These indicators were 28 and 21 in 1995 for males and females respectively.

Under 5 mortality is the probability of dying between birth and age 5, and was estimated at 71 and 67 per 1000 for males and females.

Based on the calculated childhood mortality rates (Appendices 4 and 5), a life table was constructed using MORTPAK4.1, procedures *MATCH*, with the assumption made that the *Far East Asian* pattern of the United Nations model life tables resembles most closely the empirical mortality pattern of Kiribati. The empirical mortality pattern was calculated by using the number of registered deaths by age and sex of the years 2000-2005 to calculate age-specific death rates using the 2000 and 2005 census population by age and sex as denominator. The empirical mortality pattern was compared to the different Coale-Demeny and United Nations model life tables using MORTPAK4.1, procedure *COMPAR*. The assumption was made that the under-registration of deaths is not age specific and therefore does not affect the overall pattern of mortality.

According to the assumptions made, and the procedures and methods used, *life expectancy at birth* is calculated at 58.9 and 63.1 years for males and females (Table 12 and 13).

Table 12: Abridged Life Table based on estimated infant mortality rate -q(0), and using MOTPAK4.1, procedure MATCH, Kiribati Males: 2005

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)
0	0.0554	0.0530	100,000	5,300	95,733	0.9407	5,887,145	58.9
1	0.0045	0.0177	94,700	1,676	374,600	0.9855	5,791,412	61.2
5	0.0014	0.0069	93,024	644	463,511	0.9935	5,416,813	58.2
10	0.0012	0.0061	92,380	567	460,484	0.9924	4,953,301	53.6
15	0.0020	0.0098	91,813	897	456,979	0.9880	4,492,817	48.9
20	0.0029	0.0143	90,916	1,296	451,477	0.9845	4,035,838	44.4
25	0.0033	0.0165	89,620	1,482	444,491	0.9819	3,584,361	40.0
30	0.0040	0.0199	88,138	1,758	436,466	0.9768	3,139,871	35.6
35	0.0055	0.0272	86,381	2,349	426,349	0.9669	2,703,404	31.3
40	0.0081	0.0400	84,032	3,359	412,245	0.9518	2,277,055	27.1
45	0.0119	0.0579	80,673	4,673	392,375	0.9274	1,864,810	23.1
50	0.0187	0.0895	76,000	6,799	363,887	0.8937	1,472,435	19.4
55	0.0268	0.1260	69,201	8,719	325,203	0.8439	1,108,548	16.0
60	0.0423	0.1917	60,482	11,595	274,434	0.7719	783,346	13.0
65	0.0622	0.2694	48,887	13,171	211,830	0.6880	508,911	10.4
70	0.0885	0.3613	35,716	12,904	145,742	0.5933	297,081	8.3
75	0.1216	0.4611	22,812	10,518	86,462	0.4910	151,339	6.6
80	0.1650	0.5699	12,294	7,006	42,454	0.3456	64,877	5.3
85	0.2358	...	5,288	5,288	22,423	...	22,423	4.2

Note: q(0) is an approximation of the infant mortality rate as calculated in Appendix 4 and Table 11

Table 12: Abridged Life Table based on estimated infant mortality rate - q(0), and using MOTPAK4.1, procedure MATCH, Kiribati Females: 2005

Age	m(x,n)	q(x,n)	l(x)	d(x,n)	L(x,n)	S(x,n)	T(x)	e(x)
0	0.0532	0.0510	100,000	5,100	95,935	0.9426	6,307,686	63.1
1	0.0044	0.0175	94,900	1,662	375,347	0.9866	6,211,750	65.5
5	0.0011	0.0053	93,238	493	464,957	0.9953	5,836,404	62.6
10	0.0008	0.0041	92,745	384	462,764	0.9942	5,371,446	57.9
15	0.0017	0.0083	92,361	763	460,057	0.9900	4,908,683	53.1
20	0.0023	0.0116	91,598	1,061	455,465	0.9867	4,448,625	48.6
25	0.0030	0.0149	90,537	1,353	449,419	0.9836	3,993,160	44.1
30	0.0036	0.0179	89,184	1,596	442,063	0.9797	3,543,741	39.7
35	0.0047	0.0230	87,588	2,017	433,099	0.9737	3,101,678	35.4
40	0.0061	0.0302	85,571	2,586	421,688	0.9642	2,668,579	31.2
45	0.0086	0.0423	82,985	3,512	406,602	0.9491	2,246,892	27.1
50	0.0125	0.0608	79,473	4,831	385,920	0.9265	1,840,290	23.2
55	0.0184	0.0881	74,642	6,574	357,573	0.8941	1,454,370	19.5
60	0.0270	0.1266	68,068	8,618	319,701	0.8479	1,096,797	16.1
65	0.0399	0.1818	59,450	10,808	271,084	0.7838	777,096	13.1
70	0.0587	0.2564	48,642	12,473	212,477	0.7008	506,012	10.4
75	0.0853	0.3513	36,169	12,707	148,909	0.5891	293,535	8.1
80	0.1294	0.4840	23,461	11,356	87,727	0.3934	144,626	6.2
85	0.2128	...	12,106	12,106	56,899	...	56,899	4.7

Note: q(0) is an approximation of the infant mortality rate as calculated in Appendix 5 and Table 11

Brief explanation of a **life table** (Table 12 and 13):

A life table is used to simulate the lifetime mortality experience of a population. It does so by taking that population's age-specific death rates and applying them to a hypothetical population of 100,000 people born at the same time. For each year on the life table, death inevitably thins the hypothetical population's ranks until, in the bottom row of statistics, even the oldest people die.

Column "nMx" shows the proportion of each age group dying in each age interval. These data are based on the observed mortality experience of a population. Column "lx" shows the number of people alive at the beginning of each age interval, starting with 100,000 at birth. Column "nDx" shows the number who would die within each age interval. Column "nLx" shows the total number of person-years that would be lived within each age interval. Column "Tx" shows the total number of years of life to be shared by the population in the age interval and in all subsequent intervals. This measure takes into account the frequency of deaths that will occur in this and all subsequent intervals. As age increases and the population shrinks, the total person-years that the survivors have to live necessarily diminish.

Life expectancy is shown in Column "e(x)" — the average number of years remaining for a person at a given age interval.

The first value in column "e(x)" represents life expectancy at birth.

The first value in column "q(x)" is an approximation of the infant mortality rate (IMR).

The second value in column "q(x)" is an approximation of the child mortality rate.

$m(x,n)$ = age specific death rate

$q(m,n)$ = the probability of dying between two exact ages

$l(x)$ = the number of survivors at exact age x

$d(x,n)$ = the number of deaths between two exact ages, x and $x+n$

$L(x,n)$ = the number of person-years that would be lived within the indicated age interval (x and $x+n$) by the cohort of 100,000 births assumed.

$S(x,n)$ = probability of surviving between two exact ages, x and $x+n$

$T(x)$ = total number of person-years that would be lived after the beginning of the indicated age interval by the cohort of 100,000 births assumed.

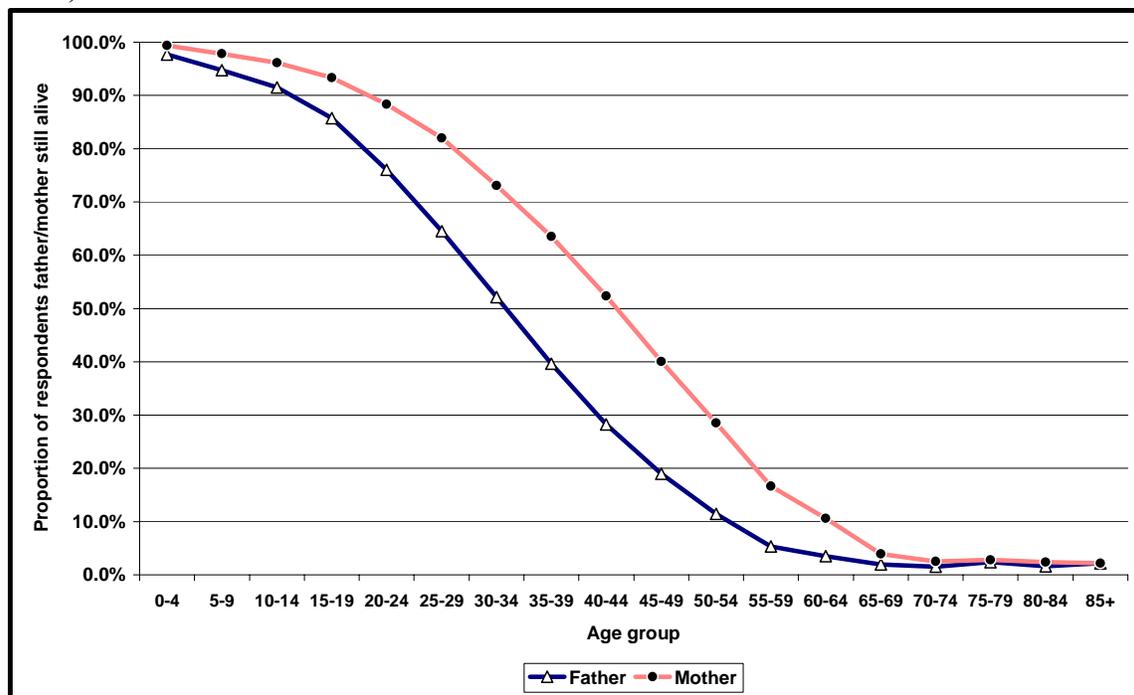
$e(x)$ = expectation of life from age x

The above mortality indicators clearly show more positive mortality indicators for females than for males, with females living a longer life, on average 4 years longer than males.

The findings are supported by the following data:

- more females than males survive to older ages (Figure 5);
- the proportion of widowed females was considerably higher than males (Figure 20), indicating earlier death of male spouses;
- the proportion of respondent's surviving mothers was higher than that of their fathers (Figure 16), indicating earlier death of respondent's fathers than mothers.

Figure 16: Proportion of population 15 years and older with father/mother still alive, Kiribati: 2005



The *crude death rate (CDR)* can then be calculated by multiplying the age specific death rates [m(x,n)-values] of the male and female life table (Tables 12 and 13) by the 2005 census male and female population (Appendix 5):

$$CDR = 806/92,533 \times 1000 = 8.7 \text{ (there were 8.7 deaths per 1000 population)}$$

Maternal mortality

Although maternal deaths are normally not derived from census data, it is mentioned in this report because it is an important Millennium Development Goal (MDG) indicator (Goal 5, Target 6, and Indicator 16).

The Kiribati Ministry of Health collects and reports the number of deliveries, and the number of deaths by age and sex and cause of death. Such data include deaths that were due to pregnancy or delivery.

Maternal mortality is defined as the number of women who die as a result of childbearing in a given year per 100,000 births in that year. Maternal deaths are those that are caused by complications of pregnancy and childbirth.

The **maternal mortality rate** is calculated as:

$$[(\text{Number of maternal deaths}) / (\text{Number of births})] * 100,000$$

$$12/7,601 \times 100,000 = \mathbf{158}$$

Based on the Kiribati hospital records, the average maternal mortality rate of the 4-year period 2001-2004 was 158, which means that there were 158 maternal deaths per 100,000 births (Table 14)

Table14: Reported number of deliveries, number of deaths due to pregnancy or delivery, and maternal mortality rate, Kiribati: 2001-2004

Year	2001	2002	2003	2004	Total
Number of deliveries	1,980	1,957	1,800	1,864	7,601
Number of deaths due to pregnancy or delivery	3	2	3	4	12
Maternal mortality rate	152	102	167	215	158

Source: Ministry of Health, Government of Kiribati

3.3 Migration

3.3.1 Internal migration

Internal migration, the movement of people from one island/region of Kiribati to another, can be estimated by

- comparing the different 2000-2005 intercensal growth rates per island or regions,
- comparing the number of people born on certain islands and who actually live there, and/or by
- comparing the place of residence five years ago with the place of residence during the census enumeration.

Based on the question about where one lived five years before the census (year 2000), 72 per cent of the total population 5 year and older answered that they had not moved from their current (November 2005) place (island) of residence; 26 per cent (16,255 persons) said that they lived elsewhere in Kiribati, and 1,870 persons (2 per cent) said that they had their usual place of residence overseas (Table 15).

Table 15: Population by place of enumeration and usual residence five years ago (in 2000), Kiribati: 2005

Place of enumeration at time of census		Usual residential address 5 years ago					
Island/Region	Total	South Tarawa	Gilbert Islands (excl. South Tarawa)	Line & Phoenix Islands	Overseas	Not born	NS*
South Tarawa	40,311	27,325	6,166	878	1,170	4,618	154
Gilbert Islands (excl. S.Tarawa)	43,372	6,526	30,605	421	574	5187	59
Line & Phoenix Islands	8,850	1,373	891	5,085	126	1196	179
Kiribati	92,533	35,224	37,662	6,384	1,870	11,001	476

*NS includes 'other Kiribati'

South Tarawa had a net loss of people to the Gilbert Group islands of 360 people (6,166 – 6,526), and to the Line & Phoenix Group islands of 495 people (878 – 1,373) during the five years before the census. The Gilbert Group had a net loss to the Line & Phoenix Group islands of 470 people (421 – 891).

Therefore the Line & Phoenix Group islands had a net gain from the Gilbert Group islands and South Tarawa of almost 1,000 people (965) during the intercensal period 2000-2005 (Table 16).

Table 16: Interregional migration during 5 years before the 2005 census, Kiribati: 2005

Island & Region	In-Migrants	Out-Migrants	Net Migrants
South Tarawa	7,044	7,899	-855
Gilbert Islands (excl. South Tarawa)	6,947	7,057	-110
Line&Phoenix Islands	2,264	1,299	965
Kiribati	16,255	16,255	0

Place of birth (Lifetime migration)

Data on lifetime migration (number of persons by place of residence and place of birth) indicate that the direction of internal migration flows was mainly towards South Tarawa.

Fifty-four per cent of the Kiribati population was living at the same place where they were born; 43 per cent (31,170 persons) were born in Kiribati but not at their current (November 2005) place of residence, and almost 3 per cent (2,487) of the population was born overseas (Table 17).

Table 17: Population by place of enumeration and place of birth, Kiribati: 2005

Place of enumeration at time of census		Place of birth				
Island/Region	Total	South Tarawa	Gilbert Islands (excl. South Tarawa)	Line & Phoenix Islands	Overseas	NS
South Tarawa	40,311	19,646	18,284	771	1,467	143
Gilbert Islands (excl. South Tarawa)	43,372	6,512	35,587	419	812	42
Line&Phoenix Isl.	8,850	1,394	3,790	3,427	208	31
Kiribati	92,533	27,552	57,661	4,617	2,487	216

Less than one third (27,552) of the population were born in South Tarawa, 62 per cent in other Gilbert Group islands (57,661), and 5 per cent (4,617) in the Line & Phoenix Group islands.

Overall less than half (49 per cent) of the South Tarawa residents were born in South Tarawa, 45 per cent were born in other Gilbert Group islands, 2 per cent in the Line & Phoenix Group islands, and almost 4 per cent were born overseas.

About 82 per cent of the residents of the Gilbert Group outer were born there, while only 39 per cent of the residents of the Line & Phoenix Group islands were born at their current place of residence.

Based on the above data, it can be seen that South Tarawa had a net gain of 11,149 people, mainly from the Gilbert Group Islands, and the Line & Phoenix Group Islands also had a net gain of almost 4,000 people, also mainly from the Gilbert Group Islands (Table 18).

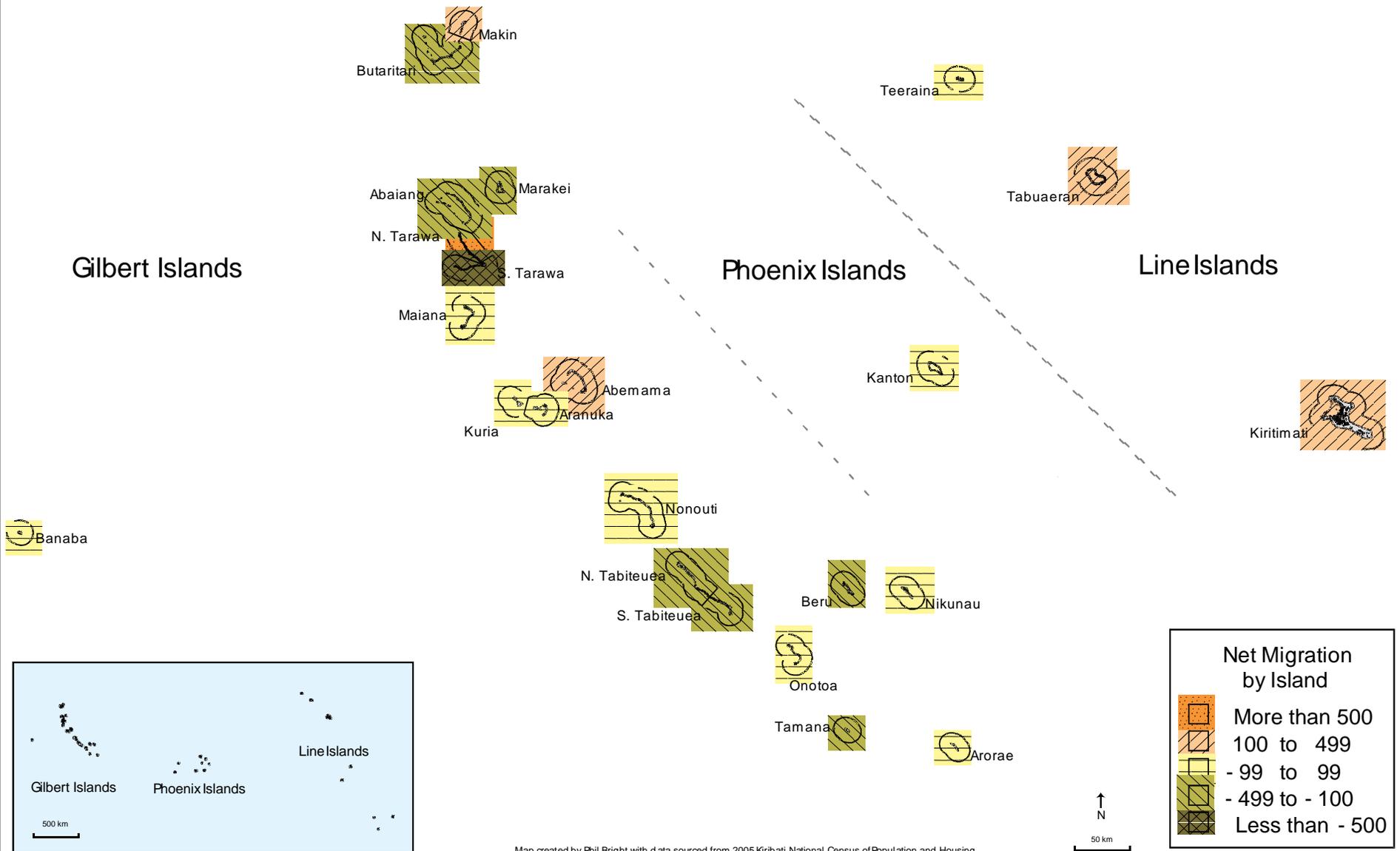
The Gilbert Group islands showed an overall net-loss of more than 15,000 people.

Table 18: Interregional lifetime migration, Kiribati: 2005

Island & Region	In-Migrants	Out-Migrants	Net Migrants
South Tarawa	19,055	7,906	11,149
Gilbert Islands (excl. South Tarawa)	6,931	22,074	-15,143
Line&Phoenix Islands	5,184	1,190	3,994
Kiribati	31,170	31,170	0

Map 1:

Net Internal Migration between 2000 and 2005



Map created by Phil Bright with data sourced from 2005 Kiribati National Census of Population and Housing

3.3.2 International migration

International migration refers to people who cross national boundaries to move to another country. Apart from this spatial consideration, *time* plays a major role in the analysis of migration. Persons are usually regarded as migrants only after spending a minimum period of time in their country of destination. Usually the minimum time required to qualify as migrant is half a year presence in-country, and sometimes even a full year. Someone coming for a short visit is not a migrant—he or she is a visitor or tourist.

Intent is also of crucial importance, as migration usually involves a change of a person's permanent residential address in pursuit of employment or educational opportunities.

The need to consider '*time* and *intent*' highlights one of the key problems concerning migration. Whether or not a particular person qualifies as a migrant can only be established after a certain period of time, usual at least a half-year period, in order to establish whether the arriving and departing persons qualify as visitors or migrants.

The net impact of migration flows (net migration) is measured as the difference between the number of arrivals (immigrants) and departures (emigrants) during a certain period of time.

$$\boxed{\text{Net migration}} = \boxed{\text{Arrivals (immigrants)}} \text{ minus } \boxed{\text{Departures (emigrants)}}$$

Therefore if *net migration* is positive it means that the number of arrivals (immigrants) was higher than the number of departures (emigrants); if *net migration* was negative, the number of departures (emigrants) was higher than the number of arrivals.

Unfortunately data on arrivals and departures provided by the *Ministry of Foreign Affairs, Immigration*, remains incomplete. The collection of arrival cards is incomplete and makes it currently impossible to obtain an accurate picture of the magnitude of migration flows to and from Kiribati based on immigration statistics.

However, the 2005 census included 3 questions that provide an indication of the level of immigration. It asked questions about:

1. respondents 'home island'
2. respondents place of birth
3. respondents residence at time of last census (in year 2000)

Question 1 refers to the island where a respondents family (ancestors) own land. Therefore only I-Kiribati can have a 'home island'. Out of 92,533 enumerated persons, 918 (1 per cent) responded that their 'home island' was overseas.

On the question on respondent's place of birth, 2.7 per cent (2,487 persons) answered that they were born overseas (Table 17). Of those, 1,116 were born in Nauru.

On the question where a respondent's residential address was 5 years ago, 1,870 persons (2.3 per cent) of the population 5 years and older answered that they lived overseas (Table 15).

However, question 1-3 only gives an indication of long term immigration.

The only reliable method to derive at a crude indication of the level of *net migration* in Kiribati is by applying the *balancing equation* to the intercensal 2000-2005 population growth rate:

Balancing equation:

$$\boxed{\text{Population growth}} = \boxed{\text{CBR}} \text{ minus } \boxed{\text{CDR}} \text{ plus } \boxed{\text{Net migration rate}}$$

Therefore the *net migration rate* can be estimated:

$$\boxed{\text{Net migration rate}} = \boxed{\text{Population growth}} \text{ minus } \boxed{\text{CBR}} \text{ plus } \boxed{\text{CDR}}$$

Note: CBR = crude birth rate
CDR = crude death rate

The population of Kiribati increased from 84,494 to 92,533 people between 2000 and 2005. This is an annual average growth rate of 1.82 per cent.

In section 3.1 and 3.2 the CBR and CDR were estimated at 26.6 and 8.7 respectively.

According to the balancing equation the net migration rate can be calculated as follows:

$$\text{Net migration rate} = 18.2 - 26.6 + 8.7 = \mathbf{0.3 (\%)}$$

A net migration rate of 0.3 (%) is negligible. This, however, does not mean that there was no population movement as census data on people's residential status 5 years before the census show. As mentioned before, the net migration rate is composed of arrivals and departures, and in this case the number of arrivals and departures was of roughly equal size.

For example, several hundred I-Kiribati repatriated from Nauru back to Kiribati during the last several years following the deterioration of Nauru's phosphate driven economy.

At the same time several hundred I-Kiribati left the country for New Zealand during the period 2000-2005, for the purpose of establishing permanent residence there. I-Kiribati are currently eligible for migration to New Zealand. Under the so-called *Pacific Access Category*, **75 persons per year are allowed to migrate to New Zealand**, irrespective of socio-economic background. Through a ballot people are drawn to be eligible for status of *Permanent Resident*. This scheme has been in existence since 2002, and according to

the New Zealand High Commission in South Tarawa, it is very popular amongst I-Kiribati, and is fully utilized. A study of the *New Zealand's Ministry of Foreign Affairs and Immigration* web site (<http://www.immigration.govt.nz/>) reveals that the immigration numbers of I-Kiribati people to New Zealand were in excess of 100 persons per year in recent years.

Another destination country for I-Kiribati migrants is Fiji (although exact numbers are not available).

Since the repatriation of I-Kiribati from Nauru to Kiribati was completed in 2006, and migration towards New Zealand continues, *net migration* can now be expected to be **negative**: there will be more departures than arrivals in Kiribati since a steady flow of migration seems to have established, at least towards New Zealand.

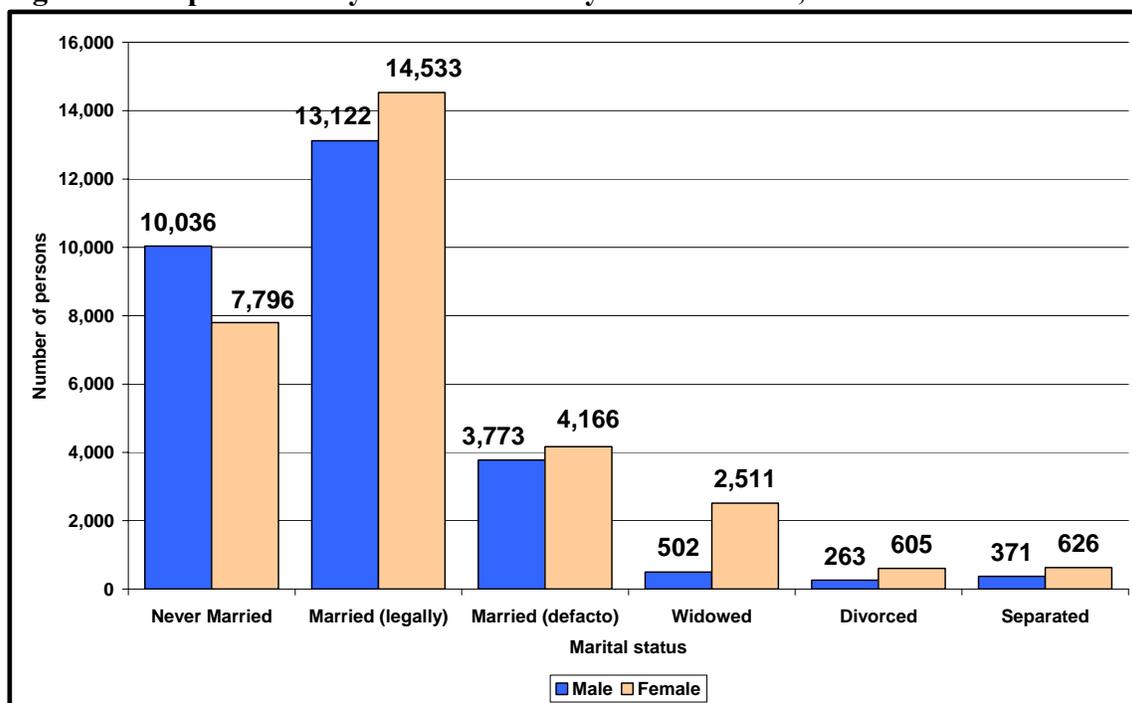
4 SOCIAL CHARACTERISTICS

4.1 Marital status

During the 2005 census, 47 per cent of males (13,122) and 48 per cent of females (14,533) 15 years and older were legally married, and another 3,773 and 4,166 males and females were living in a defacto union/marriage (Figure 17). Thirty-six per cent of males (10,036) and 26 per cent of females (7,796) were never married (single). Widowed were 2 per cent and 8 per cent of males (502) and females (2,511) respectively.

The higher number of married females than males has to be explained by the fact that about 1,000 men were working overseas as seafarers at the time of the census.

Figure 17: Population 15 years and older by marital status, Kiribati: 2005



Women marry at younger ages than men. The average age at marriage was 24.6 and 22.2 years for males and females respectively, calculated based on the proportion never married/single by age (The singulate mean age at marriage, SMAM²). The higher proportion of young married women compared to men of the same age is a further indication that women generally marry at younger ages than men (Figure 18).

While only 37 per cent of males were married (legally and de facto) at age 20-24 years, it was 53 per cent of females. While only 68 per cent of males were married at age 25-29 years, it was 76 per cent of females.

² Manual X, Indirect techniques for demographic estimation, United Nations, New York, 1983

Figure 18: Population 15 years and older by sex and proportion married, Kiribati: 2005

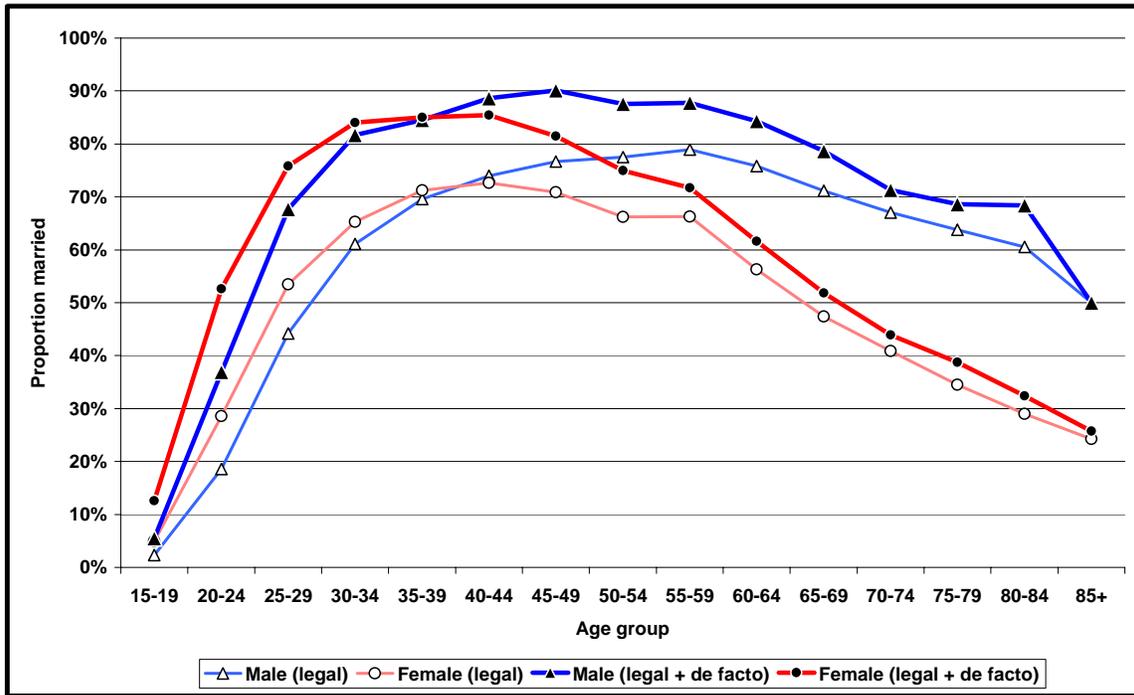
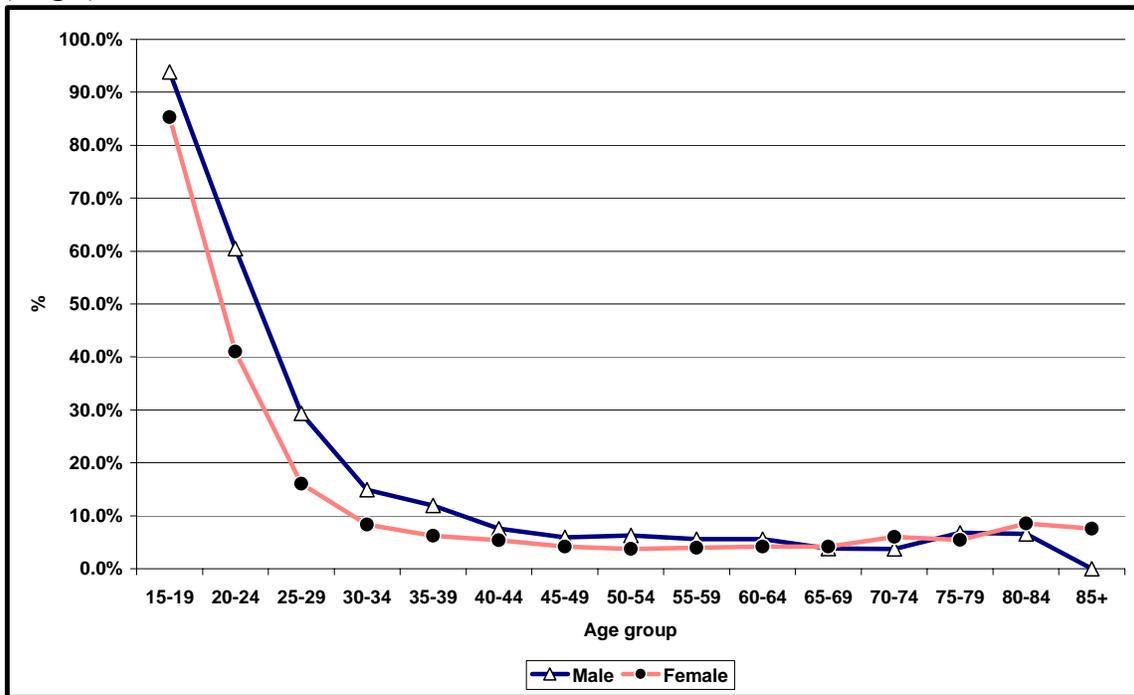


Figure 19: Population 15 years and older by sex and proportion never married (single), Kiribati: 2005



The same pattern can be seen by looking at the population never married (single) (Figure 19). A higher proportion of the male population was never married (single) at almost all age groups, especially at ages 20-29.

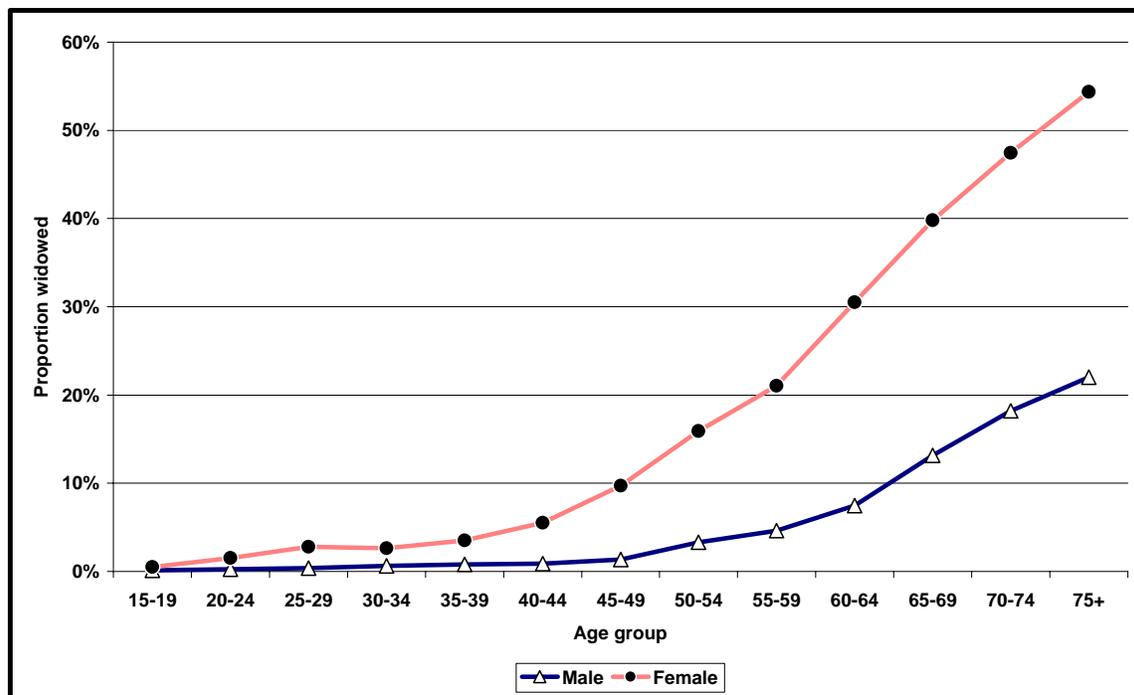
Widowhood - at ages 40 years and older, the discrepancy between the proportion of widowed males and females increases continuously (Figure 20). At age 55-59 years only 5 per cent of males were widowed, compared to 21 per cent of females. At age 75 years and older, only 22 per cent of males were widowed, compared to 54 per cent of females.

The higher proportion of widowed females has to be explained by

1. lower mortality rates of females, and therefore longer life expectancies of female spouses,
2. older age at marriage of males compared to their female partners.

Therefore male spouses usually die before their female partners.

Figure 20: Population 15 years and older by sex and proportion widowed, Kiribati: 2005

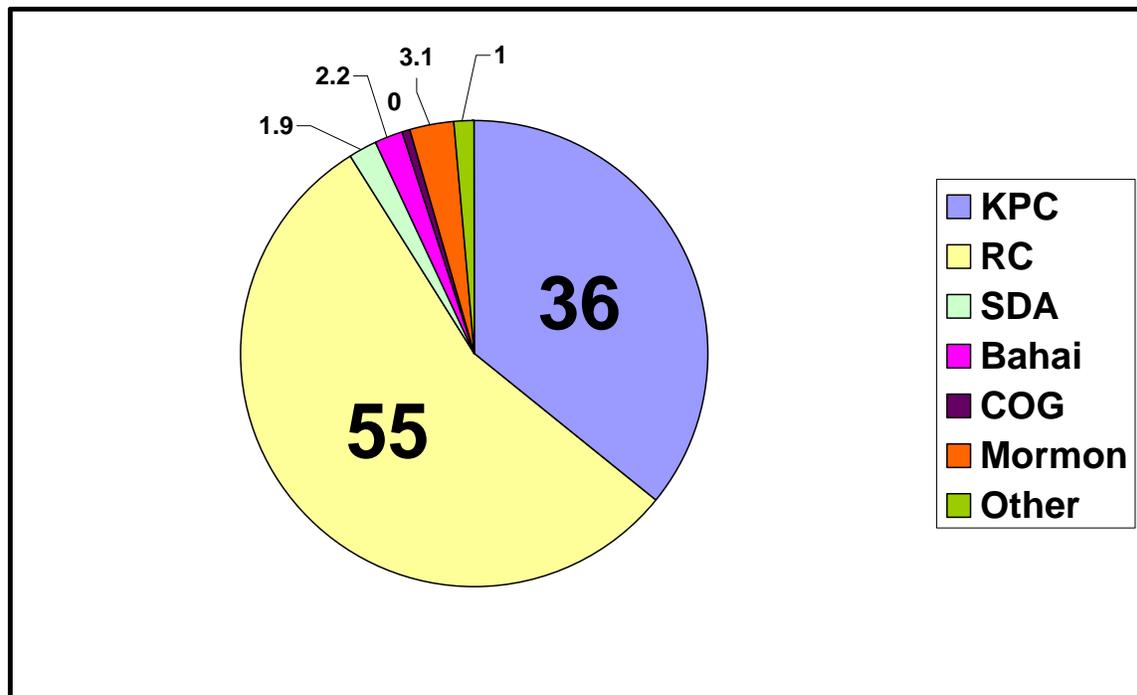


4.2 Religion

With 55 per cent or 51,144 persons affiliated to the Roman Catholic Church (RC), it remains the dominant religious denomination of the population. The next largest group was the Kiribati Protestant Church with 33,044 member or 36 per cent of all denominations, followed by the Mormons with 2,910 members or 3 per cent. The only other religion with more than 2,000 members was the Bahai (2,034). All other religions had less than 2 per cent of the population as members (Figure 21).

Only 23 persons said that they did not belong to any religious group.

Figure 21: Population by religion, Kiribati: 2006



Note: KPC = Kiribati Protestant Church
RC = Roman Catholic
SDA = Seventh Day Adventist
COG = Church of God

4.3 Health

Following requests from the Ministry of Health, the 2005 census questionnaire included several questions on smoking and drinking alcohol practices of the population aged 10 years and older. The term *regular* refers to persons that smoke and/or drink alcohol daily.

As is shown below, the proportion of males smoking tobacco and drinking alcohol is higher than females at any age (Figure 22, 23 and 24).

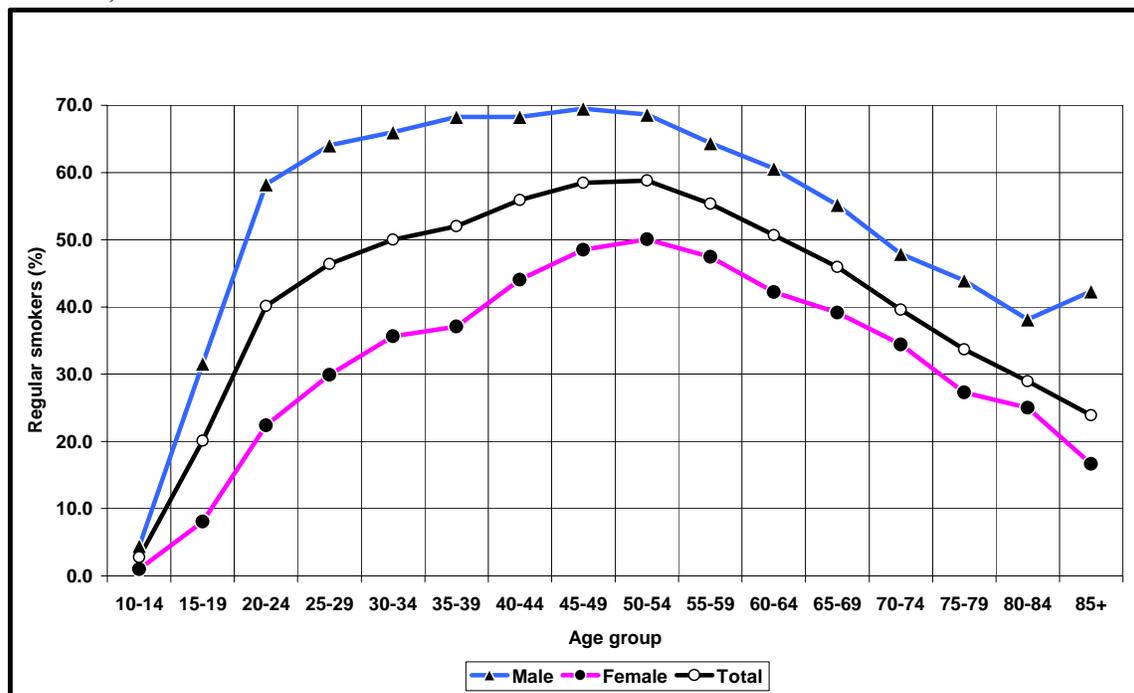
4.3.1 Smoking tobacco

According to information collected almost 70 per cent of the young adult male population aged 30-54 said that they are regular smokers. This compares to less than 50 per cent of the adult female population. The highest proportion of female smokers was 40-64 years of age, with a peak at ages 50-54 (Figure 22).

The proportion of teenage (15-19 years of age) male and female smokers was 32 and 8 per cent respectively. In general, the proportion of smokers continuously decreases after the age of 54.

In addition to the regular smokers, another 5 per cent of males and females claimed to be 'casual' smokers at any age.

Figure 22: Proportion of population 10 years and older that regularly smokes tobacco, Kiribati: 2005



4.3.2 Drinking alcohol

According to the 2005 census data less than 15 per cent of males and less than 2 per cent of females drank alcohol regularly. Between 10-15 per cent of all males aged 20-54 years claim to drink alcohol regularly. The highest proportion of regular drinkers was aged 20-29 years of age (Figure 23).

However, a considerably higher proportion claimed to drink alcohol *sometimes* (Figure 24). More than 40 per cent of males aged 20-34 drank alcohol *sometimes*. The proportion of teenage (15-19 years of age) male and female 'occasional drinkers' was 26 and 3 per cent respectively.

In general the proportion of drinkers continuously decreases after the age of 29.

Figure 23: Proportion of population 10 years and older that regularly drinks alcohol, Kiribati: 2005

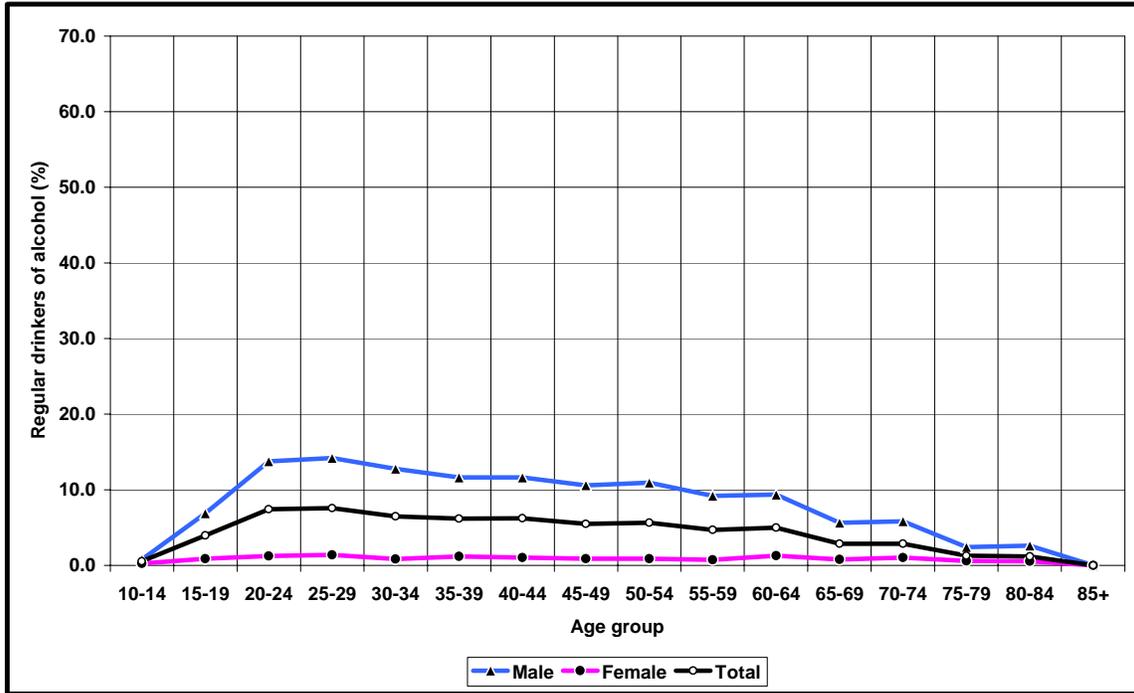
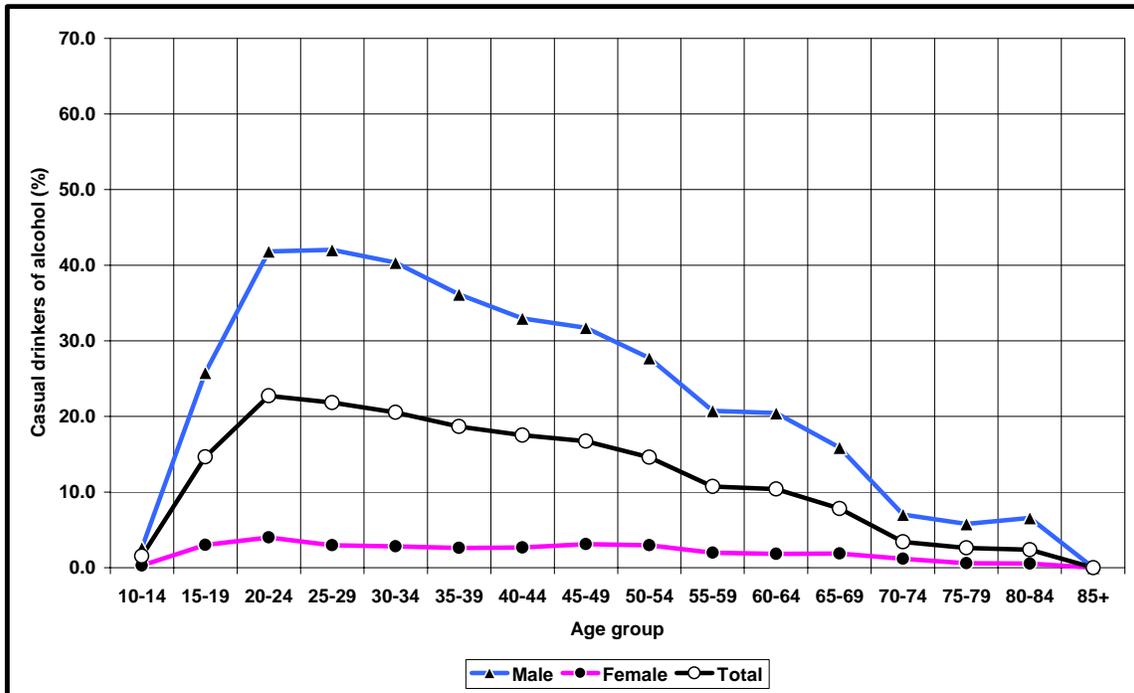


Figure 24: Proportion of population 10 years and older that occasionally drinks alcohol, Kiribati: 2005



4.4 Educational characteristics

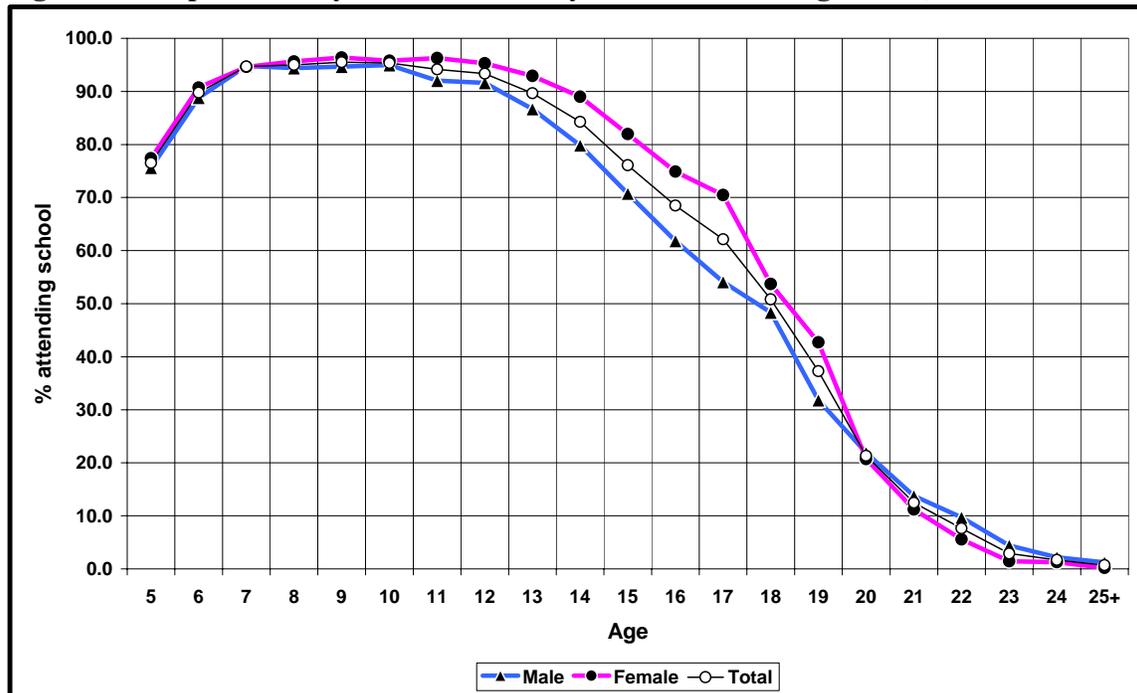
4.4.1 School enrolment

Education in Kiribati is free and compulsory from age 6 to 15 years. This has ensured access to primary and secondary levels of education for all.

At the 2005 census, 28,467 persons 5 years and older were enrolled in school, 14,157 males and 14,310 females.

Based on the question of whether a person was currently attending school, 91 per cent of the 6-15 year olds responded yes (Figure 25). However, enrollment rates started to decline drastically from the age of 13, when more and more students dropped out of school. Almost a quarter of the 15 year olds were not attending school, and only half of the 18 year old population.

Figure 25: Population 5 years and older by sex and attending school, Kiribati: 2005



In general, school enrollment rates of females were higher than that of males.

4.4.2 Educational attainment

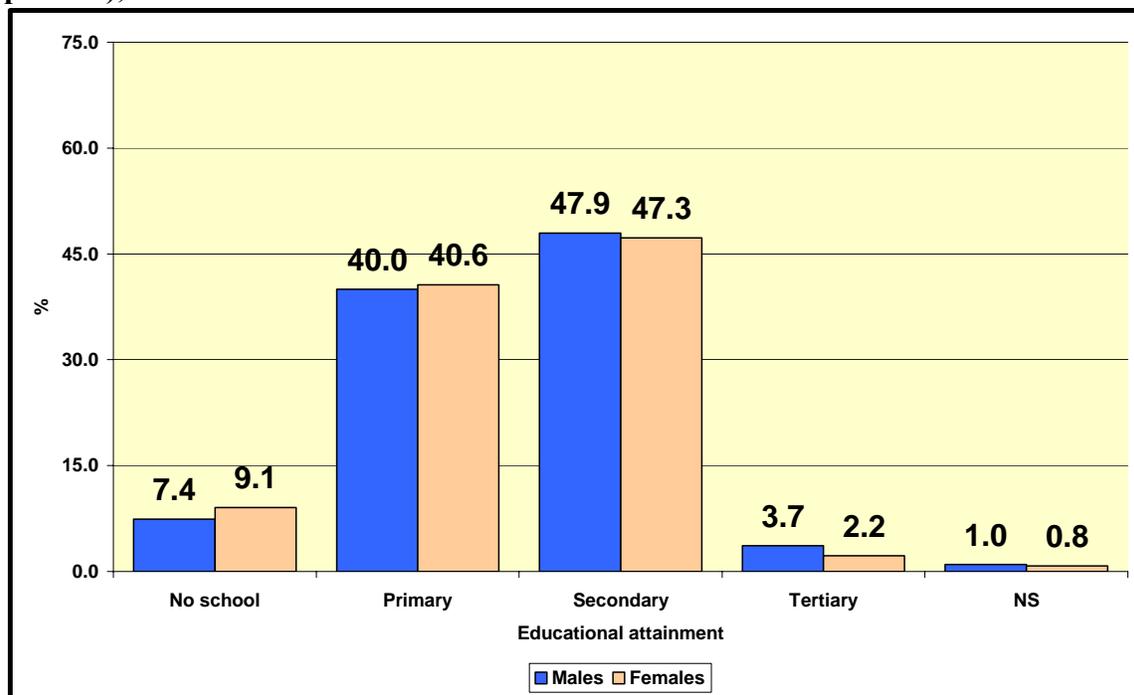
Although there was little difference between the proportion of males and females that have attended and/or completed the different educational levels, educational attainment numbers were slightly higher for males than for females at the secondary and tertiary levels.

The proportion of females with no schooling was higher than for males with no schooling (Figure 26).

Primary education included all persons that attended classes 1-9, while secondary education included all persons that attended forms 1-7.

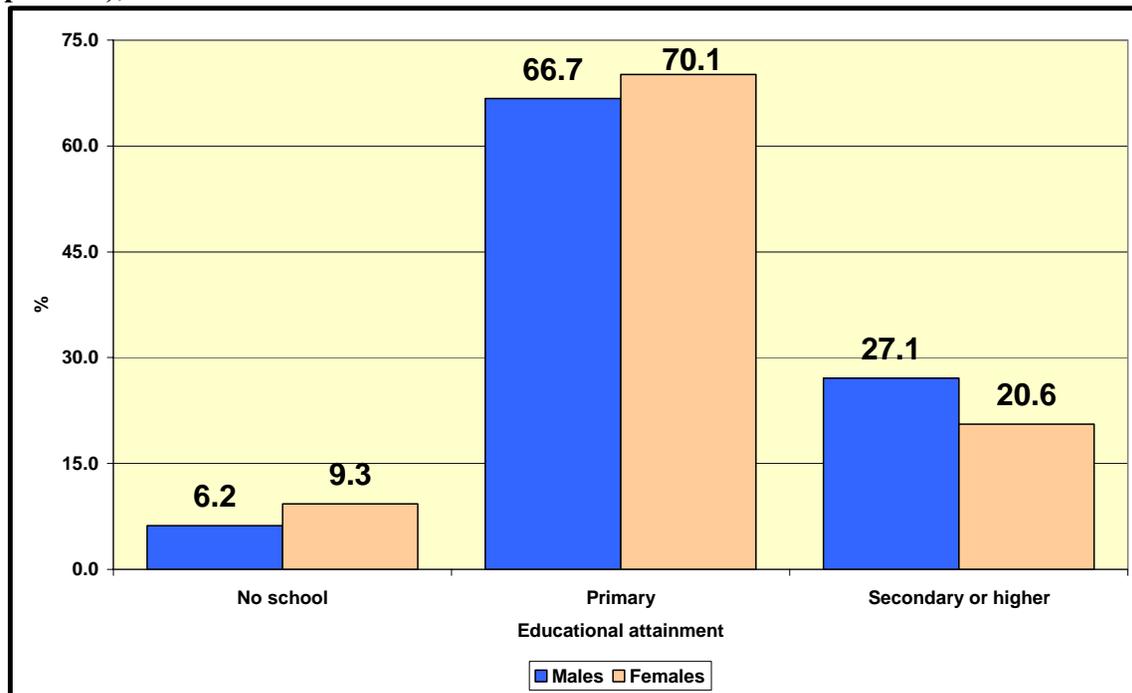
In comparison to 1995 data (Figure 27), the level of education of Kiribati's population has hugely increased. While only 27.1 and 20.6 per cent of males and females had secondary or higher education in 1995, this percentage has increased to 51.6 and 49.5 for males and females in 2005. Furthermore the gap in educational attainment levels in favor of males in 1995 has narrowed in 2005.

Figure 26: Population 15 years and older by sex and educational attainment (in percent), Kiribati: 2005



Note: 'Primary' incl. classes 1-9, 'Secondary' incl. Form 1-7

Figure 27: Population 15 years and older by sex and educational attainment (in percent), Kiribati: 1995



3.7.3 Educational qualification

The proportion of the population with secondary or tertiary qualifications was 18.2 per cent of males and 20.5 per cent of females (Table 19). While considerable more females than males have secondary qualifications, more males have tertiary qualifications.

Table 19: Population by secondary or tertiary qualification, Kiribati: 2005

Qualification	Total Male Female			Total Male Female		
	(numbers)			(percentage)		
No secondary or tertiary	74,595	37,292	37,303	80.6	81.8	79.5
Form 4	4,487	2,168	2,319	4.8	4.8	4.9
Form 5	7,588	3,395	4,193	8.2	7.4	8.9
Form 6	3,081	1,238	1,843	3.3	2.7	3.9
Form 7	1,077	490	587	1.2	1.1	1.3
Certificate	1,006	604	402	1.1	1.3	0.9
Diploma	311	187	124	0.3	0.4	0.3
Degree	290	161	129	0.3	0.4	0.3
Masters	89	70	19	0.1	0.2	0.0
PhD	9	7	2	0.0	0.0	0.0
Total qualification	17,938	8,320	9,618	19.4	18.2	20.5
Total population	92,533	45,612	46,921	100.0	100.0	100.0

Therefore it seems that many females decided not to pursue further education after completing secondary education. At this point it needs to be mentioned that many if not

most persons that pursue tertiary education were absent at the time of the census to attend tertiary schooling overseas, and are therefore not included in the census data.

4.5 Labor market activity

4.5.1 Introduction

In Kiribati, the 2006 Census included a Type of Activity sector on the questionnaire. In the manual, enumerators were instructed to ask the question, “*What work did this person do last week?*” to each respondent 15 years of age and over. Working was defined as being any activity concerned with providing the necessities of life. Furthermore, it did not matter whether the person had a job or was paid for what they did. Based upon these criteria, respondents were coded on the questionnaire into the three mutually exclusive categories of “cash work”, “village work” or “no work”.

A person who is employed or works mainly for cash is a *cash worker*. Persons doing *village work* are those performing a variety of tasks involved in growing or gathering produce or fishing to feed their families and are described as subsistence farmers or fishermen. The majority of these persons resides in rural areas or outer islands and includes those who sell the products for immediate consumption money.

The UN publication “*Principles & Recommendations for Population and Housing Censuses, Revision 2*” recommends that “*persons engaged in economic activities in the form of own-account production of goods for own final use within the same household should be considered to be self-employed.*” Certainly, those selling their products should also be classified as *employed*. According to this definition, all those persons classified as village workers are considered to be *employed*. However, the following analysis of Kiribati’s unemployment level also provides an alternative approach to include village workers as part of the unemployed on the grounds that these persons would look for work if they believed cash work was available in their labour market community.

The *no work* concept applies to those persons who did nothing in the reference week to provide for themselves or their families or household. This includes *home duties, too old, disabled, students, unemployed* and *inactive*. The enumerators are instructed to ensure that those classified as *unemployed* both did no work last week but spent some time looking for cash employment. If the persons did not work and did not spend some time looking, they are then classified as *inactive*. Individuals can also be coded as *mental, patient, or prisoner*. Persons coded as “*mental*” may be institutionalized or reside in the household.

In the Pacific region, there has been some considerable discussion about how individuals working in *subsistence activities* should be classified in the labor market. Based on the above, data collected from the Kiribati census have been assigned to the three categories of *employed*, (cash work and village work), *unemployed* or *not in the labor force* (those not employed or unemployed). Optional definitions of unemployment rates putting the

village workers in the unemployed and *not in the labor force* categories are also provided below.

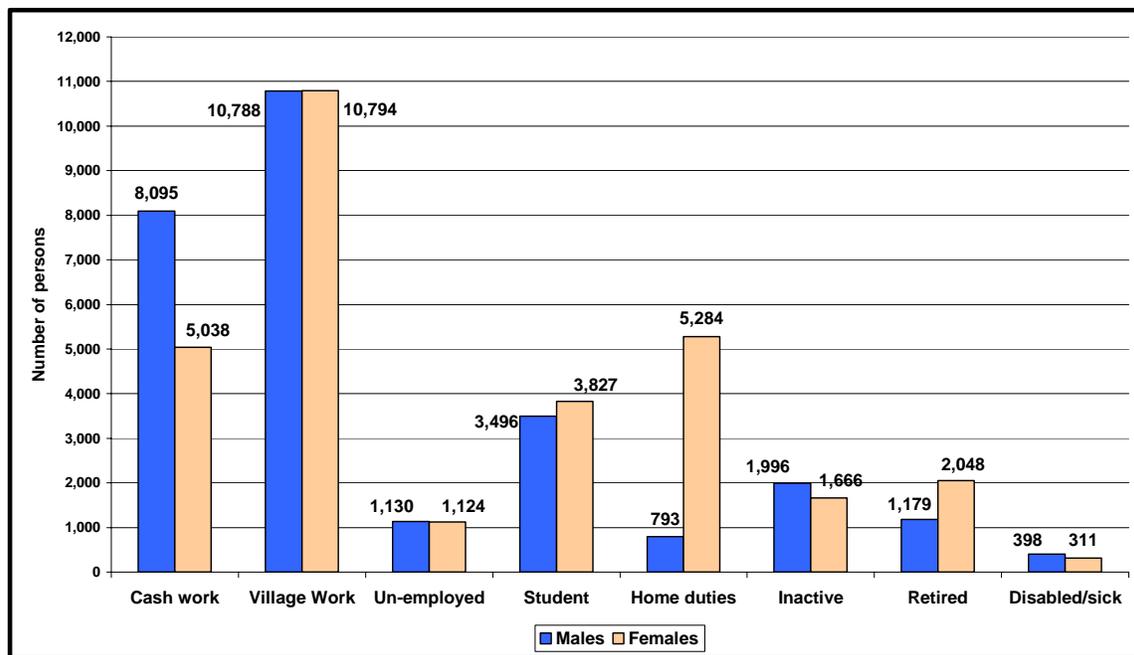
4.5.2 Employed - cash workers and village workers

As indicated in the introduction above, those persons who are defined as being employed (34,715) include 13,133 (37.8 per cent) cash workers and 21,582 (62.2 per cent) village workers (Appendix 6).

The total employment level of 34,715 consisted of 18,883 (54.4 per cent) males and 15,832 (45.6 per cent) females, and 13,340 (38.4 per cent) in the urban area and 21,375 (54.4 per cent) in the rural areas (Figure 28 and 29).

By age group, the 34,715 total number of persons employed included 7,644 in the 15-24 year old age group, 21,467 in the 25-49 year old age group, and 5,604 in the 50 years of age and over age group (Figure 30).

Figure 28: Population 15 years and older by sex and labor market activity, Kiribati: 2005



The total number of cash workers was 13,133 of which 8,095 or 61.6 per cent were males and 5,038 or 38.4 per cent were females. In the case of village workers, there were about equal numbers of male and female workers.

From an urban/rural perspective, 8,068 (61.4 per cent) of the cash workers were in the urban area while only 5,065 (38.4 per cent) held cash paying jobs in the rural areas. On the contrary, in the case of village workers, only 5,272 (24.4 per cent) were in the urban area with 16,310 (75.6 per cent) in the rural areas.

Figure 29: Population 15 years and older by urban-rural residence and labor market activity, Kiribati: 2005

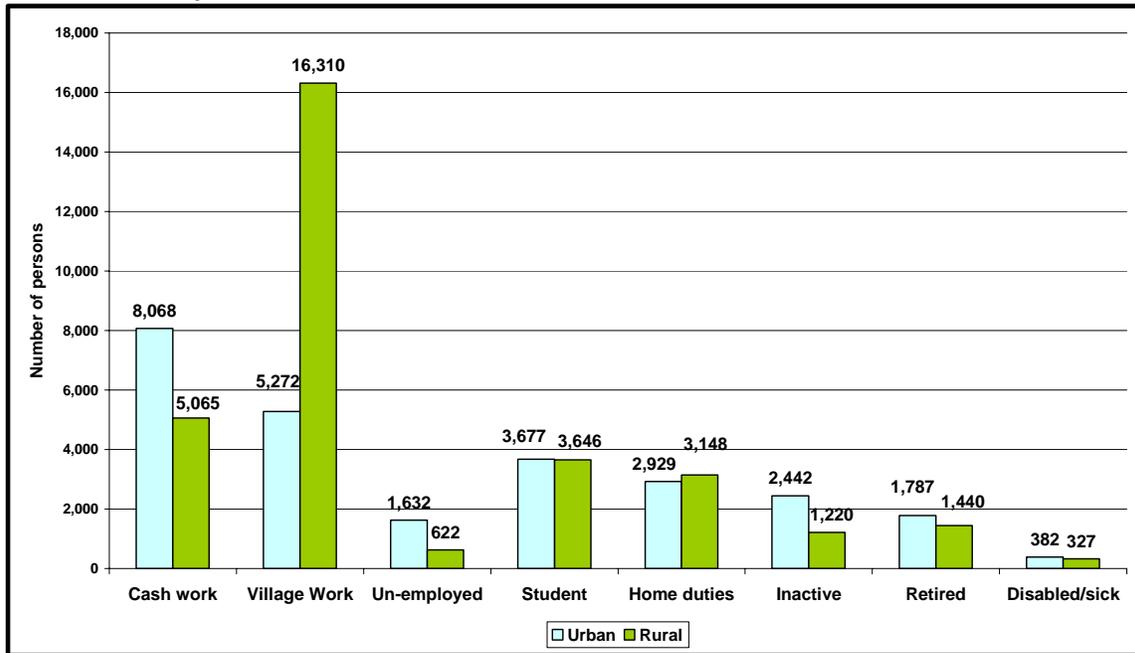
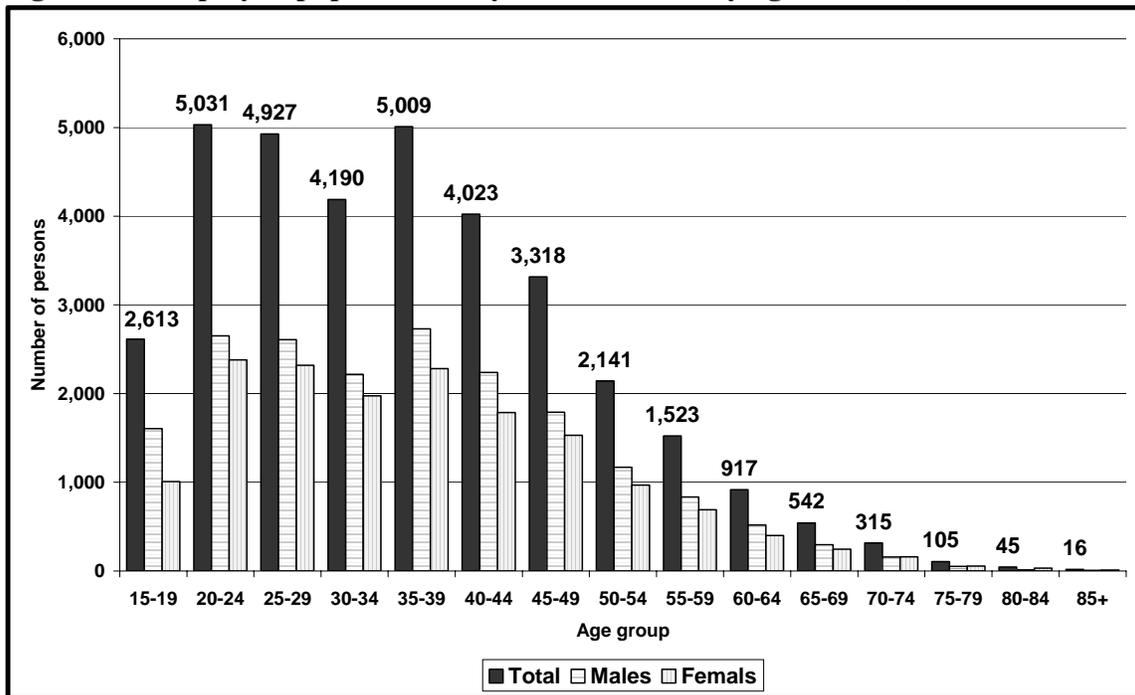


Figure 30: Employed population 15 years and older by age and sex, Kiribati: 2005



4.5.3 Labour force participation rate and Employment-population ratio

The *labour force participation rate* is the number of persons in the labour force at a given age and sex and/or place of rural-urban residence, divided by the corresponding total population with the same characteristics, multiplied by 100.

The *employment-population ratio* is the number of employed persons in cash work at a given age and sex and/or place of rural-urban residence, divided by the corresponding total population with the same characteristics, multiplied by 100.

Table 20 provides an overview of the *labour force participation rate* and the *employment-population ratio* for the total population 15 years and older by sex and by urban-rural residence. Figure 31 and 32 present the same indicators by age and sex.

The *labour force participation rates* were higher for males than females, and also higher for the rural than the urban population. In contrast, the *employment-population ratio* was higher for the urban population.

Table 20: Population 15 years and older by sex, rural-urban residence, labour force participation rate, and employment-population ratio, Kiribati: 2005

	Labour force participation rate	Employment-Population ratio
Kiribati		
Total	63.6	22.6
Males	71.5	28.9
Females	56.3	16.7
Urban		
Total	56.8	30.6
Males	63.7	39.1
Females	50.7	23.1
Rural		
Total	69.2	15.9
Males	77.6	20.8
Females	61.1	11.2

The *labour force participation rate* and the *employment-population ratio* were higher for males than females at all ages (Figure 31 and 32). The participation rate for females did not exceed 70 per cent at any age, while that of males was 90 per cent at ages 35-49. While almost half of males aged 35-49 were employed as cash workers, this was less than one quarter of females at the same age. The highest percentage of female employed cash workers was with 30 per cent at age 25-29 years.

Another general pattern was the very low participation rates at ages 15-19 years, and the sudden decrease at age 50 which may be explained by the retirement age for public servants.

Figure 31: Population 15 years and older by age and sex and labour force participation rate, Kiribati: 2005

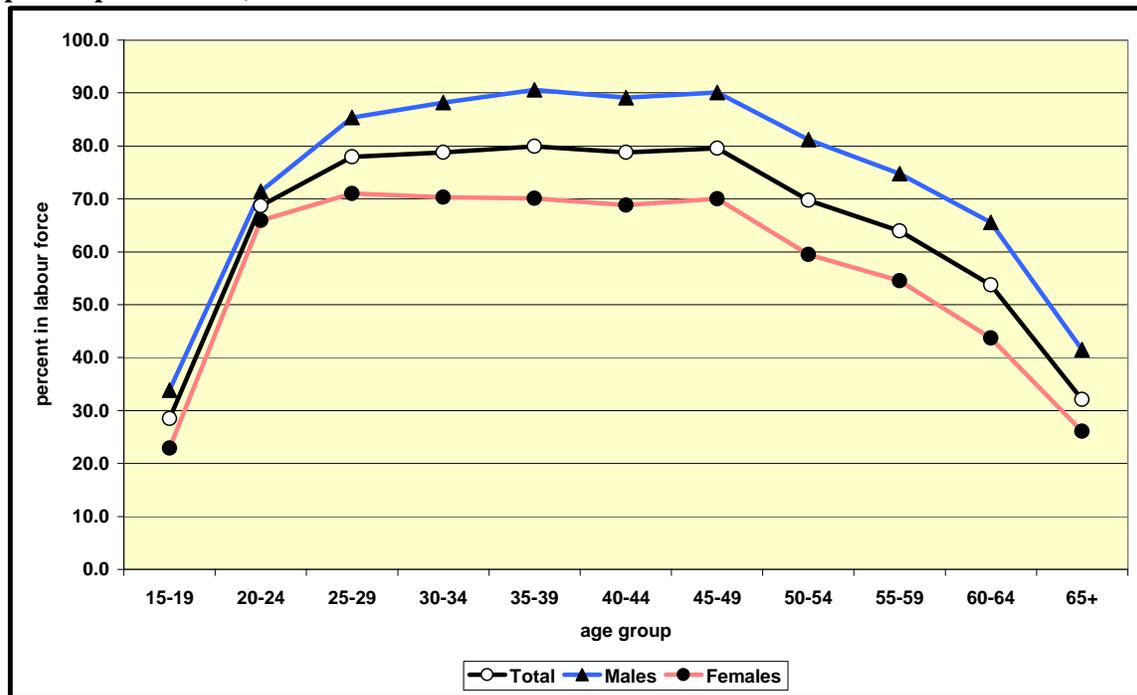
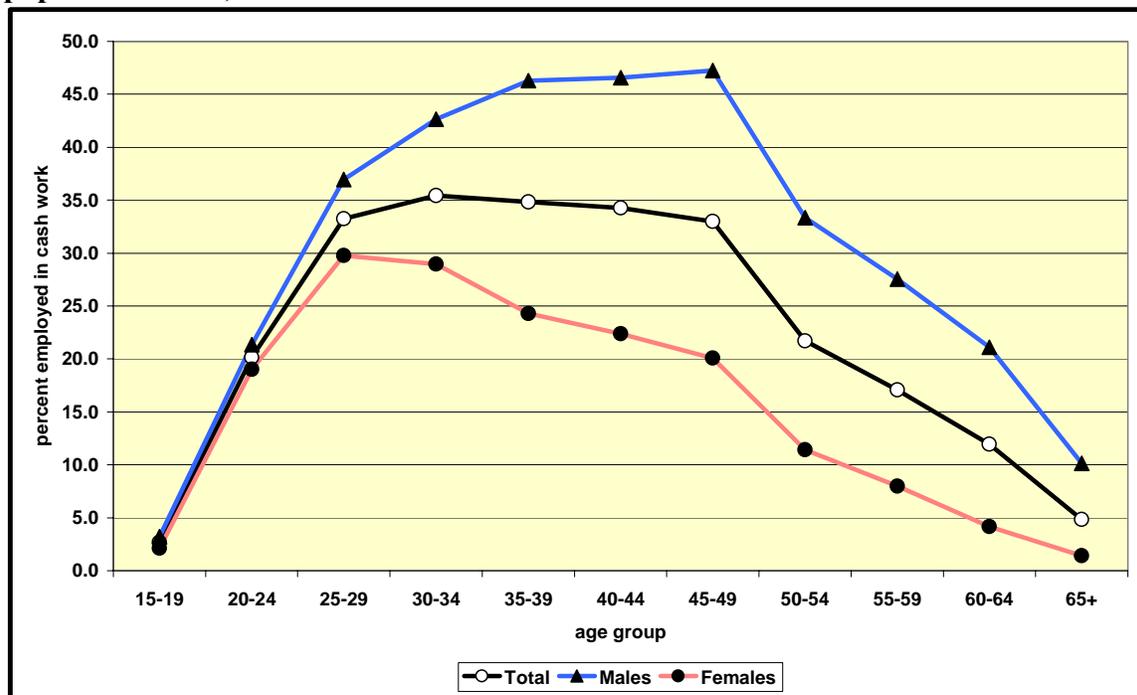


Figure 32: Population 15 years and older by age and sex and employment-population ratio, Kiribati: 2005



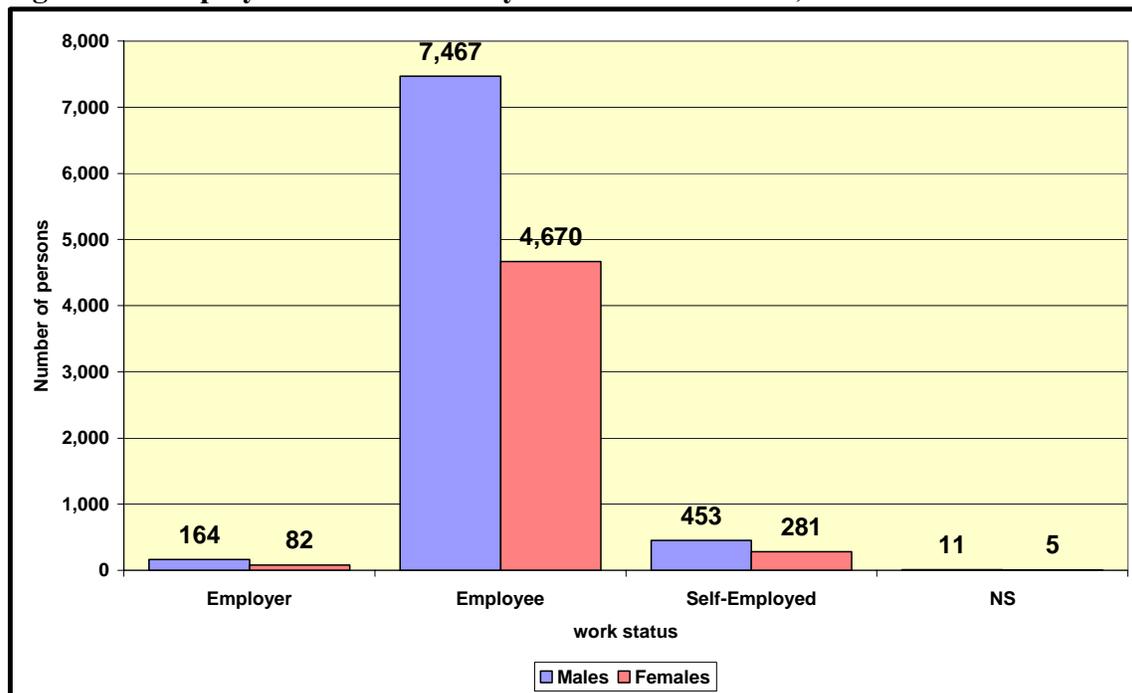
4.5.4 Employed cash workers by work status

More than 90 per cent of the 13,133 employed cash workers in 2005 were employees: 7,467 males and 4,670 females (Figure 33).

There were only 246 employers, which is 2 per cent of the total number of employed cash workers. Another 734 persons were self employed.

At any category of work status, there were considerable more male than female employed cash workers in 2005.

Figure 33: Employed cash workers by work status and sex, Kiribati: 2005

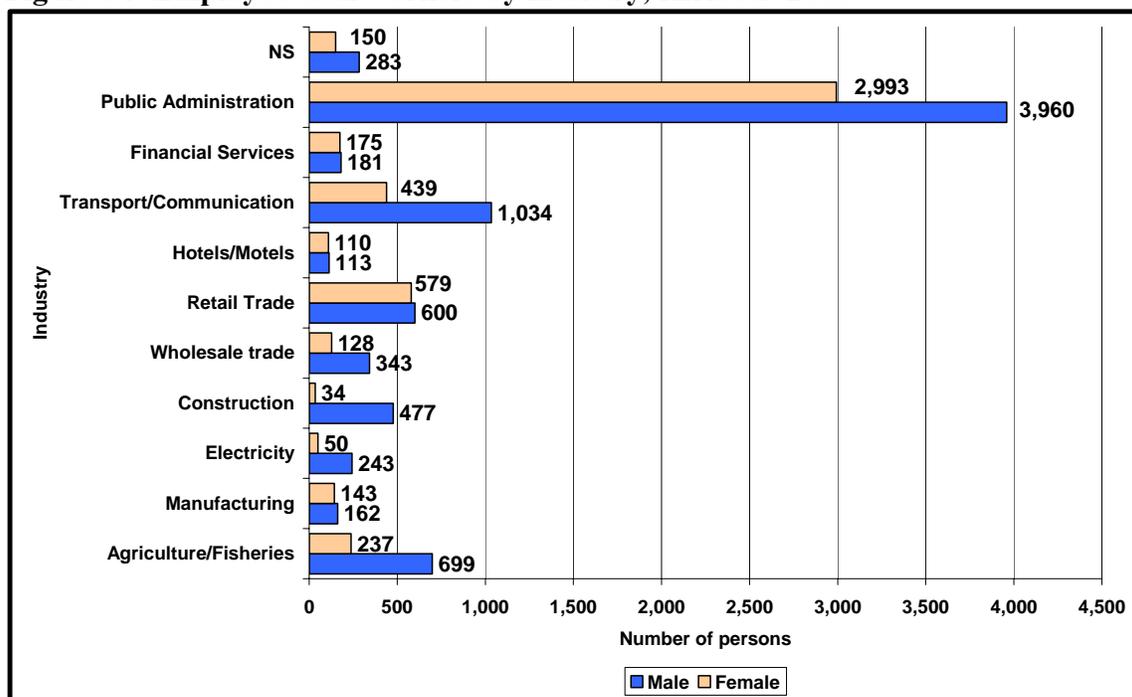


4.5.5 Employed cash workers by industry group

By far, the majority of employed cash workers in Kiribati are employed in the Public Administration sector – 6,953 persons or 52.9 per cent of the total employed (Figure 34).

The only other three industry groups that have a significant proportion of the employed persons are: Transport/Communication – 1,473 (11.2 per cent); Retail Trade – 1,179 (9.0 per cent); and Agriculture/fishing – 936 (7.1 per cent). The employment levels in the remaining industry groups all represent less than 4 per cent of the total.

Figure 34: Employed cash workers by industry, Kiribati: 2005



4.5.6 Employed cash workers by occupational group

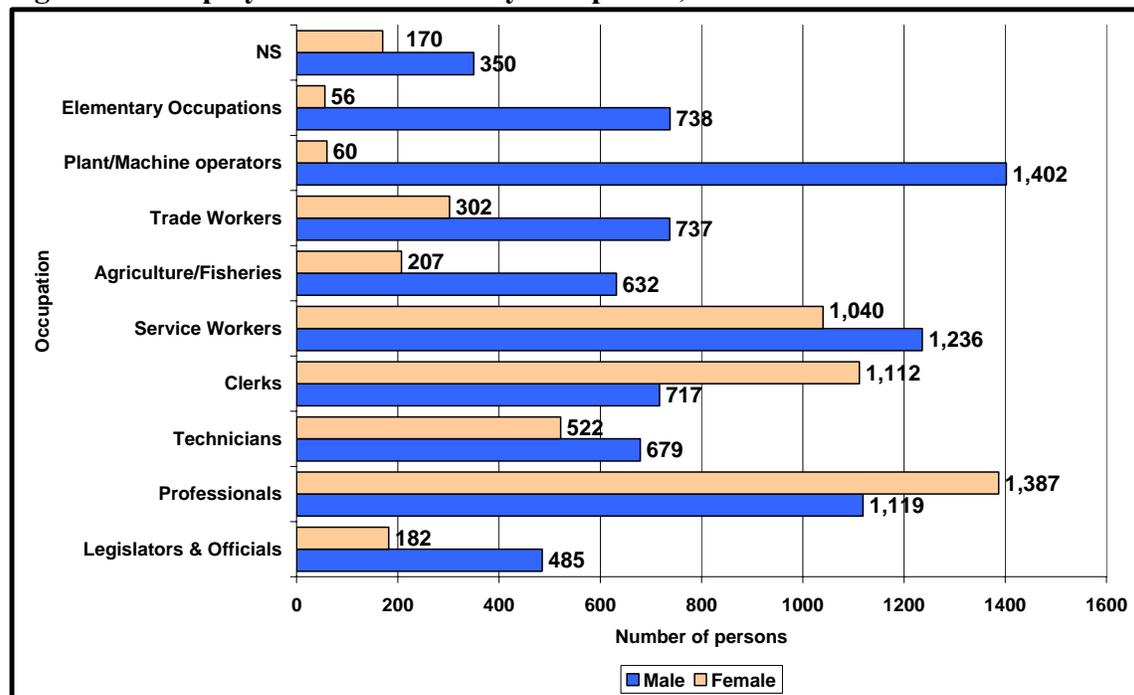
The largest number of employed cash workers are found in the Professional occupational group – 2,506 (19.1 per cent), followed closely by those in the Service Workers Group – 2,276 (17.3 per cent) and the Clerks group – 1,829 (13.9 per cent) (Figure 35).

The least prominent occupational groups are the Legislators and Senior Officials – 667 (5.1 per cent) and Agricultural and Fisheries workers – 839 (6.4 per cent).

The number of employed in the remaining occupational groups is as follows: Plant and Machine Operators – 1,462 (11.1 per cent); Elementary Occupations – 794 (6.0 per cent); Technicians and Associate Professionals – 1,201 (9.1 per cent); and Trade Workers – 1,039 (7.9 per cent).

Female employees dominated the occupational groups *Professionals* and *Clerks*. All other occupational groups were dominated by male employees.

Figure 35: Employed cash workers by occupation, Kiribati: 2005



4.5.7 Unemployed

The number of persons 15 years of age and over who did no work and did not spend some time looking for cash work was 2,254 during reference week. This level of unemployment represents 6.1 per cent of the total labour force.

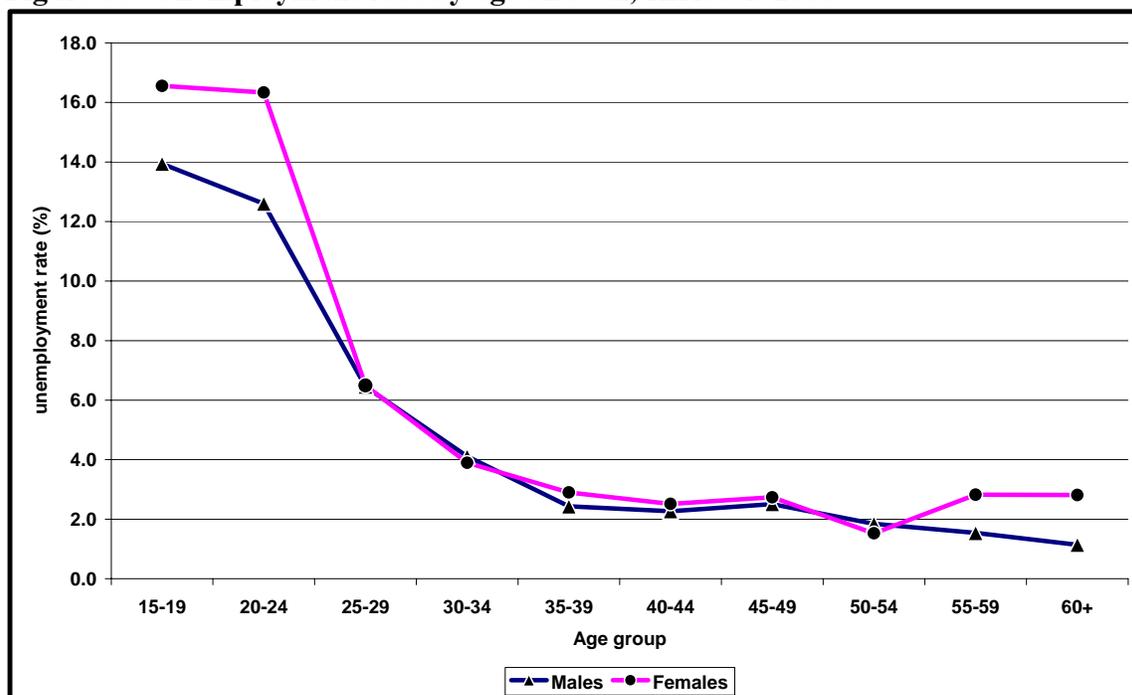
The level of unemployment for males was 1,130 (5.6 per cent) and 1,124 (6.6 per cent) for females.

In the urban areas, the unemployment level was recorded as 1,632 (10.9 per cent) compared with 622 (2.8 per cent) in the rural areas.

By age group, the 2,254 unemployed persons included 1,307 in the 15-24 year old age group, 839 in the 25-49 year old age group, and 108 in the 50 years of age and over age group (Figure 36).

Some users have indicated that they wish to include village workers as part of the unemployed, on the grounds that these persons would look for work if they believed cash work was available in their labour market community. Using this analysis, the total unemployment level, including village workers becomes 23,836 or an unemployment rate of 64.5 per cent (Table 21).

Figure 36: Unemployment rate by age and sex, Kiribati: 2005



For males, the level is 11,918 (59.6 per cent) and 11,918 (70.3 per cent) for females. Interestingly, the level for males and females is exactly the same.

For the urban/rural distinction, the level is 6,904 (46.1 per cent) for the urban and 16,932 (77.0 per cent) in the rural areas.

Table 21: Population 15 years and older and unemployment status according to various unemployment concepts, Kiribati: 2005

Unemployment concept	Number of unemployed			Unemployment rate		
	Males	Females	Total	Males	Females	Total
only reported unemployed	1,130	1,124	2,254	5.6	6.6	6.1
'village work' classified as unemployed	11,918	11,918	23,836	59.6	70.3	64.5
excluding 'village work' from labor force	1,130	1,124	2,254	12.2	18.2	14.6

Other users prefer to have the village workers included in the *not in the labour force* category. Using this analysis, the unemployment rates for the discussed groups becomes as follows:

- Kiribati – 14.6 per cent;
- Urban – 16.8 per cent;
- Rural – 10.9 per cent;
- Males – 12.2 per cent;
- Females – 18.2 per cent.

4.5.8 Not in the Labour Force

The total number of persons classified as not in the labor force in the 2005 Kiribati census was 21,069 (Appendix 6, and Figures 28 and 29). The distribution of these individuals was as follows:

Students	– 7,323	(34.8 per cent);
Home duties	– 6,077	(28.8 per cent);
Inactive	– 3,662	(17.4 per cent);
Retired ('old')	– 3,227	(15.3 per cent);
Disabled/sick	– 709	(3.4 per cent);
Prisoners	– 71	(0.3 per cent).

More than 60 per cent of the population 15 years and older that was not in the labor force were women (13,143), and only 7,926 were males.

There were more female (3,827) than male (3,496) *students*, and 87 per cent of those engaged in '*home duties*' were females (5,284).

In addition, more females (2,048) than males (1,179) were *retired ('old')*.

On the other hand, there was a higher proportion of males '*inactive*', '*disabled and/or sick*', and in prison.

5 HOUSEHOLD CHARACTERISTICS

5.1 Household size

The number of private households increased by 1,388 from 12,611 in 2000 to 13,999 in 2005 (Table 22).

Table 22: Number of private households, number of occupants, and average household size by island/region, Kiribati: 2000 and 2005

Island/Region	Number of private households		Number of persons in private households		Average household size (number of persons per household)	
	2000	2005	2000	2005	2000	2005
Banaba	54	61	262	301	4.9	4.9
Makin	292	328	1,679	1,858	5.8	5.7
Butaritari	592	561	3,464	3,279	5.9	5.8
Marakei	429	437	2,523	2,664	5.9	6.1
Abaiang	843	853	5,093	5,008	6.0	5.9
North Tarawa	693	867	4,294	5,404	6.2	6.2
South Tarawa	4,530	5,245	35,499	39,186	7.8	7.5
Maiana	376	354	2,048	1,894	5.4	5.4
Abemama	533	592	2,753	3,059	5.2	5.2
Kuria	182	202	958	1,082	5.3	5.4
Aranuka	194	211	963	1,158	5.0	5.5
Nonouti	508	540	2,850	3,068	5.6	5.7
North Tabiteuea	600	573	3,214	3,332	5.4	5.8
South Tabiteuea	230	262	1,207	1,298	5.2	5.0
Beru	492	462	2,419	2,022	4.9	4.4
Nikunau	333	335	1,733	1,912	5.2	5.7
Onotoa	354	332	1,668	1,644	4.7	5.0
Tamana	214	196	962	875	4.5	4.5
Arorae	244	241	1,225	1,250	5.0	5.2
Teeraina	169	198	1,003	1,155	5.9	5.8
Tabuaeran	282	438	1,591	2,470	5.6	5.6
Kiritimati	458	702	3,386	4,684	7.4	6.7
Kanton	9	9	61	41	6.8	4.6
Total	12,611	13,999	80,855	88,644	6.4	6.3
Rural	8,081	8,754	45,356	49,458	5.6	5.6
Line&Phoenix Islands	918	1,347	6,041	8,350	6.6	6.2
Gilbert Islands	11,693	12,652	74,814	80,294	6.4	6.3

In addition, there were 43 non-private dwellings (institutions) such as accommodation for short-term visitors, institutions such as hospitals, hostels, prisons, dormitories and maneabas (meeting houses).

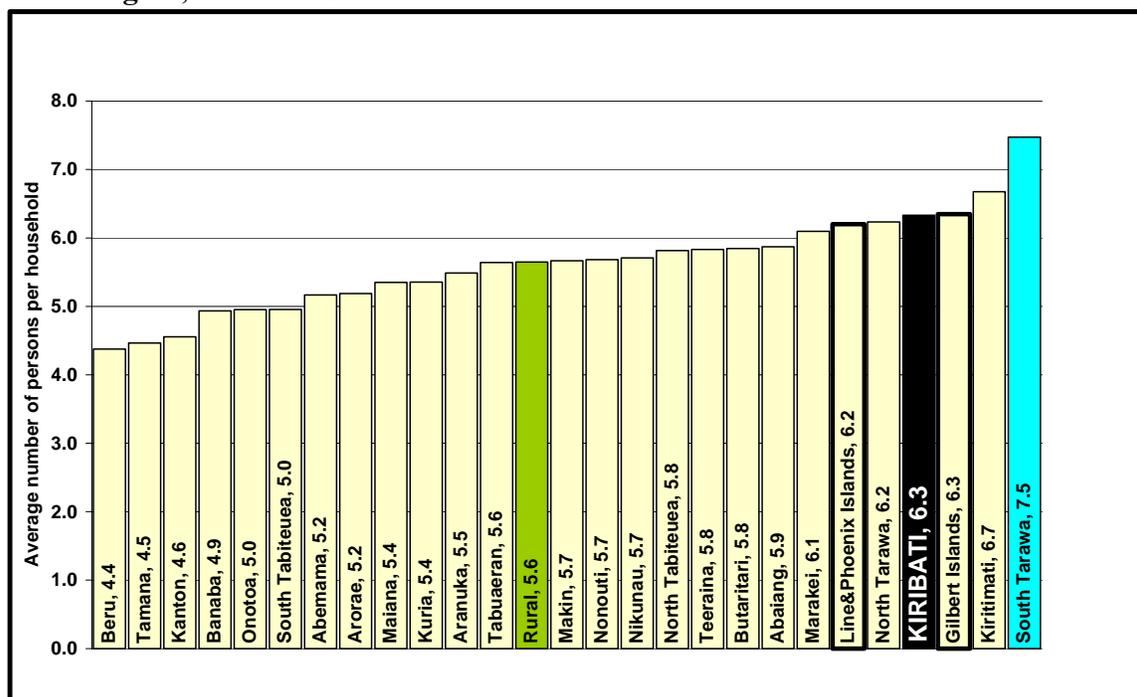
The number of households increased substantially in North and South Tarawa, and in Tabuaeran and Kiritimati. However, there were islands where the total number of households decreased such as in Butaritari, Maiana, North Tabiteuea, Beru, Onotoa, Tamana, and Arorae.

Although overall the average household size decreased slightly from 6.4 to 6.3 persons per household between 2000 and 2005, it increased in several islands, most notably in Aranuka, North Tabiteuea, and Nikunau.

On the other hand, there was a substantial decrease in average household size in South Tarawa, Beru, and Kiritimati.

In general the average household size of 5.6 persons per household was much lower in the rural areas than the 7.5 persons per household in South Tarawa (Figure 37).

Figure 37: Average household size (number of persons per household) by island/region, Kiribati: 2005



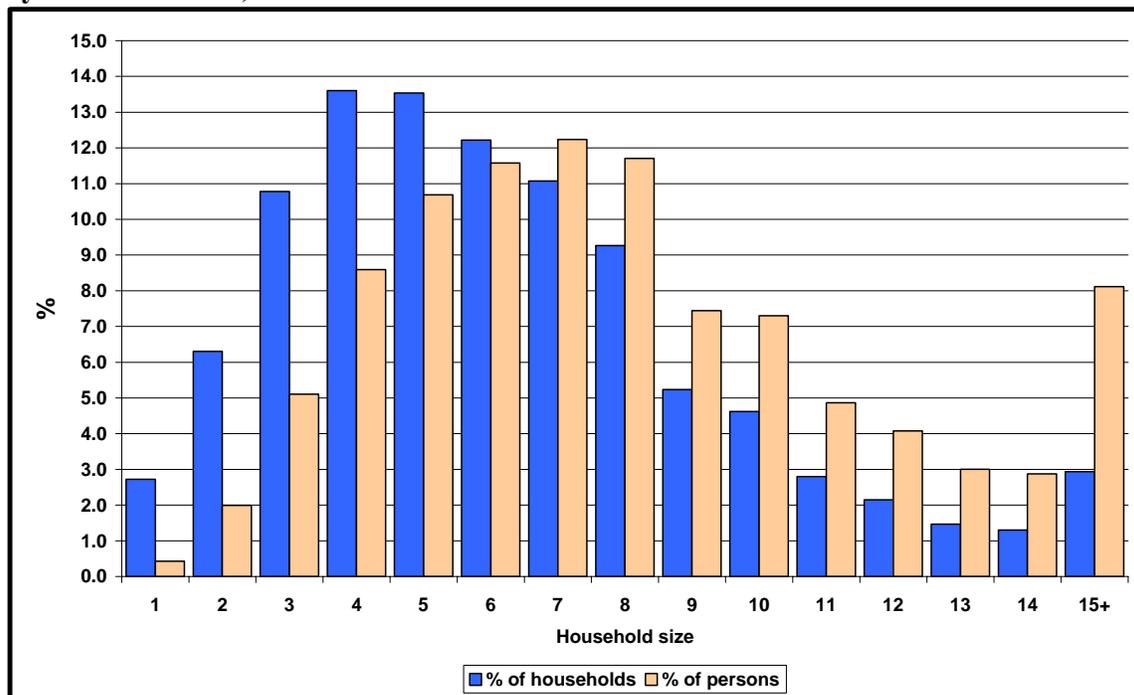
The most common household size in 2005 was 4 and 5 persons per household, with 13.6 and 13.5 per cent of all households falling into this category (Table 23 and Figure 38). However, most people (12.2 per cent) lived in households with 7 persons per household.

More than 30 per cent of all people lived in households with 10 or more persons per household, and 8 per cent of the population lived in households with more than 15 persons per household. On the other hand, less than 1 per cent of the population lived in one-person households.

Table 23: Number of private households by household size and persons per household, Kiribati: 2005

Household size	Private households		Persons per household size	
	Number	%	number	%
1	381	2.7	381	0.4
2	882	6.3	1,764	2.0
3	1,509	10.8	4,527	5.1
4	1,904	13.6	7,616	8.6
5	1,895	13.5	9,475	10.7
6	1,710	12.2	10,260	11.6
7	1,550	11.1	10,850	12.2
8	1,297	9.3	10,376	11.7
9	733	5.2	6,597	7.4
10	647	4.6	6,470	7.3
11	392	2.8	4,312	4.9
12	301	2.2	3,612	4.1
13	205	1.5	2,665	3.0
14	182	1.3	2,548	2.9
15+	411	2.9	7,191	8.1
Total	13,999	100.0	88,644	100.0

Figure 38: Distribution of households and population living in private households, by household size, Kiribati: 2005



5.2 Household composition

Data on household composition was established by identifying a head of household who serves as a reference person to whom all other persons in the household, in terms of family membership, are related (Table 24).

The majority of all heads of households in Kiribati were 80 per cent men (11,243) and 20 per cent (2,756) women.

Sixty-two per cent of all household members were husband and wife and their children (the so-called nuclear family).

More than 10 per cent were other children such as adopted children, grand children, or son/daughter in laws of the household head. Another 17 per cent of all household members were other relatives such as brothers and sisters, uncles and aunts, nephews, cousins, parents etc.

Almost every 10th person was a non-relative.

Table 24: Population by household composition (relationship to head of household), Kiribati: 2005

Relationship	Total	Male	Female	Total	Male	Female
	Total number			Percentage		
Head	13,999	11,243	2,756	15.8	25.7	6.1
Spouse	10,640	523	10,117	12.0	1.2	22.5
Child	30,196	15,804	14,392	34.1	36.1	32.1
Adopted Child	1,561	811	750	1.8	1.9	1.7
Son/daughter in Law	1,531	608	923	1.7	1.4	2.1
Grand Child	6,325	3,297	3,028	7.1	7.5	6.7
Parent	1,411	350	1,061	1.6	0.8	2.4
Other relative	14,929	7,450	7,479	16.8	17.0	16.7
Non-relative	8,052	3,663	4,389	9.1	8.4	9.8
Total	88,644	43,749	44,895	100.0	100.0	100.0

5.3 Household amenities and capital goods

Please note that households were allowed to select several sources of drinking water, types of toilet facility (sanitation), and sources of lighting when asked by census interviewers which type was used and/or available to them. Therefore the total percentages of usage add up to more than 100 per cent.

5.3.1 Private households by main source of drinking water, Kiribati, 2005

The main source of drinking water in Kiribati was *open well*, with 70 per cent of all households obtaining their drinking water from that source (see Table H36 in Basic Tables-Volume I, and Map 2 for specific island data).

The second most important source was *piped water* with 31 per cent. However, piped water was only used by a significant proportion of households in South Tarawa, and Kiritimati. Otherwise, a quarter of all households used *rain water*, and another 21 per cent obtained their drinking from *closed wells*.

While households in South Tarawa relied mainly on piped water (67 per cent), in rural areas 79 per cent relied on open wells.

5.3.2 Private households by type of toilet facility (sanitation) used, Kiribati, 2005

The most frequently recorded toilet facility used by half of all Kiribati households was *beach (lagoon side)*, followed by a third of households *latrine*, another 30 per cent used the *sea (ocean side)*, and 27 per cent the *bush*.

However, the types of toilet facilities varied widely by island and region (Map 3). While in the rural areas the *beach* was the most common facility, it was *public* or *own flush toilet*, and *latrine* in South Tarawa.

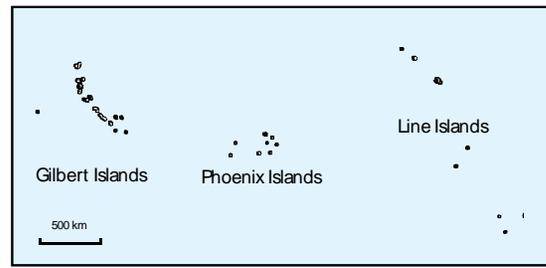
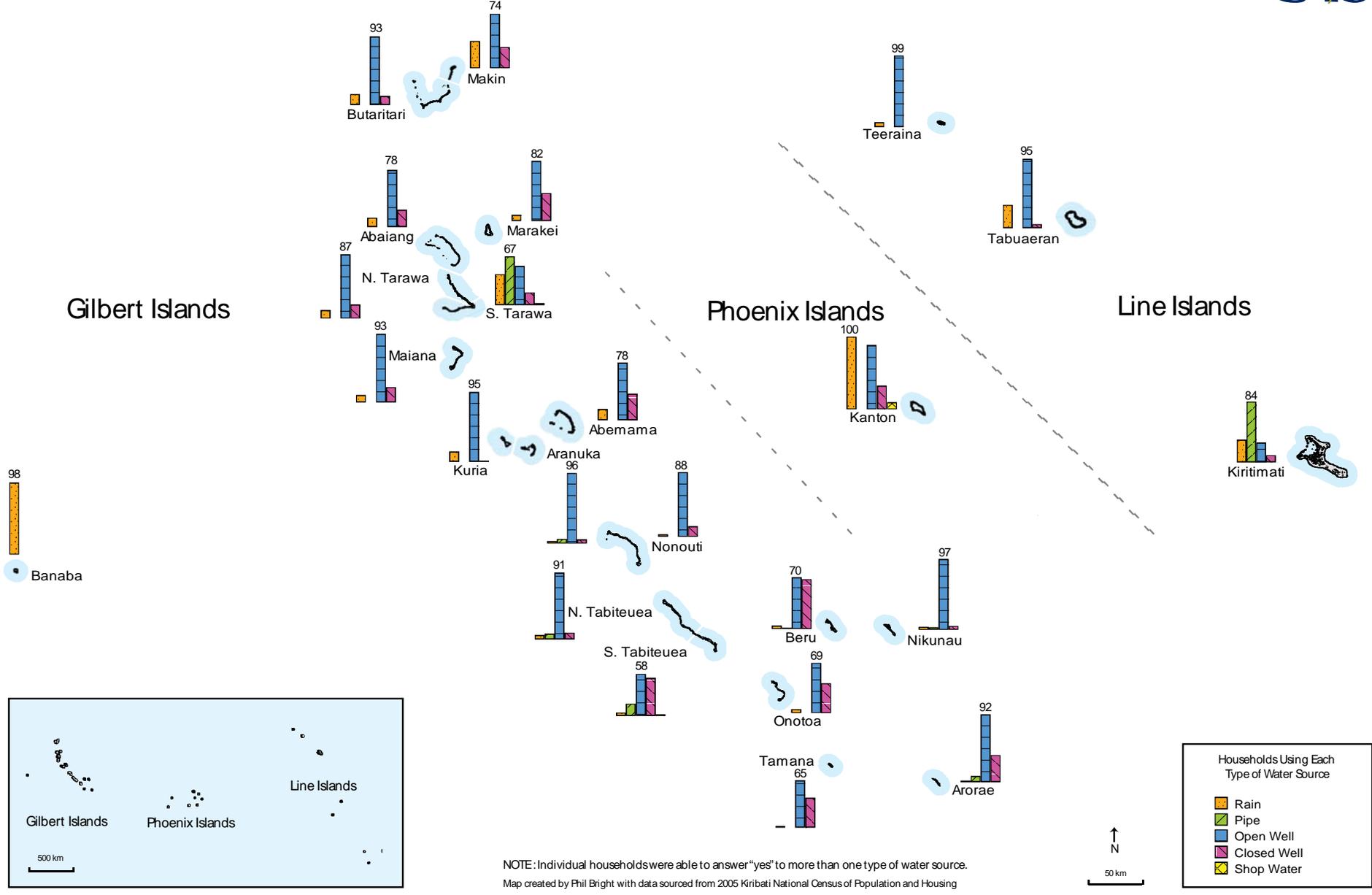
In many islands, the *sea* and *bush* was also an important place of sanitation.

5.3.3 Private households by source of lighting, Kiribati, 2005

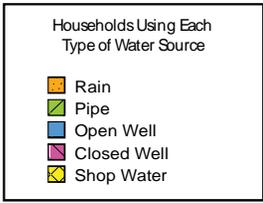
The most common means of lighting in Kiribati was at 62 per cent of all households using a *pressure lamp*, followed by almost 40 per cent the *public electric generator*. However, the public generator was mainly used in South Tarawa and Kiritimati (Map 4).

Other means of lighting were *solar generator*, at 20 per cent of all households and *generator engine* (11 per cent). The *solar generators* were mainly used in the rural areas, and little use was made of solar power in South Tarawa.

Map 2: Percentage of Households Using Various Sources of Drinking Water in Kiribati, 2005, by Island
 (% values are indicated for largest bar in each chart)

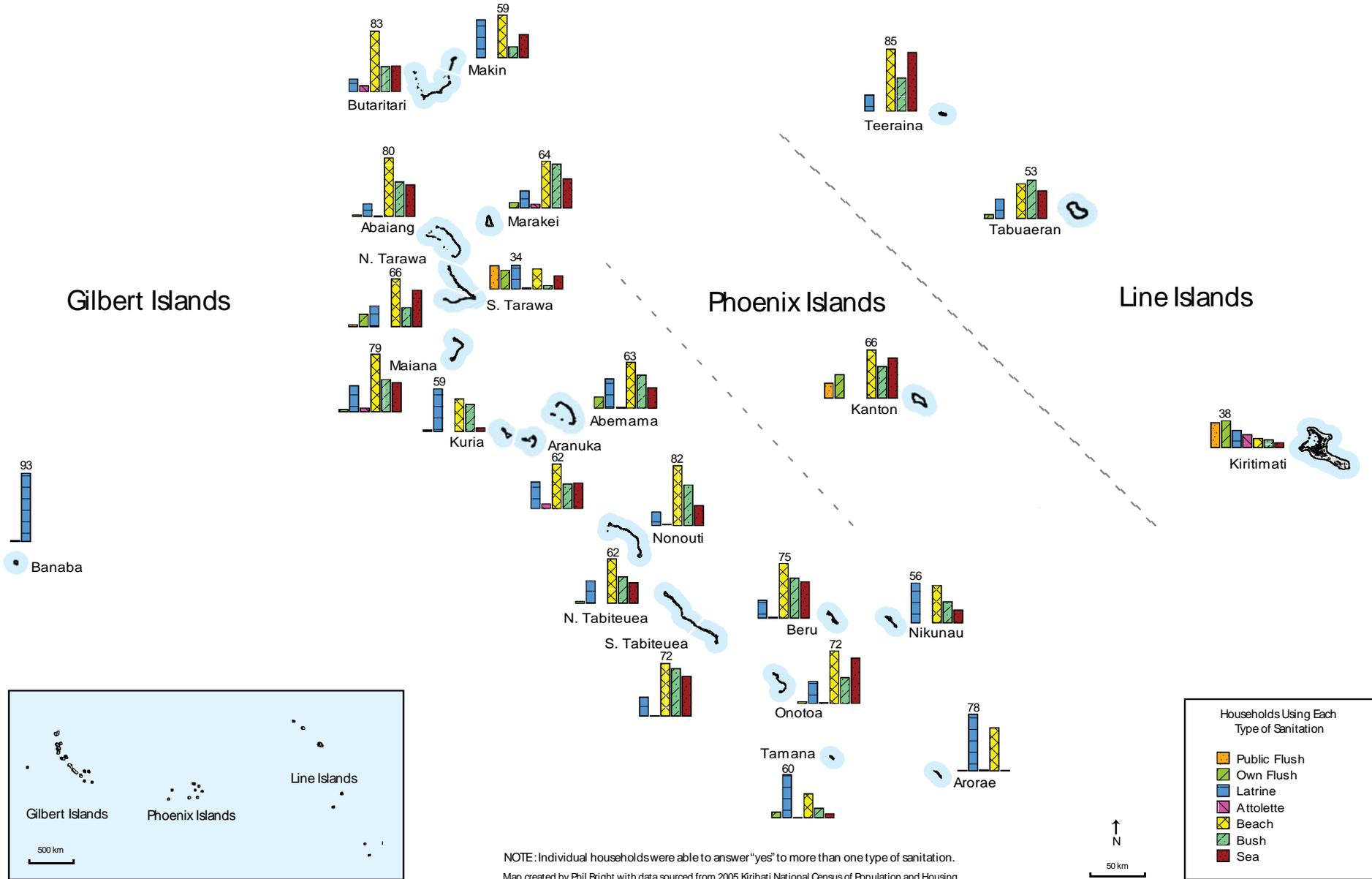


NOTE: Individual households were able to answer "yes" to more than one type of water source.
 Map created by Phil Bright with data sourced from 2005 Kiribati National Census of Population and Housing



Map 3:

Percentage of Households Using Various Types of Sanitation in Kiribati, 2005, by Island
(% values are indicated for largest bar in each chart)



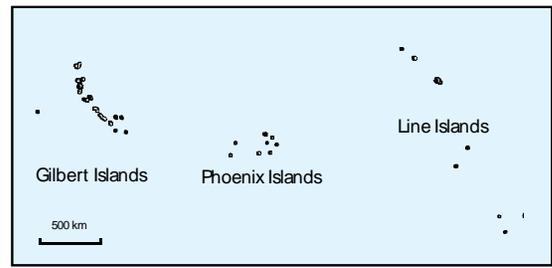
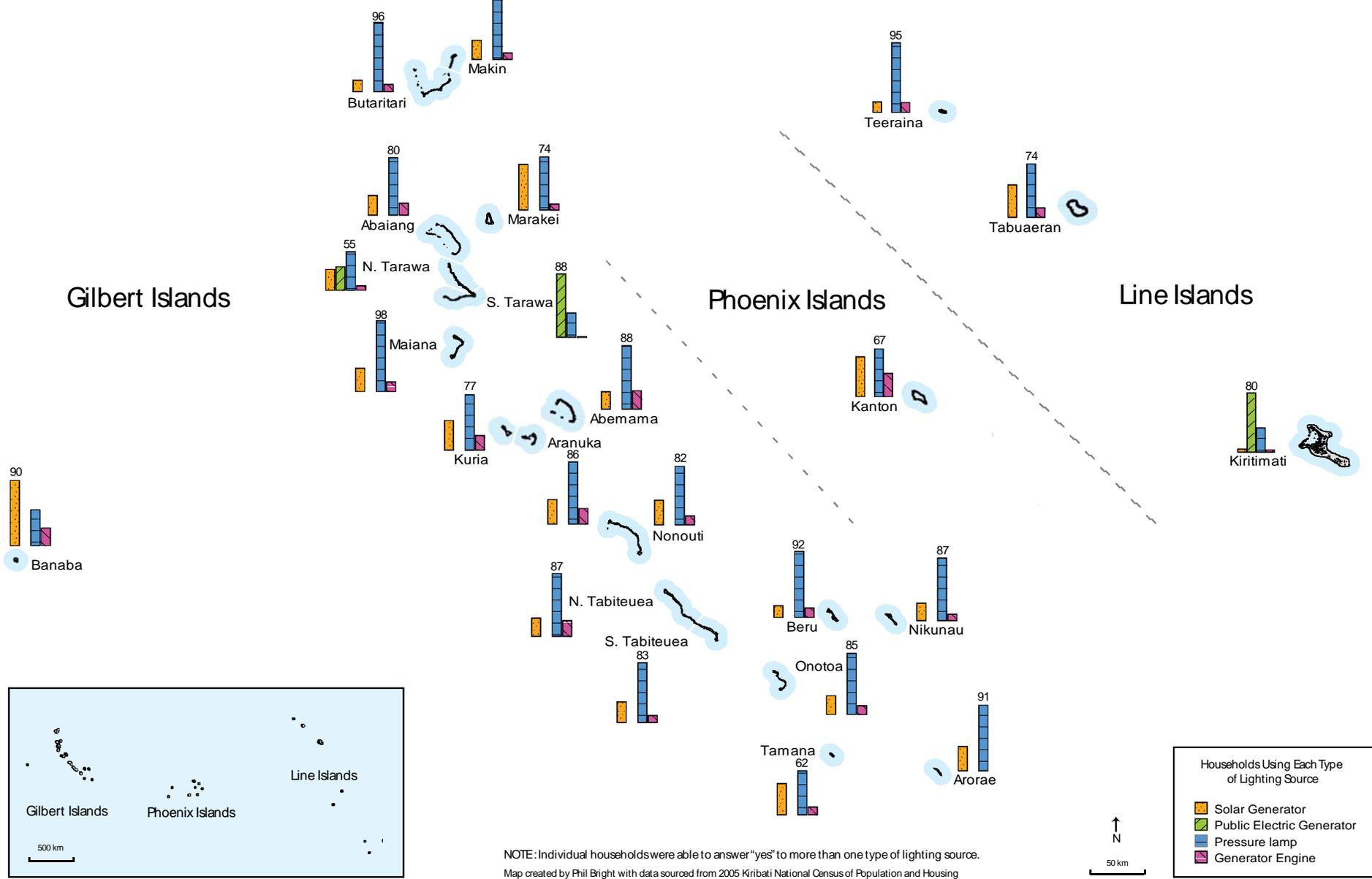
NOTE: Individual households were able to answer "yes" to more than one type of sanitation.
Map created by Phil Bright with data sourced from 2005 Kiribati National Census of Population and Housing



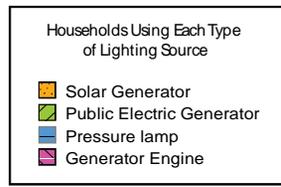
Households Using Each Type of Sanitation

- Public Flush
- Own Flush
- Latrine
- Attoilette
- Beach
- Bush
- Sea

Map 4: Percentage of Households Using Various Sources of Lighting in Kiribati, 2005, by Island
 (% values are indicated for largest bar in each chart)



NOTE: Individual households were able to answer "yes" to more than one type of lighting source.
 Map created by Phil Bright with data sourced from 2005 Kiribati National Census of Population and Housing



5.3.4 Private households and availability of capital goods, Kiribati, 2005

This section briefly summarizes the availability of a selection of food, communication, and transport equipment use (Figure 39)

Every fifth household (20 per cent) owned a *fridge*. This percentage was 41 per cent in South Tarawa and only 8 per cent in the rural areas.

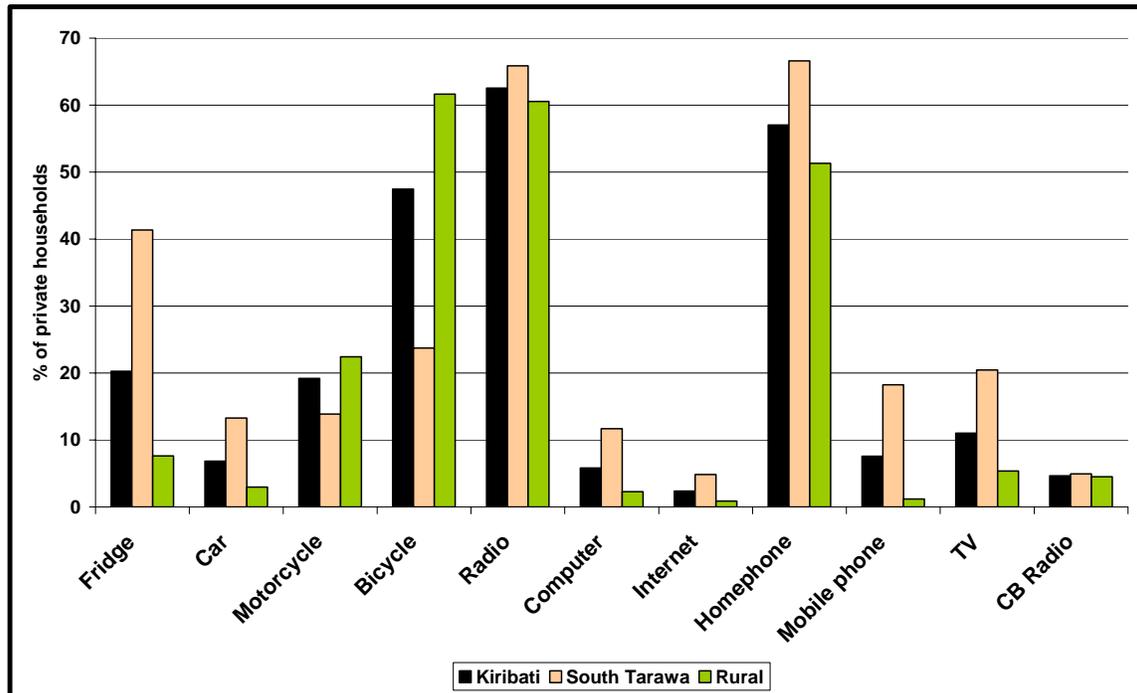
Only 7 per cent of all households owned a *car*. This was 13 per cent in South Tarawa, and 3 per cent in the outer islands (rural areas). The proportion of households owning a *bicycle* was much higher in the rural areas than in South Tarawa.

A *home phone* was available to 57 per cent of all households; this was 67 per cent in South Tarawa and just over half of all households in the rural areas.

Only every tenth (11 per cent) of all households owned a *TV*, being 20 per cent in South Tarawa and 5 per cent in the outer islands.

More than 60 per cent of all households owned a *radio*.

Figure 39: Proportion of private households and availability of capital goods, Kiribati: 2005



6 POPULATION PROJECTIONS

Timely and accurate information about population trends is in high demand. Knowledge about the current size and structure of a country's population is needed for the formulation and implementation of policies and programmes in almost all areas of public life. Because policies are aimed at achieving goals in the future, knowledge about future population trends is required. Activities in areas as diverse as health, environment, poverty reduction, social progress, and economic growth rely on comprehensive and consistent demographic information.

The appropriate method to do this is to prepare estimates and projections of population size and structure by age and sex.

The starting point for any projections is a reliable age-sex distribution of a population. Furthermore information on recent levels and patterns of fertility, mortality, and migration is needed.

The *cohort-component method* was used to compute the population projections presented here. This procedure simulates population changes as a result of changes in the components of growth: fertility, mortality, and migration. Based on past information, assumptions are made about future trends in these components of change. The assumed rates are applied to the age and sex structure of the population, in a simulation that takes into account that people die according to their sex and age, that women have children, and some people change their residence. The cohort-component method of projecting a population follows each cohort of people of the same age and sex throughout their lifetime according to their exposure to fertility, mortality, and migration³.

The key to making meaningful projections lies in the choice of assumptions about future population developments. These assumptions concern possible future birth, death, and migration rates.

6.1 Projection assumptions

As a general guideline, when preparing multiple assumptions about future levels of fertility, mortality and/or migration, it is advisable to arrive at outcomes that are symmetric. This means that the level of the low and the high, or the fast and the slow growth assumptions, should be equally higher and lower positioned from the medium level assumption.

The following demographic inputs were developed for the projections:

Projection period:

The population projections cover the 20-year period 2005-2025.

³ Population Analysis with Microcomputers, Volume I, Presentation of Techniques, p.309/310, by Eduardo Earring, Bureau of the Census, Department of Commerce, USA

Base Population:

The projections are based on the 2005 Kiribati census age and sex distribution of the total enumerated population, adjusted to mid-year 2005.

Fertility:

The estimated TFR (Total fertility rate) of the period 2004-2005 and associated Age-Specific-Fertility-Rates (ASFR), as described in section 3.1 (Table 8), are used as a starting point, with three different assumptions made about future fertility developments (Figure 40).

It is assumed that the level of the future TFR of the *Medium fertility assumption* is reaching 1.9, which is the average level of TFR of the populations of present day Australia, France, New Zealand and United States (Appendix 7). This level will be reached (by means of linear extrapolation) with a pace of fertility decline that is based on the recent past fertility trend of Kiribati. According to this pace, Kiribati would reach a TFR of 1.9 in the year 2038. Since the population projections only include the period 2005-2025, the level of fertility at the end of the projections period in 2025 will be 2.6 (Figure 40).

The reason for choosing the fertility level of countries such as Australia, France, New Zealand and the United States as future level for Kiribati is twofold:

- 1) They have completed the *demographic transition* (see explanatory note in glossary). Appendix 7 shows that the TFR of these 4 countries has remained almost constant at a level of 1.9 over the last 25 years (1980-2005).
- 2) They are regarded as the metropolitan focal points of the Pacific Island countries.

Therefore the *Medium fertility assumption* is set as follows:

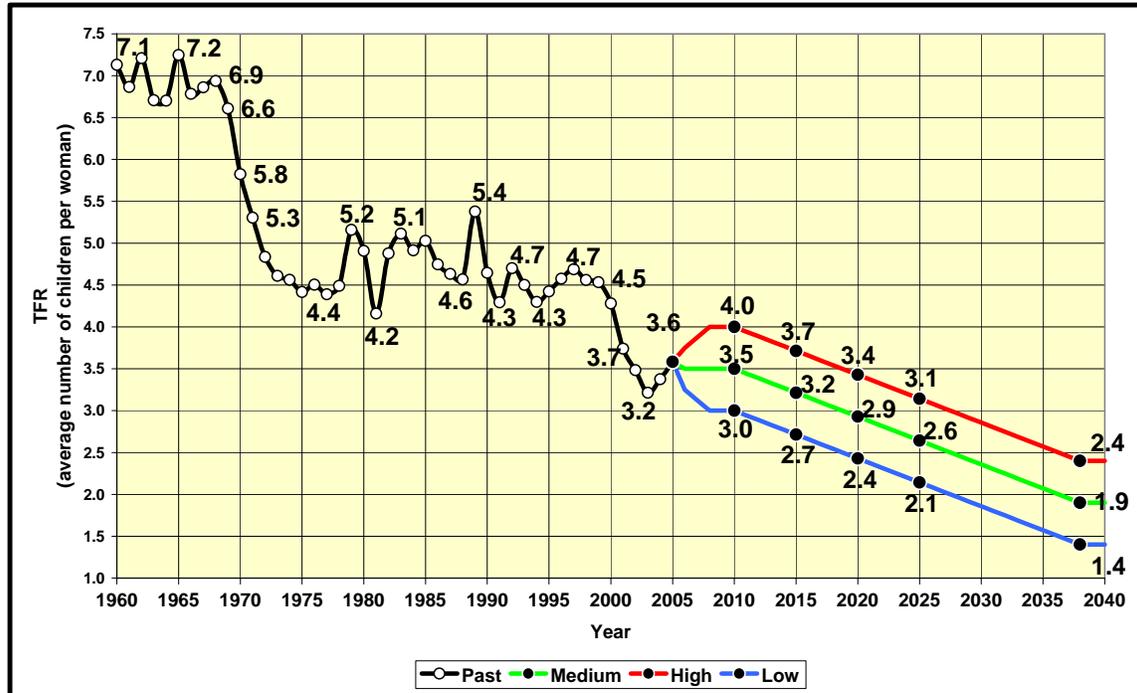
Assumption 1 - Medium Fertility: Fertility decreases to 2.6 in the year 2025 (and further to 1.9 in 2038). However, the TFR is assumed to remain stable at 3.5 for the period 2005-2010, because a clear decreasing or increasing trend during the intercensal period 2000-2005 can not be established (Figure 11 and 40).

The *High* and the *Low fertility assumptions* were built symmetrically around the *Medium fertility assumption*:

Assumption 2 - High Fertility: The High fertility assumption is set to be by a TFR of 0.5 higher than the medium fertility level. Therefore during the period 2005-2010 the TFR initially increases to a level of 4 before it decreases to 3.1 in 2025.

Assumption 3 - Low Fertility: The Low fertility assumption is set to be by a TFR of 0.5 lower than the medium fertility level. Fertility decreases to 2.1 in the year 2025.

Figure 40: Estimated past levels of fertility, and future fertility assumptions for projections, Kiribati: 1960-2025



Note: Fertility estimates of the years 1960 to 2005 were derived by using the *own-children method*, Mr. Michael Levin, US Census Bureau, Washington DC, USA

Mortality:

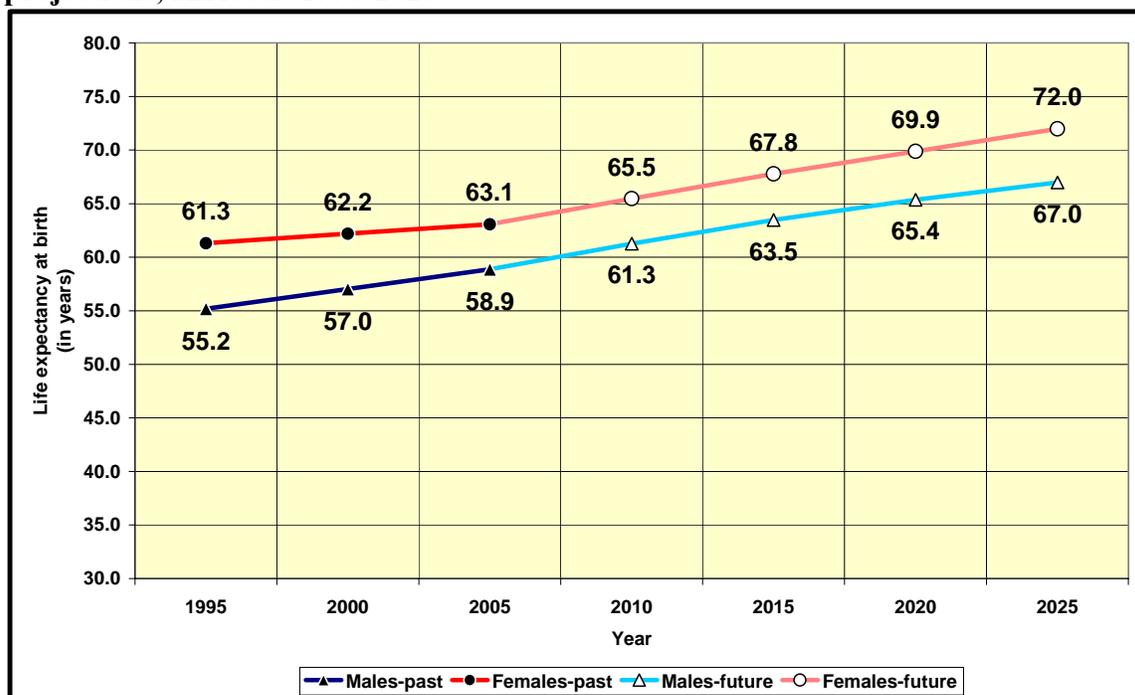
It is thought that under normal circumstances (meaning the absence of catastrophes like wars, epidemics and major natural disasters) the health situation in Kiribati and mortality levels will continuously improve throughout the projection period.

The estimated life expectancies at birth [E(0)] of 58.9 years and 63.1 years for males and females respectively, are used as the starting point for the projections in 2005. These estimates are based on the reported number of children ever born and the proportion of children still alive as reported in the 2005 census, as outlined in Section 3.2.

Assumption: The presented population projections assume a rising trend in life expectancy for males and females according to the United Nations working models, medium pace of mortality improvement, as described in World Population Prospects (United Nations, 1995, p.144). According to this model, current estimated life expectancies gradually increase and reach 67.0 and 72.0 years in 2025 for males and females respectively (Figure 41).

Only one assumption regarding mortality is made. The reason for this is that variations in mortality levels (multiple assumptions) usually have only a minor impact on final projection results; they also would require the production of too many different scenarios that ultimately would only complicate the presentation of results.

Figure 41: Estimated past levels of mortality, and future mortality assumptions for projections, Kiribati: 1995-2025



Migration:

Making meaningful assumptions about future migration developments provides the single greatest difficulty for undertaking population projections, as many of the social and economic parameters shaping migration patterns depend largely on countries' overall social, economic and political developments, which can fluctuate widely and are hard to predict. It, furthermore, depends on economic and political developments overseas, in particular on decisions whether or not to provide working or residency visas, and/or establish immigration quotas for potential Kiribati (labour) migrants.

The total number of migrants is expressed as *net migration* which is the difference between the number of arrivals (immigrants) and departures (emigrants) during a certain period of time.

$$\boxed{\text{Net migration}} = \boxed{\text{Arrivals (immigrants)}} \text{ minus } \boxed{\text{Departures (emigrants)}}$$

Therefore if *net migration* is positive it means that the number of arrivals (immigrants) was higher than the number of departures (emigrants); if *net migration* is negative, the number of departures (emigrants) is higher than the number of arrivals.

In section 3.3.2 the level of *net migration* for the intercensal period 2000-2005 was estimated to be negligible. However, I-Kiribati are currently eligible for migration to New Zealand under the so-called *Pacific Access Category*. 75 persons per year are allowed to migrate to New Zealand to establish permanent residence there. This scheme exists since 2002, and is fully utilized

A study of the *New Zealand's Ministry of Foreign Affairs and Immigration* web site (<http://www.immigration.govt.nz/>) reveals that immigration numbers of I-Kiribati people were in excess of 100 persons per year to NZ in recent years.

As several hundred I-Kiribati left the country for New Zealand between 2000-2005, it could be expected that *net migration* was calculated to be negative during the intercensal period. The fact that this is not the case has to be explained by the fact that during the same period several hundred I-Kiribati repatriated from Nauru back to Kiribati.

However, repatriation of I-Kiribati from Nauru to Kiribati was completed in 2006, and *net migration* can be expected to be negative since then. Apart from New Zealand, another country of destination for I-Kiribati migrants is Fiji (although exact numbers are not available).

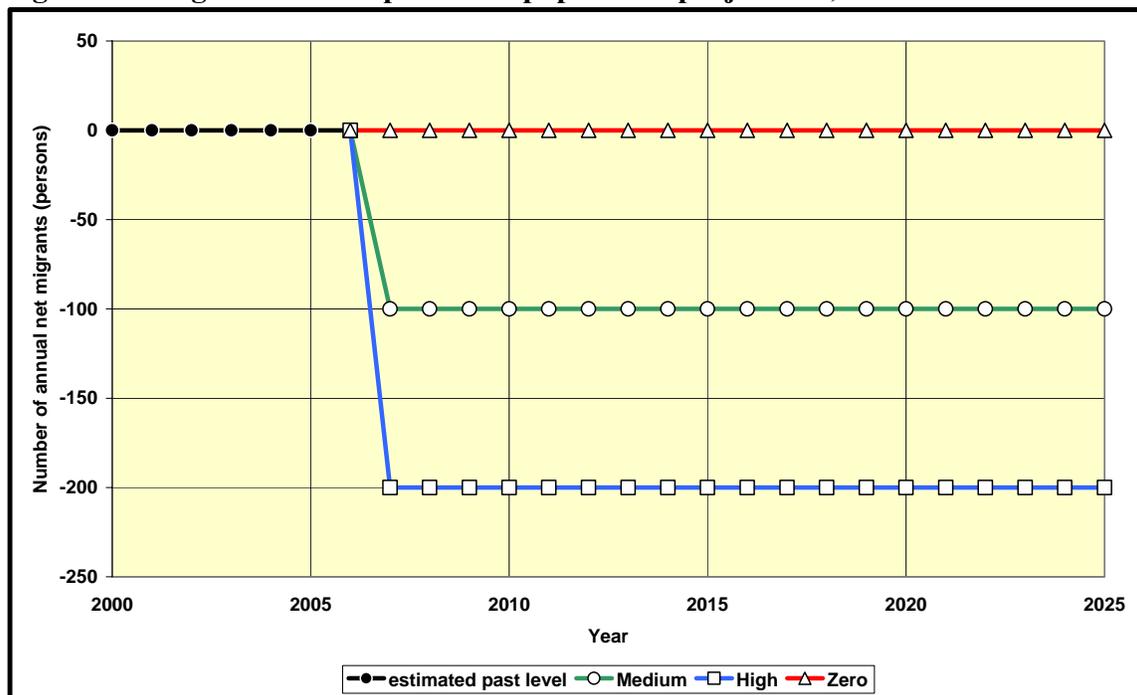
In total three different migration assumptions were made, and the *High* and the *Low (Zero) net migration assumption* were built symmetrically around the *Medium net migration assumption* (Figure 42):

Assumption 1 - Medium net migration: net migration is assumed to be constant at -100 persons per year for the period 2007-2025 (100 more persons depart from Kiribati than arrive in the country annually).

Assumption 2 – High net migration: net migration is assumed to be constant at -200 persons per year for the period 2007-2025 (200 more persons depart from Kiribati than arrive in the country annually).

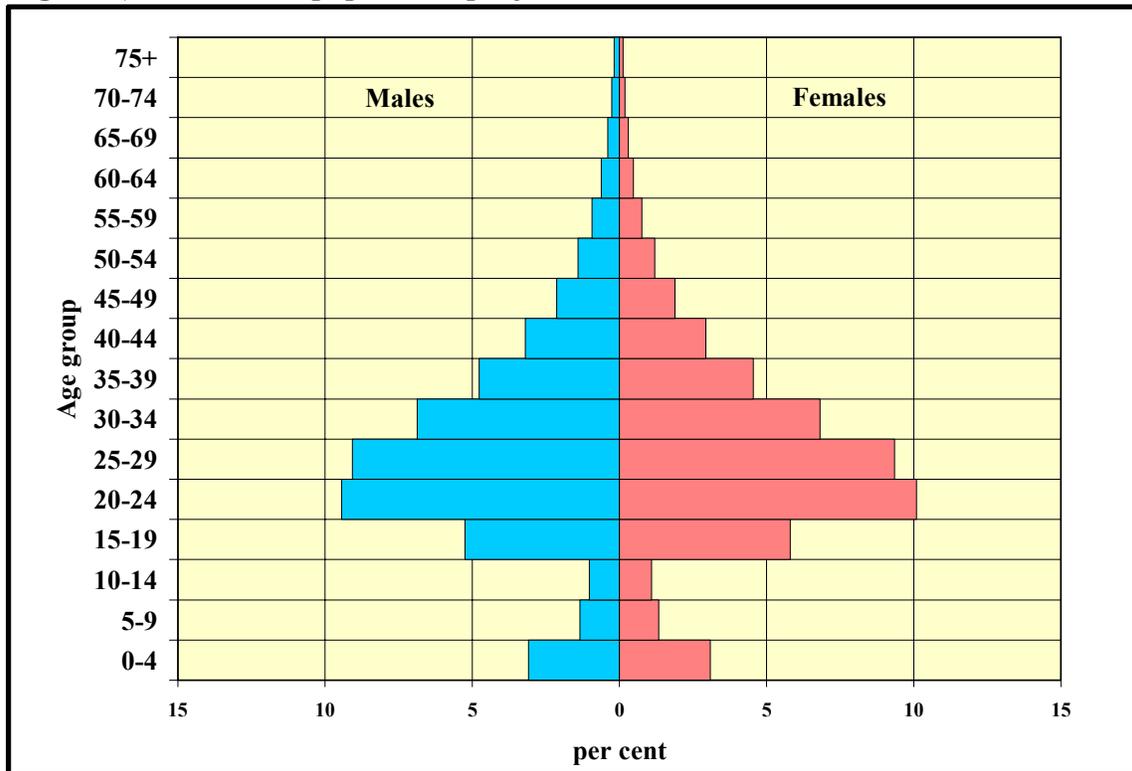
Assumption 3 - Zero net migration: net migration is assumed to be zero for the entire projections period (number of arrivals [immigrants] and departures [emigrants] are of equal size).

Figure 42: Migration assumptions for population projections, Kiribati: 2005-2025



With regard to the age and sex structure of migrants (Figure 43) it is assumed that there will be equal numbers of males as females, and the age structure resembles that of a *family type* migration pattern, which means that it is foremost young couples aged 20-29 years who migrate, sometimes with their (young) children aged 0-4 years. The main reason for this particular age group is to seek further education and employment opportunities.

Figure 43: Assumed age distribution of net migrants (in per cent of total number of migrants) used for the population projections, Kiribati: 2005-2025



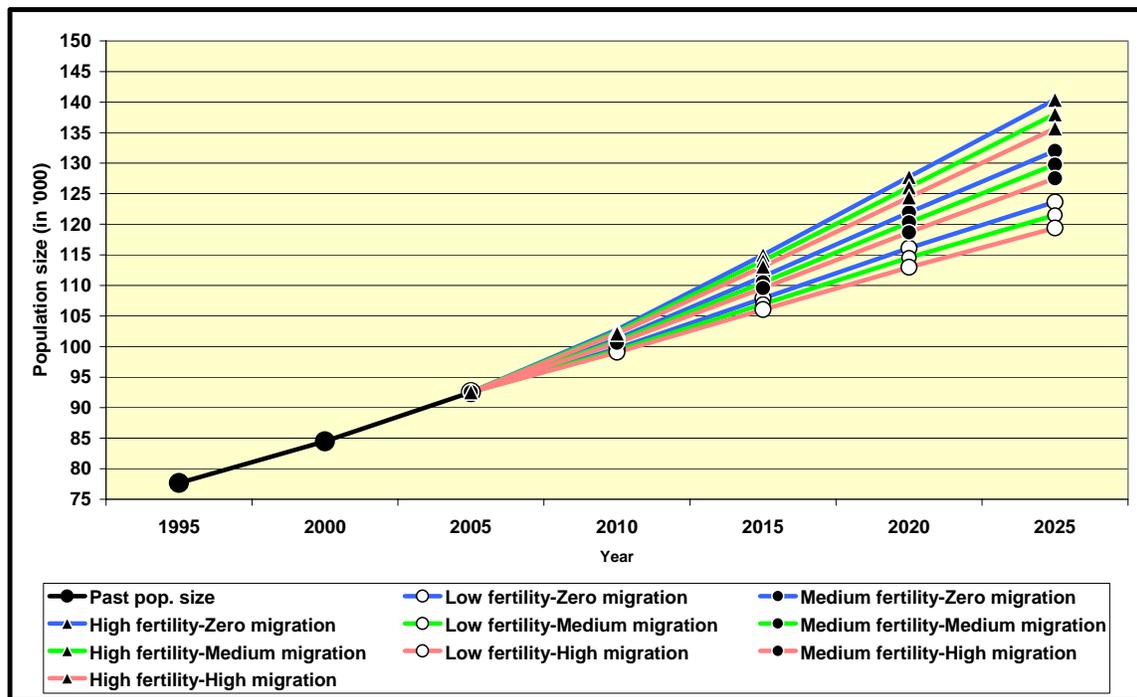
5.2 Projection results

The combination of the above described 3 different fertility and 3 different migration assumptions (with one general mortality assumption) results in 9 different projections (Figure 44). These 9 different projections highlight the impact of different levels of fertility on the one hand and the impact of migration on the other.

From Appendix 8 and Figure 44 it can be seen that the all scenarios result in an increasing population size in future. However, the higher the fertility level assumed, the higher is the population outcome, and the higher the number of annual net migrants (in negative terms), the lower will be the population size in future.

It also can be seen that the impact of the different levels of migration have a relatively small impact on the population size compared to the impact that the fertility assumptions have.

Figure 44: Past and future population trend according to 9 projection variants, Kiribati: 2005 - 2025

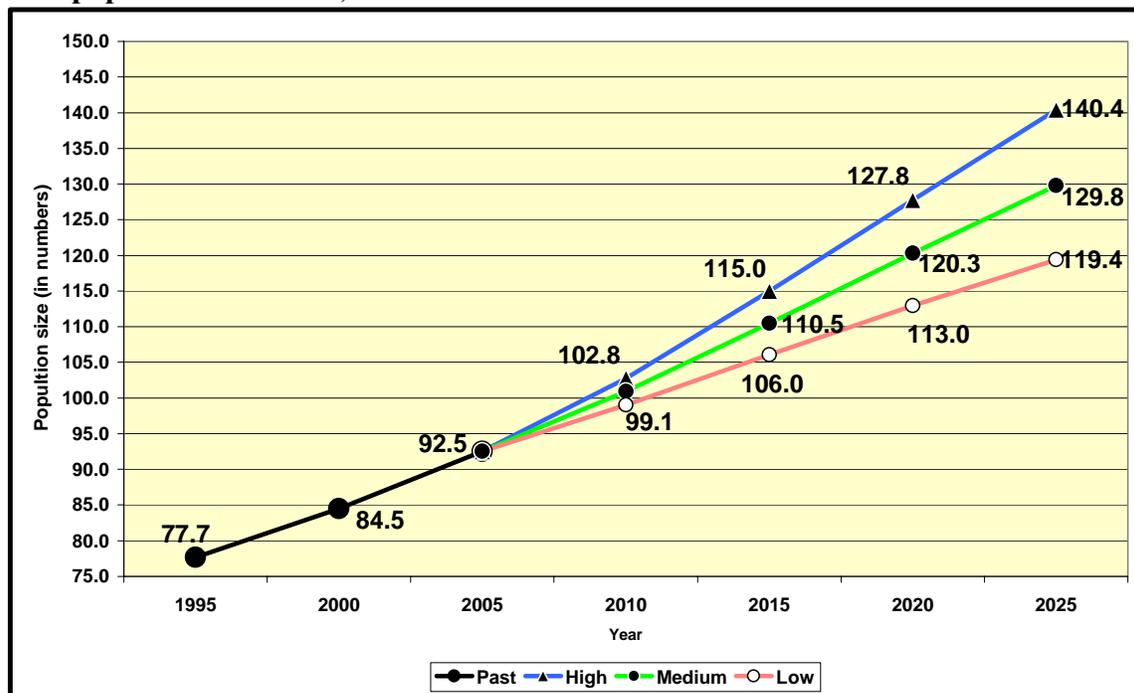


Below only the 3 population projection scenarios (or variants) are described in detail that show the most extreme impact on the population size and structure in comparison to an intermediate (medium) outcome (Figure 45):

1. **High population scenario:** the projection outcome is determined by applying the *High fertility assumption* (slow fertility decline) while assuming *Zero net migration*.

2. **Medium population scenario:** the projection outcome is determined by applying the *Medium fertility assumption* (moderate fertility decline), and the *Medium net migration assumption* (assuming -100 net migrants annually throughout the projection period).
3. **Low population scenario:** the projection outcome is determined by applying the *Low fertility assumption* (fast fertility decline) in combination with a *High net migration assumption* (assuming -200 net migrants annually).

Figure 45: Past and future population trend according to the High, Medium, and Low population scenario, Kiribati: 2005 - 2025



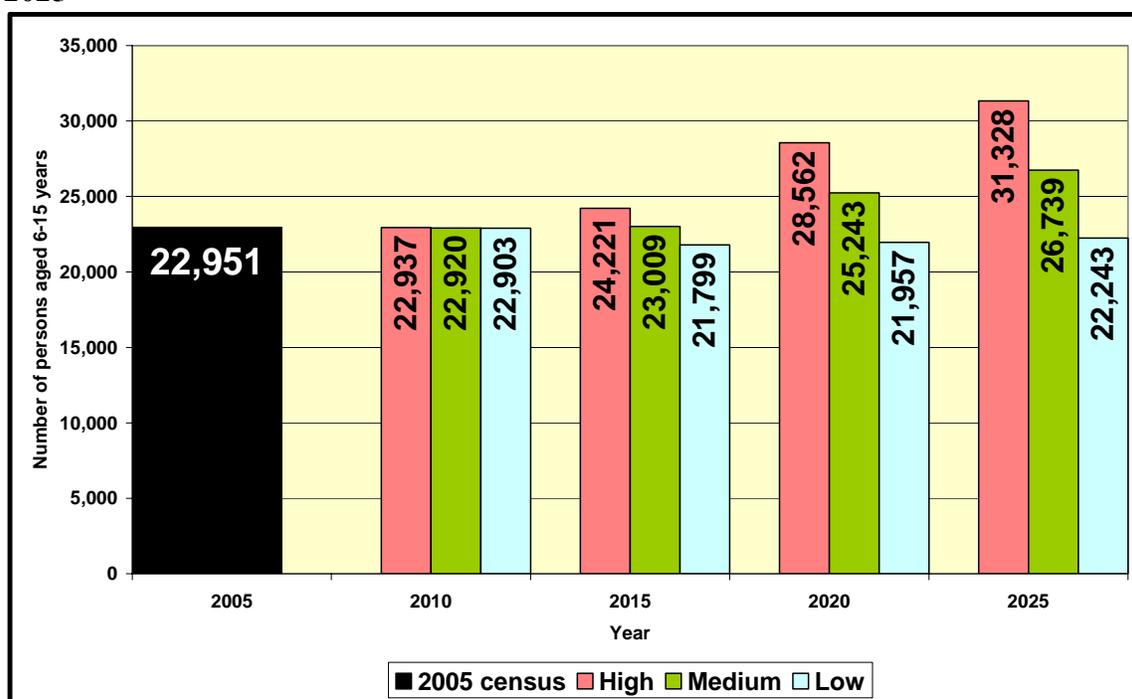
It can be seen that the impact of the different projections on the population size for the year 2010 are relatively minor. Significant population differences based on the different projection assumption can only be expected thereafter. According to the extreme scenarios (the *Low* and *High population scenarios*), the population size of Kiribati will be between 119,000 and 140,000 people in the year 2025. The *Medium population scenario* predicts a population size of almost 130 thousand people in 2025.

The population size in 2015 can be expected to be between 106,000 and 115,000 people, depending on the projection assumptions made.

Figures 46-52 feature the comparative results of the various projections, highlighting the differential impact on population size, growth and structure, as a result of different levels and trends of fertility and different levels of migration.

The population aged 6-15 years of age - the mandatory school age population - can be expected to remain at the 2005 level until the year 2010; from then onwards the three different population scenarios will have very different impacts on the size of the school age population (Figure 46). This age group would only slightly decrease in numbers if the fertility level decreases rapidly (as outlined by the *Low fertility assumption*), and that Kiribati would experience high levels of out migration (*High migration assumption*), as outlined by the *Low population scenario*. The other scenarios result in an increase of the school age population from 2010 onwards. The largest increase would occur if fertility levels only slowly decrease (*High fertility assumption*) and migration would be zero, as outlined by the *High population scenario*.

Figure 46: Population aged 6-15 years (mandatory school age) according to the High, Medium and Low population scenarios, Kiribati: 2005, 2010, 2015, 2020, and 2025



The general impact on the future population structure by broad age groups can be seen in Table 25 and Figures 47-49.

Regardless of the population scenario used, the proportion and size of the **working age population (aged 15-59 years)** will be significantly larger in 2025 compared to 2005 (Figure 49). According to the *High population scenario*, the working age population would increase from 53,320 in the year 2005 to almost 82,000 in 2025, an increase by 54 per cent. According to the *Medium population scenario* the working age population would still increase by 48 per cent to almost 79,000 people which is more than the total population census count in 1995. Even according to the *Low population scenario* the size of the population aged 15-59 would be 76,000, significantly larger than in 2005.

Another general outcome is that the **population 60 years and older** will more than double from 5,020 persons in 2005 to over 10,000 in 2025 regardless of the projection variant used (Figure 49).

The proportion of the **young population aged 0-14 years** as part of the total population will decrease until 2025 regardless of the type of projection scenario used (Table 25). It will decrease from 37 per cent to a range of 28-34 per cent of the total population.

However, the size of the **population younger than 15 years** will most likely increase from 34,000 in 2005 to over 40,000 in 2025 (according to the *Medium population scenario*). It would be almost 48,000 according to the *High population scenario*. Only the *Low population scenario* results in a population size of the 0-14 year olds that is less than in 2005 (Figure 49).

The population will grow older regardless of which projection variant is used, as is expressed in the **median age**; it will increase from 20.7 years in 2005 to somewhere between 24.0-27.4 years as a result of a decrease of the proportion of the young population aged 0-14, and an increase of the proportion of the population 60 years and older (Table 25).

However, the three different projection scenarios will produce very different population growth rates: the *High population scenario* will result in an annual population growth rate of 2.1 per cent between 2005 and 2025, while the *Medium population scenario* and the *Low population scenario* will only produce 1.7 and 1.3 per cent growth annually.

Table 25: Population structure and indicators according to three different projection scenarios, Kiribati: 2025

Indicator	2005 census	2025		
		High	Medium	Low
Population by broad age groups (%)				
0-14 years	37	34	31	28
15-59 years	58	58	61	64
60 years and older	5	8	8	8
	100	100	100	100
Dependency ratio	74	71	64	57
Median age	20.7	24.0	25.7	27.4
Average annual growth rate	1.8	2.1	1.7	1.3
Sex ratio	97	100	99	99

The different impacts on the population size and structure are furthermore illustrated as population pyramids (Figure 50-52). The *shaded* area represents the enumerated 2005 population size by sex and age group, and the *outlined* area represents the estimated (projected) population size in 2025 according to the *High* (Figure 50), *Medium* (Figure 51), and *Low population scenario* (Figure 52).

Figure 47: Population by broad age groups according to 3 scenarios, Kiribati: 2010

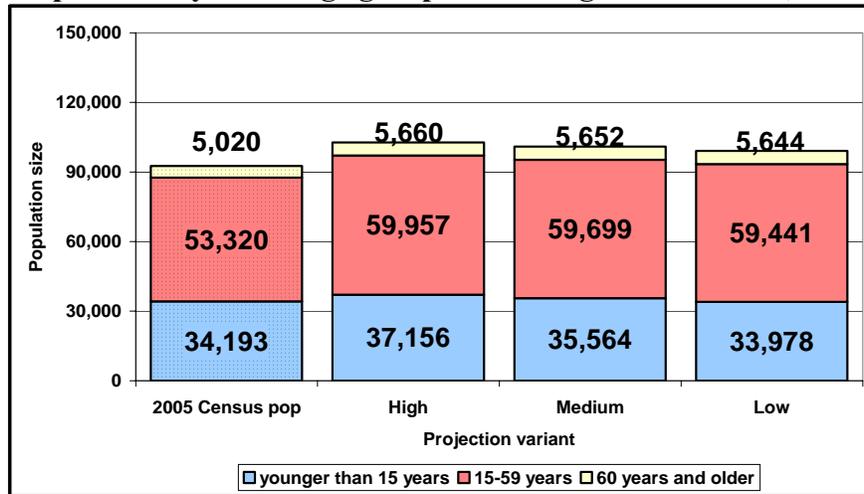


Figure 48: Population by broad age groups according to 3 scenarios, Kiribati: 2015

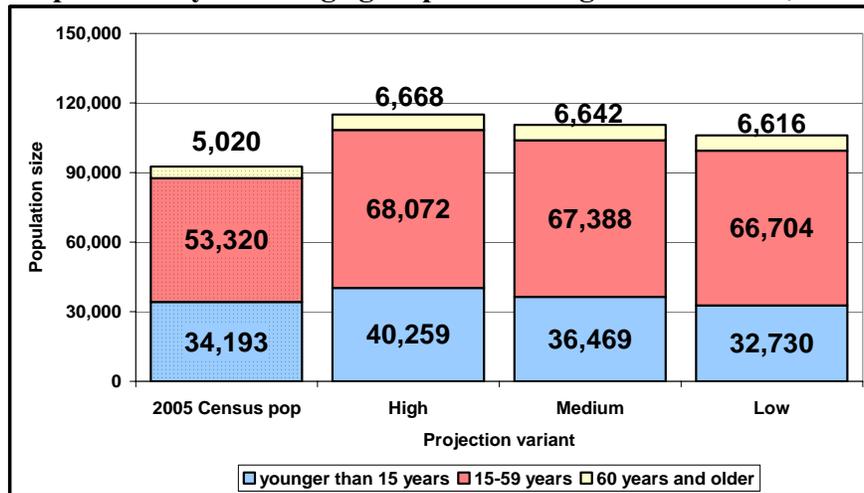


Figure 49: Population by broad age groups according to 3 scenarios, Kiribati: 2025

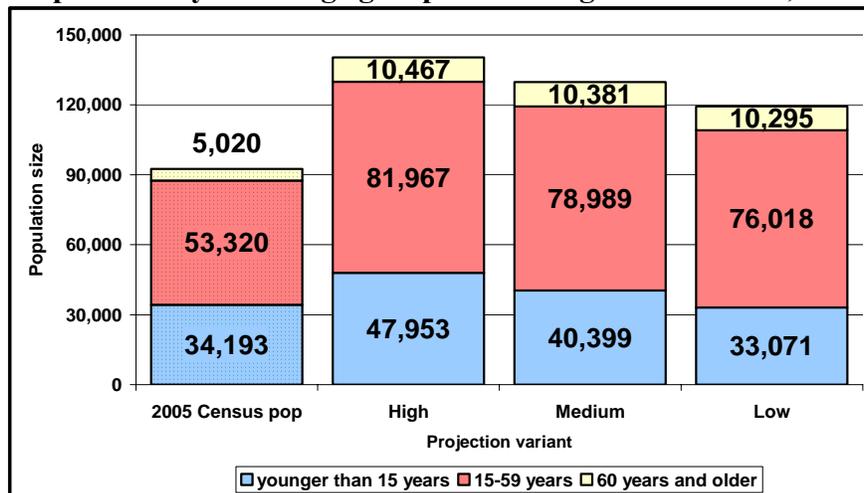


Figure 50: Population pyramid, High population projection: 2005 and 2025

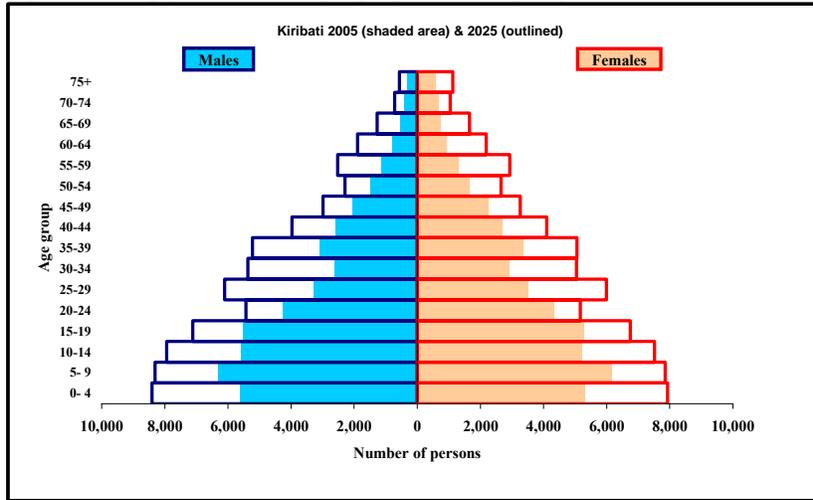


Figure 51: Population pyramid, Medium population projection: 2005 and 2025

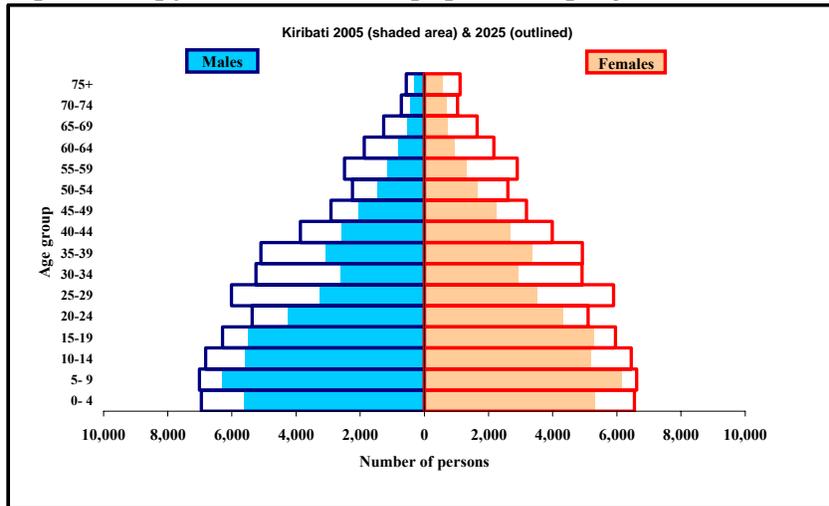
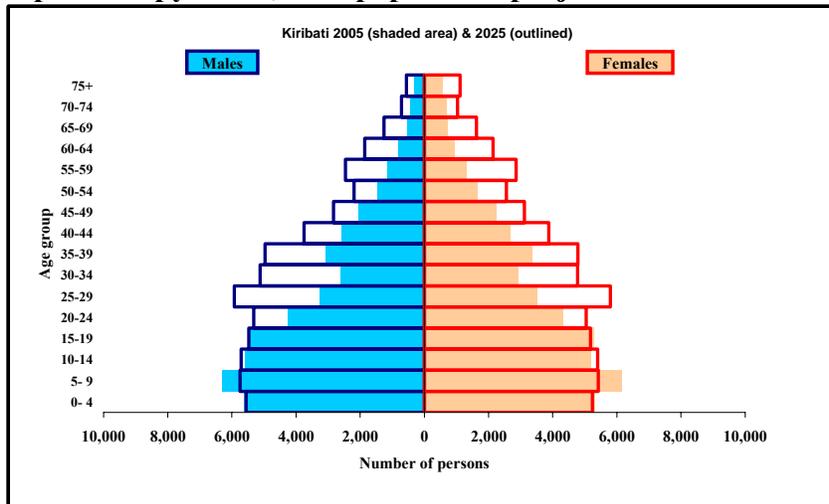


Figure 52: Population pyramid, Low population projection: 2005 and 2025



The differently shaped pyramids clearly illustrate that the difference in population size and structure in 2025 between the 3 different projection variants is the size of the population aged 0-19 years. It highlights the predominant effect of the assumed level of fertility on future population size and structure: the lower the assumption of the future level of fertility, the smaller will be the size of the population younger than 20 years of age in future.

In contrast, the different migration assumptions have a relatively minor impact on future population size and structure.

Most likely outcome

Predicting the likelihood of a certain future population size and structure is difficult for any country, and the further into the future, the more uncertain is the outcome.

Therefore several projections variants have to be produced to allow users to choose from an outcome that seems most probable according to their own views and opinions.

However, most data users like to be pointed to a *most likely outcome*.

Population changes close to those presented in the *Medium population scenario* that uses the *medium fertility assumption* (TFR decreases from its current level to 2.6 in 2025), and the *medium migration assumption* (a total of -100 net migrants annually) appears to be the most likely outcome (see Figure 44 and 45, the green middle line, and Appendix 8 the middle outlined boxes) because:

- The relatively high level of fertility is expected to decline as it has been in Kiribati's recent past and is furthermore expected to do so, based on historical worldwide observations of countries with a similar level of fertility (refer also to *the theory of demographic transition*, in the glossary). Therefore the *High fertility assumption* with its very slow fertility decline seems to be more unlikely outcome.
- Although fertility levels (TFR) have already declined to well below 2 in many parts of the world, such rapid fertility decline is not expected to occur before the end of the projection period in 2025, based on Kiribati's relatively slow past pace of fertility decline. Hence, the *Low fertility assumption*, assuming a rapid fertility decline, appears an equally unlikely outcome.
- While it is nearly impossible to predict future migration patterns and levels, the *Medium migration assumption* appears to be the most realistic, because in recent years a steady flow of out migration seems to have established, at least towards New Zealand. Therefore an assumption of zero net migration seems an unlikely scenario at the moment. On the other hand larger numbers of persons leaving Kiribati (compared to those outlined by the *Medium migration assumption* of -100 persons per year) is hampered by immigration restrictions posed by possible destination countries, most notably Australia and New Zealand.

7 IMPLICATIONS OF DEMOGRAPHIC TRENDS

7.1 Population dynamics

Fertility

Kiribati's population growth of 1.8 per cent annually, an increase of almost 1,700 persons per year (more than the total population of Onotoa), is the result of a continued high fertility rate. Although fertility (birth) rates have decreased substantially in recent years, they still cause the population to grow rapidly. The average number of children per woman (TFR) has dropped from about 4.5 children per woman in 1995 to 3.5 in 2005.

It will be a huge challenge for Kiribati communities to cope with a fast growing population that places increasing demands on housing, land, energy and water, educational services, health facilities and employment opportunities. The Government of Kiribati, in addressing the issue of population growth, needs to produce policies that focus on fertility reduction through strengthening family planning and reproductive health. Policies and programmes directed toward the expansion of family-planning services should be considered. Availability and accessibility of family planning services for women (and their partners) of all ages will empower them to make conscious decisions about the number and spacing of their births. Furthermore, pregnancies of young women are often unwanted and the result of unprotected sex. This is a major health concern, considering the risk of HIV/AIDS and STDs.

Data supporting teen pregnancy as a social issue include lower educational levels, higher rates of poverty, and other poorer "life outcomes" in children of teenage mothers. In general, teenage pregnancy usually occurs outside of marriage, and, for this reason, it often carries a social stigma.

Many stakeholders are involved in the teenage reproductive health strategies working at various levels to reduce teenage pregnancy by increasing the knowledge and practice of family planning, promoting peer education, providing sex education advisory services including contraceptives, involving young people in service design, educating the parents of teenagers on effective communication, providing better support for teenage mothers (such as help returning to education, advice and support), working with young fathers, giving better childcare, and increasing the availability of supported housing.

Data gathered from the Ministry of Health/Ministry of the Interior, Family Planning showed a substantial increase of family planning users during the years 2002-2004, coinciding with substantial reduction of birth rates. However, the number of family planning users decreased in 2005, and birth rates increased again. These data confirm the link between efforts made by the Ministries to promote knowledge, availability, and usage of family planning methods, and its effect on birth rates.

Mortality

Estimates on the level of mortality presented in this profile, suggest that life expectancy at birth and infant mortality rates have improved, although slowly during the period 1995-2005. Females live a longer life than males, and live on average four years longer than males.

Improved mortality rates mean that healthier people live longer lives. In working towards this goal, the following efforts should be made:

- improve infant, child and maternal health by improving primary health care programmes;
- expand programmes of immunization;
- prevention of HIV/AIDS and STDs by:
 - Increasing awareness and knowledge of safer sexual behaviour and practices by using appropriate language;
 - Targeting priority groups (Youth, women and men, particularly aged 10-24);
 - Enhancing education programmes to encourage open discussions (between partners and their children) on issues of sexual behaviours;
 - Promoting and disseminate information outlining the advantages and proper use of condoms by men and women with emphasis on targeting male organizations;
 - Reviewing, developing, implementing and evaluating the effectiveness of appropriate policies;
 - Delaying the initial sexual activity of young people;
 - Developing a well planned media campaign throughout the year based on health promotion with regards to HIV/AIDS;
 - Ensuring protection of the rights of people living with HIV/AIDS;
 - Ensuring that people living with HIV/AIDS have free and unrestricted access to medical treatment, facilities and support services;
 - Ensuring that a reliable HIV/AIDS testing system is in place;
 - Establishing a voluntary, confidential system of HIV/AIDS testing with informed consent that includes pre and post test counseling;
- combat the prevalence of diabetes and heart disease;
- provide a hygienic and safe living environment;
- promote healthy eating habits and food nutrition programmes;
- advocate a general healthy life style including regular physical exercise;
- discourage smoking and excessive alcohol consumption.

Internal Migration

Until the year 2000 there was a strong trend of rural to urban migration in Kiribati. People left the Outer islands and settled in South Tarawa. The population growth of South Tarawa therefore was significantly higher than the national average, resulting in high population densities and crowded household, especially in Betio.

The 2005 census data, however, show a different trend. Based on data on place of residence 5 years before the census, it can be concluded that there was a net-flow of people from the Gilbert Group islands (including South Tarawa) towards the Line Islands, in particular the islands Tabuaeran and Kiritimati showed very high population growth rates.

Possible explanations for this trend are:

1. South Tarawa and especially Betio is 'full', and there is only limited availability of land for additional housing construction or extension, therefore
2. North Tarawa has increasingly become the destination of Outer Islands migrants, and possibly even for former South Tarawa residents.

New settlement developments in North Tarawa, and Tabuaeran and Kiritimati increase demands for land allocation, energy and water consumption, waste disposal, sewage connections and general infrastructure.

International Migration

Although Kiribati 2000-2005 intercensal estimates shows that there has been negligible international net migration, I-Kiribati are currently eligible for migration to New Zealand under the so-called *Pacific Access Category*. 75 persons per year are allowed to migrate to New Zealand to establish permanent residence there. This scheme has existed since 2002, and is fully utilized. At the same time, several hundred I-Kiribati repatriated from Nauru back to Kiribati. The number of arriving and departing people cancelled each other out which explains the calculation of 'negligible' international net migration for the period 2000-2005. However, repatriation of I-Kiribati from Nauru to Kiribati was completed in 2006, and *net migration* can be expected to be negative since then, which means that more people leave Kiribati than arrive. This will lower the overall population growth, although in view of the low numbers of migrants involved, only slightly.

Unfortunately data on arrivals and departures provided by the *Ministry of Foreign Affairs, Immigration*, remain incomplete and are unusable for migration analysis. The collection of arrivals cards is incomplete. This means that the level of net migration can only be crudely estimated by comparing intercensal population growth with rates of natural increase for the same time period. While this method provides a reasonably robust indication of net migration, planners and policy-makers require more detailed and timelier information on the demographic make-up of opposing migration streams to make and implement realistic policy decisions. Hence, further improvements are needed to collect and process information on age, sex and nationality of all arriving and departing passengers in Kiribati.

Should improvements prove impossible, an alternative would be to apply the proper demographic methodologies, by comparing the two nearest censuses, to calculate the desired population data. The disadvantage of this option is that this can only be done after

the analysis of the latest census is completed. This exercise can prove more timely (and costly) than an efficient registration system which would provide regular and timely migration information.

Population projections

Knowledge about the current size and structure of a country's population is needed for the formulation and implementation of policies and programmes in almost all areas of public life. Because policies are aimed at achieving goals in the future, knowledge about future population trends is required.

The population projection scenarios presented in this paper point to a growing population for the Republic of Kiribati during the next 20 years. The medium-variant scenario of the projections points to a population of about 101,000 in 2010 and 130,000 people in the year 2025.

Changes in the Kiribati population's age structure as a result of possible declining fertility rates will have an impact on the proportion of the young population aged 0-14 years. The changes will be reflected in a smaller proportion of those under the age of 15, and a larger working-age population aged 15–59 years. As a result, the dependency ratio of Kiribati's population will decrease, and the population's median age will increase by about 4-7 years.

The population aged 60 years and older will double from 5,000 in 2005 to more than 10,000 in 2025.

The working-age population is expected to increase considerably, both in proportion and in absolute numbers. According to the *Medium population scenario* the working age population will be almost 60,000 people in 2010, 67,000 in 2015, and almost 80,000 in 2025, compared to 53,000 in 2005.

The needs of this larger population size and its different population subgroups should be considered in development plans in areas as diverse as health, education, the environment, and economic growth.

7.2 Crosscutting issues

Kiribati will experience a continued growth of its population during the next years. Appropriate health, education, and social welfare programs must be in place to fulfil the needs and aspirations of Kiribati communities.

Vital statistics

A well functioning registration system, able to supply accurate and timely statistics on population developments, is of fundamental importance to planners and policy makers. In

order to facilitate reliable estimates on the level and trend of fertility and mortality indicators, improvements need to be made to strive towards a complete registration system recording the number of deaths by age and sex, and the number of births by sex, and by age of mother. Improving co-ordination between all agencies involved is required.

By tracking all entry and exiting persons, policy makers will be able to have an accurate and current picture of Kiribati's total population size and structure. Such information will prove useful for policy planning purposes and to develop meaningful projections.

The Environment

As the natural resources of the land and sea form the basis of a sustainable and healthy life for the Kiribati communities and its people, maintaining a healthy and sustainable living environment should be a top priority for Kiribati's Government

The size and density of the population has a direct impact on water and energy consumption, sewage and waste production, the general infrastructure such as roads, the use of land, and the development of agriculture and marine resources.

High population densities, such as in South Tarawa, mean more stress on the environment, and consequently there is a need for higher priorities to be placed on environmental health services like public garbage collection to keep the communities free of waste, and most importantly, a well-functioning sewage system. In addition, water sources need to be protected.

Households

It is not just the growth of the population which contributes to an increased demand in water and energy supply, waste disposal, sewage connections and general infrastructure, but an increase in the number of households due to changes in average household size. Even if the population size would remain stable, the number of households can still increase when households and/or family structures break up into smaller units which are often described as the transition from extended family type households to nuclear family type living arrangements.

The census data show a very high population density and therefore a very large average number of people per households in South Tarawa in general, and in Betio particularly. This was caused by Kiribati's high natural growth and by the movement of people from the outer islands to South Tarawa (Betio) which has led to visible overcrowding. Overcrowded living conditions place a stress on the residents, as well as their environment.

The Kiribati Government may support the current trend of increased urban to rural internal migration for example by strengthening its (former) *resettlement programme*.

Health services, and well-being

The health status of each individual and his/her family members is probably one of the most important concerns people have. Therefore the availability, utilization and affordability of quality health care and medical services are major issue of concern. Government and health officials need to address challenges of the health services and the health care system.

While it cannot be expected that certain special health care facilities will be available to a small and remote population such as the Outer islands of Kiribati (because the low number of cases prohibits the operation of state-of-the-art health services that requires the employment of specialist personnel and the purchase and maintenance of specialist equipment), provisions need to be in place to ensure a system of efficient referrals to the nearest health facilities. Frequent visits by medical specialists are another way to comply with peoples' health demands.

The population projections have shown that the population aged 60 years and older will double in size during the next 20 years. This requires strengthening of special services for the growing number of elderly people, including a pension scheme with retirement benefits, and specialized health care for the elderly.

Education

The educational level of a population is a key indicator of the development and quality of life in a country. Education plays an important role in development through its links with demographic, as well as economic and social factors. In general, there is a close and complex relationship between education, fertility, morbidity, mortality and mobility: when couples are better educated, they tend to have fewer children, their children's health status improves and their survival rates tend to increase. Higher levels of educational attainment also contribute to a better-qualified workforce, higher wages, and better economic performance than the proportion of people who had little or no formal education and training.

In this regard, it is a benefit that young people leave the country to join overseas higher educational institutions. However, graduates need to return to suitable employment to avoid a brain drain and to retain the educated with their newly acquired knowledge and skills.

School enrolment data shows that almost 9 per cent of children in the age group 6–15 years were not enrolled in schools, and almost 20 per cent of 15 year olds were not attending school. More efforts need to be undertaken to get those children (back) into school, as it is not only compulsory by law for children of this age to attend school but also every child has both a need and a right to gain basic education.

The overall educational attainment of the Kiribati population has improved since 1995. Higher proportions of school-leavers with secondary education (and post-secondary

qualifications) have an impact on a country's labour market for both the private and public sectors.

Although data on educational attainment shows that men have achieved, on average, higher academically than females, information on current school enrolment shows a far more balanced picture, with actually more females currently enrolled than males.

Economic activity and labour market

Economic activity and employment is shaped by the size of the working-age population, the educational skill level of the labour force, and by the economic resources available to a country.

Apart from Government jobs, employment on fishing vessels and especially on merchant, container boats, and tankers is the main source of employment for (male) I-Kiribati. Therefore it was sobering to hear that these opportunities are declining.

According to representatives of the *South Pacific Marine Services (SPMS)* and the *Marine Training Centre (MTC)* approximately 1,000 I-Kiribati crew is currently employed on vessels around the world. However, recent high dismissal rates of I-Kiribati crew due to *misconduct* have a profound impact on recruitment with shipping companies being increasingly reluctant to employ I-Kiribati. *Misconduct* refers to violent behaviour due to drunkenness, and/or home sickness, or other unspecified stress factors.

Aside from the problems of 'misconduct', other disincentives to employ I-Kiribati include poor health of potential recruits (alcohol, obesity, infections), difficulties obtaining visas, and long (timely) and expensive travel to employer, especially in view of high competition from other countries (Philippines etc).

According to SPMS there would be the potential to employ 4-times more crew of I-Kiribati origin on foreign vessels (about 4,000), if their reputation as reliable crew would improve, and if it would be easier (more cost effective) to get recruits from Kiribati to their respective boats.

On a positive note, the *Marine Training Centre (MTC)* provides training for 150 students per year with 100 per cent employment prospect on international shipping vessels. For the first time this year the MTC trains 12 female crew as stewards and cooks to be included on foreign shipping vessels.

The *Kiribati Fishing Services (KFS)* provides employment for about 300 I-Kiribati crew on 37 Japanese boats on a 1-year contract. Unfortunately, these opportunities are declining due to a reduction in the Japanese vessels (due to international competition). The *Fisheries Training Centre (FTC)* provides training for 72 students per year to be employed by KFS with about 60per cent per class graduating. Students are required to learn Japanese, which is a major stumbling block to graduate. Recruitment quota per island exists according to size of 18-30 year male population.

Although a high percentage (64 per cent) of the Kiribati population 15 years and older was economically active, only a relatively small proportion (23 per cent) was regularly employed and received a regular cash income. It was mainly these relatively few people (13,133) who supported the rest of the population in regard to cash income. This means that one employed person supports on average about 6 other people.

More than half (53 per cent) of the employed cash workers were employed in the Public Administration.

According to the projection results presented in this report, the working-age population will increase significantly during the next 20 years. Its future size will increase rapidly: probably by about 26,000 people between 2005 and the year 2025.

Households and families who are economically incapable of sustaining an acceptable and healthy lifestyle might need extra attention from the government, since unhealthy living environments affect everybody in the long run. In particular the following minimum housing condition should be in place: access to clean water and public electricity, an adequate sewage system, and waste disposal facilities.

Government and business officials are encouraged to partner their efforts and ideas to develop innovative strategies that will promote economic diversification and growth.

Good governance

Good governance and effective policymaking should provide the framework for sustainable development within which the interrelationship of population, environment, and all possible socio-economic aspects of a country can prosper cohesively.

In this regard it is important that policy makers, planners, political parties and community leaders need to be aware of the needs and aspirations of the people of their country to effectively provide for the specific needs of their population, and the different population sub-groups. Governments need to know about their country's population structure, population processes and socio-economic characteristics in order to plan for an adequate standard of living, and for a proper provision and distribution of goods and services.

Appendices

Appendix 1: Arriaga's approach for estimation of ASFR for two points in time and the age patterns of fertility (Arriaga-Brass), MORTPAK4.1, procedure FERTPF, United Nations

First enumeration: Nov 2000

Fertility pattern is tabulated by age of woman at enumeration

Age Group of Woman	Children Ever Born	Age Specific Fertility rates (ASFR)	Fertility Consistent with C.E.B. (ASFR)	Fertility Pattern by Age at Survey Date		ASFR	Cumulation of Fertility Pattern by Age at Birth		Age Specific Fertility Rates Based on Adjustment Factor for the Age Group		
				Recorded	Calculated		Adjustment Factors	20 - 25	25 - 30	30 - 35	
15 - 20	0.091	0.031	0.060	0.031	0.039	0.060	0.039	1.524	0.043	0.041	0.042
20 - 25	0.729	0.147	0.157	0.147	0.157	0.216	0.196	1.104	0.173	0.166	0.170
25 - 30	1.739	0.188	0.190	0.188	0.188	0.406	0.385	1.056	0.208	0.199	0.203
30 - 35	2.890	0.164	0.163	0.164	0.160	0.569	0.545	1.044	0.177	0.169	0.173
35 - 40	3.713	0.126	0.104	0.126	0.120	0.673	0.665	1.012	0.132	0.127	0.130
40 - 45	4.328	0.052	0.068	0.052	0.046	0.741	0.710	1.043	0.050	0.048	0.049
45 - 50	4.544	0.009	0.025	0.009	0.007	0.766	0.717	1.068	0.007	0.007	0.007
Total Fertility Rate:			3.8		3.6				3.96	3.79	3.87

Last enumeration: Nov 2005

Fertility pattern is tabulated by age of woman at enumeration

Age Group of Woman	Children Ever Born	Age Specific Fertility rates (ASFR)	Fertility Consistent with C.E.B. (ASFR)	Fertility Pattern by Age at Survey Date		ASFR	Cumulation of Fertility Pattern by Age at Birth		Age Specific Fertility Rates Based on Adjustment Factor for the Age Group		
				Recorded	Calculated		Adjustment Factors	20 - 25	25 - 30	30 - 35	
15 - 20	0.074	0.0306	0.051	0.031	0.039	0.051	0.039	1.301	0.039	0.040	0.039
20 - 25	0.636	0.1475	0.147	0.148	0.156	0.197	0.195	1.012	0.158	0.158	0.158
25 - 30	1.578	0.1709	0.175	0.171	0.172	0.372	0.367	1.015	0.174	0.174	0.174
30 - 35	2.655	0.1628	0.165	0.163	0.159	0.538	0.526	1.023	0.161	0.161	0.161
35 - 40	3.582	0.1097	0.115	0.110	0.104	0.653	0.630	1.037	0.105	0.106	0.106
40 - 45	4.111	0.0495	0.063	0.050	0.044	0.716	0.673	1.063	0.044	0.044	0.044
45 - 50	4.495	0.0085	0.023	0.009	0.006	0.739	0.680	1.087	0.006	0.006	0.006
Total Fertility Rate:			3.7		3.4				3.44	3.45	3.44

Appendix 2: Estimates of Fertility Based on the Arriaga Method, PAS spreadsheets, procedure ARFE-2, US Census Bureau

Year and item or age	ASFR from CEB		ASFR		Adjusting factors	Adjusted ASFR's based on age group			
	ASFR	cumulative	pattern	cumulative		20-29	25-29	25-34	30-34
2000 Census									
ASFR corrected for one-half year between birth and reporting.									
15-19	0.0596	0.0596	0.0385	0.0385	1.5463	0.0417	0.0407	0.0405	0.0402
20-24	0.1570	0.2166	0.1567	0.1953	1.1093	0.1698	0.1656	0.1645	0.1634
25-29	0.1895	0.4061	0.1891	0.3844	1.0567	0.2048	0.1998	0.1985	0.1971
30-34	0.1627	0.5689	0.1613	0.5456	1.0426	0.1746	0.1704	0.1693	0.1681
35-39	0.1039	0.6728	0.1202	0.6658	1.0105	0.1301	0.1270	0.1261	0.1253
40-44	0.0504	0.7232	0.0452	0.7110	1.0171	0.0490	0.0478	0.0475	0.0471
45-49	0.0116	0.7348	0.0063	0.7172	1.0245	0.0068	0.0066	0.0066	0.0065
TFR	3.67		3.59			3.88	3.79	3.76	3.74
Mean age at childbearing			29.79						
2005 Census									
ASFR corrected for one-half year between birth and reporting.									
15-19	0.0507	0.0507	0.0381	0.0381	1.3318	0.0387	0.0387	0.0388	0.0389
20-24	0.1468	0.1975	0.1558	0.1938	1.0189	0.1585	0.1582	0.1588	0.1593
25-29	0.1745	0.3720	0.1723	0.3662	1.0158	0.1753	0.1750	0.1757	0.1763
30-34	0.1655	0.5374	0.1593	0.5254	1.0229	0.1620	0.1618	0.1623	0.1629
35-39	0.1153	0.6528	0.1043	0.6297	1.0367	0.1061	0.1059	0.1063	0.1066
40-44	0.0493	0.7021	0.0436	0.6732	1.0428	0.0443	0.0443	0.0444	0.0446
45-49	0.0125	0.7145	0.0062	0.6795	1.0517	0.0063	0.0063	0.0063	0.0064
TFR	3.57		3.40			3.46	3.45	3.46	3.48
Mean age at childbearing			29.64						

Appendix 3: Child mortality indices based on number of children ever born and still alive, using procedure CEBCS of MORTPAK 4.1 for MALES, Kiribati: 2005

Age group of women	Reference Date	United Nations Models (Palloni-Heligman Equations)					Reference Date	Coale-Demeny Model (Trussell Equations)			
		Latin Am.	Chilean	So. Asian	Far East	General		West	North	East	South
		Infant mortality rate									
15 - 20	Oct 2004	0.077	0.085	0.077	0.077	0.077	Nov 2004	0.082	0.08	0.082	0.078
20 - 25	Sep 2003	0.053	0.059	0.053	0.053	0.054	Sep 2003	0.054	0.05	0.057	0.056
25 - 30	Mar 2002	0.048	0.055	0.049	0.049	0.049	Jan 2002	0.049	0.044	0.053	0.053
30 - 35	Apr 2000	0.054	0.064	0.056	0.056	0.056	Dec 1999	0.055	0.049	0.061	0.06
35 - 40	Dec 1997	0.057	0.069	0.06	0.058	0.059	Jul 1997	0.057	0.051	0.064	0.065
40 - 45	Mar 1995	0.062	0.077	0.066	0.063	0.064	Dec 1994	0.062	0.054	0.071	0.07
45 - 50	Nov 1991	0.071	0.09	0.076	0.071	0.073	Dec 1991	0.07	0.059	0.081	0.08
Probability of dying between ages 1 and 5											
15 - 20	Oct 2004	0.041	0.018	0.036	0.034	0.035	Nov 2004	0.037	0.053	0.024	0.029
20 - 25	Sep 2003	0.021	0.01	0.02	0.018	0.019	Sep 2003	0.02	0.026	0.013	0.013
25 - 30	Mar 2002	0.019	0.009	0.017	0.016	0.016	Jan 2002	0.017	0.021	0.011	0.011
30 - 35	Apr 2000	0.023	0.011	0.022	0.02	0.02	Dec 1999	0.02	0.025	0.014	0.016
35 - 40	Dec 1997	0.025	0.013	0.024	0.021	0.022	Jul 1997	0.021	0.026	0.016	0.019
40 - 45	Mar 1995	0.028	0.016	0.028	0.024	0.025	Dec 1994	0.024	0.029	0.018	0.023
45 - 50	Nov 1991	0.036	0.02	0.036	0.029	0.032	Dec 1991	0.029	0.033	0.023	0.03
Child mortality											
15 - 20	Oct 2004	0.115	0.102	0.111	0.109	0.11	2004.88	0.116	0.128	0.104	0.104
20 - 25	Sep 2003	0.073	0.068	0.072	0.071	0.071	2003.71	0.073	0.075	0.069	0.068
25 - 30	Mar 2002	0.066	0.064	0.065	0.065	0.065	2002.04	0.065	0.064	0.063	0.063
30 - 35	Apr 2000	0.076	0.075	0.076	0.075	0.075	1999.96	0.074	0.073	0.074	0.075
35 - 40	Dec 1997	0.081	0.081	0.082	0.079	0.08	1997.54	0.077	0.075	0.079	0.082
40 - 45	Mar 1995	0.088	0.091	0.092	0.086	0.087	1994.96	0.084	0.081	0.087	0.091
45 - 50	Nov 1991	0.105	0.108	0.11	0.098	0.103	1991.96	0.097	0.091	0.102	0.108

Appendix 4: Child mortality indices based on number of children ever born and still alive, using procedure CEBCS of MORTPAK 4.1 for FEMALES, Kiribati: 2005

Age group of women	Reference Date	United Nations Models (Palloni-Heligman Equations)					Reference Date	Coale-Demeny Model (Trussell Equations)			
		Latin Am.	Chilean	So. Asian	Far East	General		West	North	East	South
		Infant mortality rate									
15 - 20	Oct 2004	< .028	< .031	< .032	< .015	< .024	Dec 2004	< .013	< .017	< .016	< .036
20 - 25	Oct 2003	0.05	0.056	0.051	0.051	0.051	Nov 2003	0.052	0.048	0.055	0.054
25 - 30	May 2002	0.038	0.043	0.039	0.039	0.039	Feb 2002	0.039	0.035	0.041	0.042
30 - 35	Apr 2000	0.044	0.051	0.045	0.045	0.045	Dec 1999	0.045	0.04	0.049	0.049
35 - 40	Dec 1997	0.049	0.058	0.051	0.05	0.05	Aug 1997	0.049	0.043	0.055	0.056
40 - 45	Feb 1995	0.057	0.071	0.061	0.058	0.059	Dec 1994	0.057	0.05	0.065	0.065
45 - 50	Oct 1991	0.06	0.075	0.064	0.06	0.062	Dec 1991	0.058	0.05	0.067	0.069
Probability of dying between ages 1 and 5											
15 - 20	Oct 2004	< .008	< .004	< .008	< .002	< .005	Dec 2004	< .002	< .004	< .002	< .005
20 - 25	Oct 2003	0.02	0.009	0.018	0.017	0.018	Nov 2003	0.018	0.025	0.012	0.012
25 - 30	May 2002	0.013	0.006	0.012	0.011	0.011	Feb 2002	0.011	0.014	0.007	0.007
30 - 35	Apr 2000	0.016	0.008	0.015	0.014	0.014	Dec 1999	0.014	0.018	0.01	0.01
35 - 40	Dec 1997	0.019	0.01	0.018	0.016	0.017	Aug 1997	0.016	0.02	0.012	0.013
40 - 45	Feb 1995	0.025	0.014	0.025	0.021	0.022	Dec 1994	0.021	0.025	0.016	0.019
45 - 50	Oct 1991	0.027	0.015	0.027	0.022	0.024	Dec 1991	0.021	0.025	0.017	0.021
Child mortality											
15 - 20	Oct 2004	< .036	< .035	< .04	< .017	< .029	2004.96	< .015	< .021	< .018	< .041
20 - 25	Oct 2003	0.069	0.065	0.068	0.067	0.068	2003.88	0.07	0.072	0.066	0.065
25 - 30	May 2002	0.05	0.049	0.05	0.049	0.049	2002.12	0.05	0.049	0.048	0.048
30 - 35	Apr 2000	0.059	0.059	0.06	0.058	0.059	1999.96	0.058	0.057	0.058	0.059
35 - 40	Dec 1997	0.067	0.067	0.068	0.066	0.067	1997.62	0.064	0.063	0.066	0.068
40 - 45	Feb 1995	0.08	0.083	0.084	0.078	0.08	1994.96	0.077	0.074	0.08	0.084
45 - 50	Oct 1991	0.086	0.089	0.09	0.08	0.084	1991.96	0.078	0.074	0.083	0.089

Appendix 5: Estimated number of deaths by age and sex for 2005, based on 2005 census population and calculated m(x,n)-values from abridged life tables for males and females, Kiribati: 2005

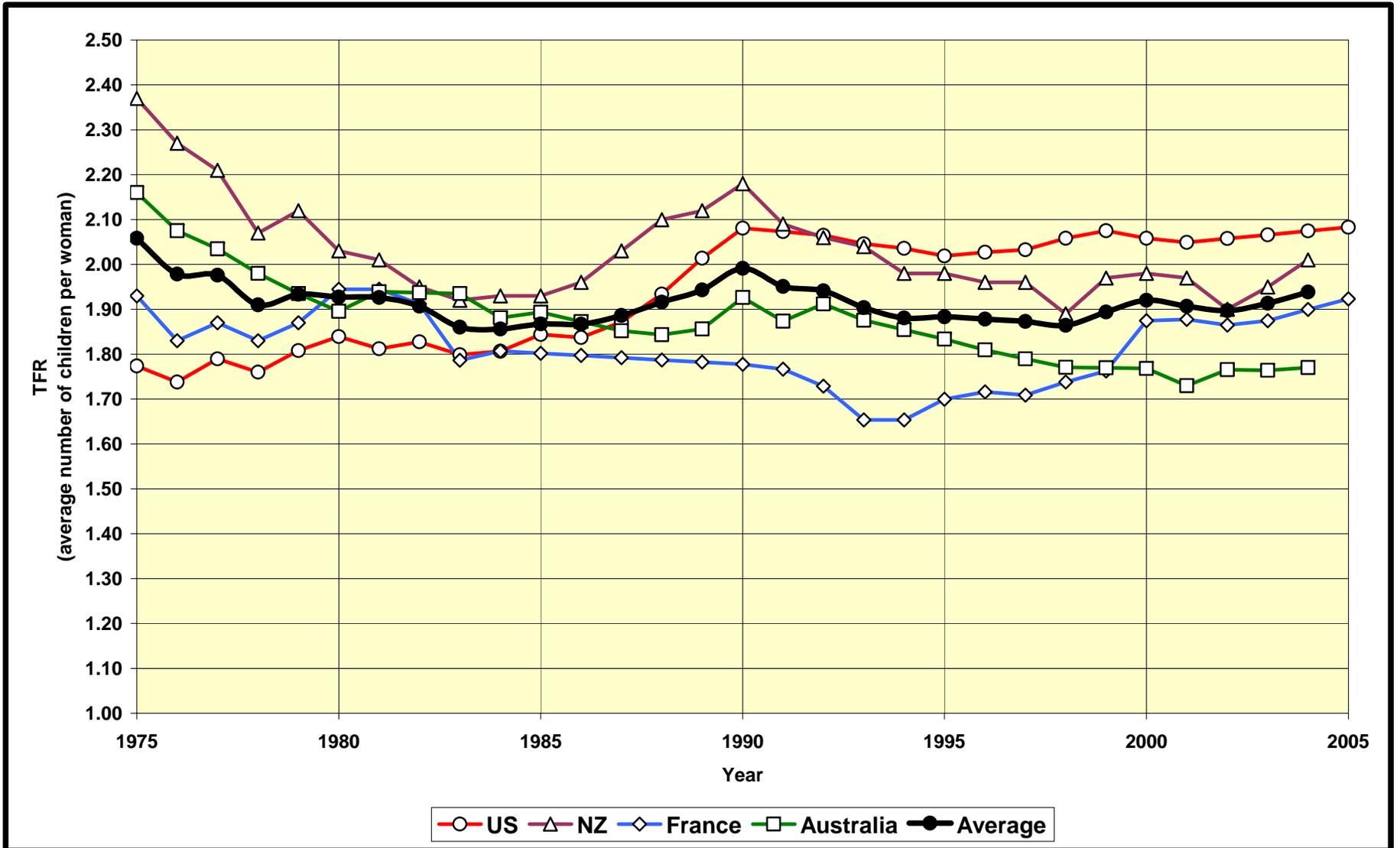
Age	2005 census population			m(x,n)-values from estimated life table		Number of deaths = (m(x,n)-values by age and sex) x (2005 census population by age and sex)		
	Male	Female	Total	Male	Female	Male	Female	Total
0	1,235	1,168	2,403	0.0554	0.0532	68	62	130
1-4	4,378	4,136	8,514	0.0045	0.0044	20	18	38
5-9	6,315	6,151	12,466	0.0014	0.0011	9	7	15
10-14	5,597	5,213	10,810	0.0012	0.0008	7	4	11
15-19	5,511	5,282	10,793	0.0020	0.0017	11	9	20
20-24	4,247	4,327	8,574	0.0029	0.0023	12	10	22
25-29	3,274	3,508	6,782	0.0033	0.0030	11	11	21
30-34	2,631	2,930	5,561	0.0040	0.0036	11	11	21
35-39	3,095	3,364	6,459	0.0055	0.0047	17	16	33
40-44	2,575	2,678	5,253	0.0081	0.0061	21	16	37
45-49	2,046	2,252	4,298	0.0119	0.0086	24	19	44
50-54	1,479	1,671	3,150	0.0187	0.0125	28	21	49
55-59	1,143	1,307	2,450	0.0268	0.0184	31	24	55
60-64	802	938	1,740	0.0423	0.0270	34	25	59
65-69	547	741	1,288	0.0622	0.0399	34	30	64
70-74	428	683	1,111	0.0885	0.0587	38	40	78
75-79	207	330	537	0.1216	0.0853	25	28	53
80-84	76	176	252	0.1650	0.1294	13	23	35
85+	26	66	92	0.2358	0.2128	6	14	20
Total	45,612	46,921	92,533			418	388	806
CDR						9.2	8.3	8.7

Appendix 6: Population 15 years and older by labor market activity, by sex, and by urban/rural residence, Kiribati: 2005

Region/Sex	Labour Force				Non Labour Force							NS*	Total
	Cash work	Village Work	Un-employed	Total	Student	Home duties	Inactive	Retired	Disabled/sick	Prisoner	Total		
Total	13,133	21,582	2,254	36,969	7,323	6,077	3,662	3,227	709	71	21,069	302	58,340
Urban	8,068	5,272	1,632	14,972	3,677	2,929	2,442	1,787	382	66	11,283	264	26,519
Rural	5,065	16,310	622	21,997	3,646	3,148	1,220	1,440	327	5	9,786	38	31,821
Males	8,095	10,788	1,130	20,013	3,496	793	1,996	1,179	398	64	7,926	148	28,087
Urban	4,842	2,257	779	7,878	1,778	453	1,262	669	202	62	4,426	129	12,433
Rural	3,253	8,531	351	12,135	1,718	340	734	510	196	2	3,500	19	15,654
Females	5,038	10,794	1,124	16,956	3,827	5,284	1,666	2,048	311	7	13,143	154	30,253
Urban	3,226	3,015	853	7,094	1,899	2,476	1,180	1,118	180	4	6,857	135	14,086
Rural	1,812	7,779	271	9,862	1,928	2,808	486	930	131	3	6,286	19	16,167

*includes 61 persons classified as 'mission'

Appendix 7: Total fertility rate (TFR) of Australia, France, New Zealand, United States of America, and average TFR of these 4 countries: 1975-2005



Appendix 8: Projected population size according to 9 projection scenarios (combination of 3 different fertility and migration assumptions), Kiribati: 2010, 2015, and 2025

Year 2010			
Fertility assumption (TFR from 2005 to 2025)	Migration assumption		
	Zero	Medium	High
Slow decline: (3.5 → 3.1)	102,773	102,450	102,126
Medium decline (3.5 → 2.6)	101,235	100,915	100,595
Fast decline (3.5 → 2.1)	99,696	99,380	99,063

Year 2015			
Fertility assumption (TFR from 2005 to 2025)	Migration assumption		
	Zero	Medium	High
Slow decline: (3.5 → 3.1)	114,999	114,042	113,085
Medium decline (3.5 → 2.6)	111,434	110,499	109,565
Fast decline (3.5 → 2.1)	107,873	106,962	106,050

Year 2025			
Fertility assumption (TFR from 2005 to 2025)	Migration assumption		
	Zero	Medium	High
Slow decline: (3.5 → 3.1)	140,387	138,040	135,693
Medium decline (3.5 → 2.6)	132,012	129,769	127,527
Fast decline (3.5 → 2.1)	123,659	121,521	119,384

Glossary

<u>Indicator</u>	<u>Definition</u>
Age dependency ratio	Number of persons in the “dependent” ages (population younger than 15 years plus population 60 years and older) per 100 in the “economically productive ages” 15-59 years
Average age at (first) marriage (SMAM)	Approximation of average age at marriage, based on proportion of population never married (single)
Balance equation	Population growth = Births – Deaths + Net Migration
Births - estimated number for 2005	Estimated age specific fertility rates (ASFR) * enumerated number of women by age in 2005
Child mortality Rate (1q5)	Probability of dying of children aged 1-4 years per 1000
Contraceptive prevalence rate	Female family planning users of childbearing age (15-49 year)
Crude Birth Rate (CBR)	Estimated number of births per 1000 population (2,475/92,533*1000)
Crude Death Rate (CDR)	Estimated number of deaths per 1000 population (806/92,533*1000)
Crude net migration rate	Rate of growth minus rate of natural increase
Deaths - estimated number for 2005	Estimated age specific death rates [m(x)] by sex (from life table) * enumerated population by age and sex in 2005
Employment-population ratio	Proportion of employed persons in cash work at a given age and sex, as part of the corresponding total number of persons of the same characteristics
Infant Mortality Rate (IMR)	Number of deaths of infants (children younger than 1 year) per 1000 births
Intercensal period	Time period between two censuses
Labour force	Persons employed (cash work plus village work) and unemployed (excludes those not seeking employment)
Labour force participation rate	Proportion of persons in the labour force at a given age and sex, as part of the corresponding total number of persons of the same characteristics
Life expectancy at birth	Number of years a new born baby can expect to live on average
Maternal mortality rate	Number of deaths due to pregnancy or delivery per 100,000 deliveries
Mean Age at Childbearing	Average age of women when giving birth
Median age	The age at which exactly half the population is older and half is younger
Rate of growth (%)	Average annual growth rate between 2000-2005 $\ln(\text{TotPop2005}/\text{TotPop2000})/5 * 100$
Rate of natural increase	Crude birth rate (CBR) minus Crude death rate (CDR)
Sex ratio	Number of males per 100 females.
Teenage Fertility Rate	Number of births of women aged 15-19 years per 1000

Total Fertility Rate (TFR)
Under 5 mortality (q5)
Urban population

Average number of children per woman
Probability of dying of children aged 0-4 per 1000
Total population of South Tarawa

The Demographic Transition

According to the *theory of demographic transition*, throughout history all countries will undergo change from high rates of births and deaths to low rates of births and deaths. This transition process is usually closely associated with economic, social and scientific developments. This is assumed to happen in four distinct stages:

- | | |
|---|------------------------------|
| Stage 1: High birth rate, high death rate | → little or no growth |
| Stage 2: High birth rate, falling death rate | → high growth |
| Stage 3: Declining birth rate, relatively low death rate | → slowed growth |
| Stage 4: Low birth rate, low death rate | → very low population growth |

High levels of births and deaths kept most populations from growing rapidly through time. In fact, many populations not only failed to grow but also completely died out when birth rates did not compensate for high death rates (**stage 1**). There are few populations/communities left today at stage 1.

Death rates eventually fell as living conditions, nutrition and public health improved. The decline in mortality usually precedes the decline in fertility, resulting in population growth during the transition period (**stage 2**). In Europe and other industrialized countries, death rates fell slowly. With the added benefit of medical advances, death rates fell more rapidly in the countries that began the transition in the 20th century. These are/were foremost the so-called developing countries. Their death rates often fell much faster than in countries of Europe because they benefited from inventions and innovations readily available to them.

In general, fertility rates fell neither as quickly nor as dramatically as death rates, and thus population grew rapidly.

The **3rd stage** is characterized by falling birth rates. There are many reasons for this to happen and are different from country to country and population to population, e.g.: transition from non-monetary to monetary economy, urbanization, change in values from a community emphasis to individualism, increasing emphasis on consumerism, improved education, availability of (modern) family planning methods (contraceptives), greater involvement of women in the workplace, a rising cost of living, rising cost of raising children, and preferences in how people want to spend their time.

The *demographic transition* is regarded as completed when both birth and death rates have reached a low and stable level (**stage 4**). As a result population growth is very low.

Originally the *theory of demographic transition* included only the 4 stages described above. There is now another stage, the so-called **post-transition period** (although it is uncertain whether all countries will reach this stage):

- | | |
|--|-------------------|
| Post-transition period: Very low birth rate, low death rate | → negative growth |
|--|-------------------|

When fertility falls to very low levels and stays there for a protracted period, a slow rate of population growth can turn into a negative one, and the population decreases. Many countries in Europe and some in Asia now have TFRs well below two children per woman. The TFRs of the Republic of Korea, Ukraine, Czech Republic, Slovakia, Slovenia, Republic of Moldova, Bulgaria,

and Belarus - all about 1.2 - were among the world's lowest, and those of several other countries were not far behind. The TFRs of Macao and Hong Kong was even less than 1 child per woman on average. Many of the factors that lowered fertility in the first place - greater involvement of women in the workplace, a rising cost of living, and preferences in how people want to spend their time - appear to be keeping fertility rates very low.

While the *theory of demographic transition* describes the population history of Western Europe quite well, for many reasons, developing countries not always exhibit the same patterns of change. In some cases, death rates increased after early contact with outside societies resulted in local epidemics as groups succumbed to diseases against which they had no natural immunity. When health conditions improved as a result of the application of new and efficient disease control technologies, death rates declined while birth rates sometimes increased. This combination of factors produced population growth rates in today's developing countries that are much higher than ever experienced in the pre-industrial West.

Stylized Graph of the European Demographic Transition

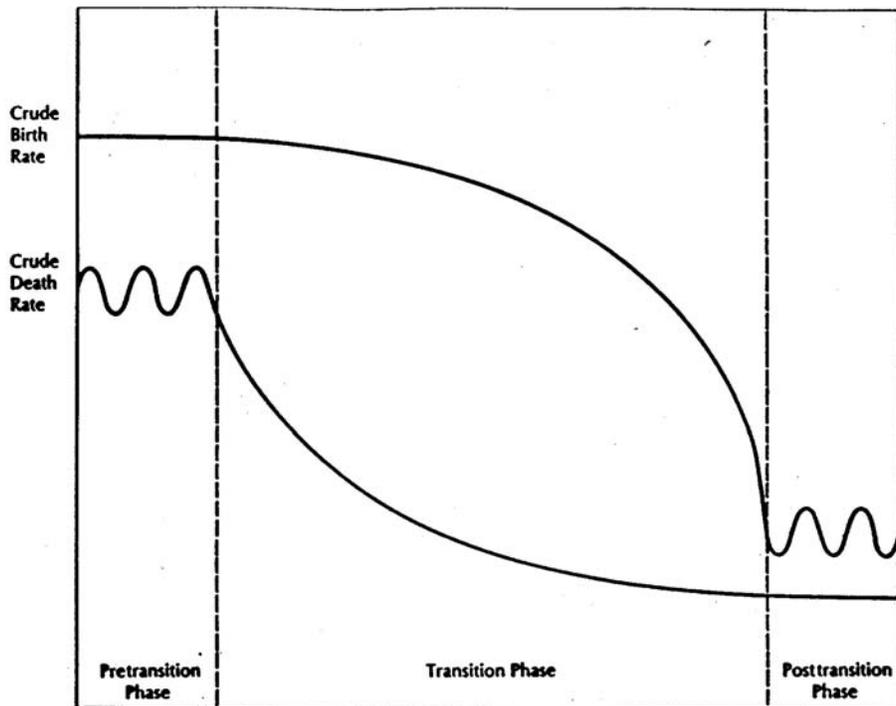


Figure 3-2 A SIMPLIFIED DIAGRAM OF THE EUROPEAN DEMOGRAPHIC TRANSITION

Source: Ansley J. Coale, 1974, p. 49.

Sources: Population Handbook, Population Reference Bureau, Inc, Washington D.C., 4th Intern. Edition, PNG National Population Policy 2000-2010, Department of Planning & Monitoring, Waigani, PNG.

Gilbert Group islands:

Banaba
Makin
Butaritari
Marakei
Abaiang
North Tarawa
South Tarawa
Maiana
Abemama
Kuria
Aranuka
Nonouti
North Tabiteuea
South Tabiteuea
Beru
Nikunau
Onotoa
Tamana
Arorae

Line Group islands:

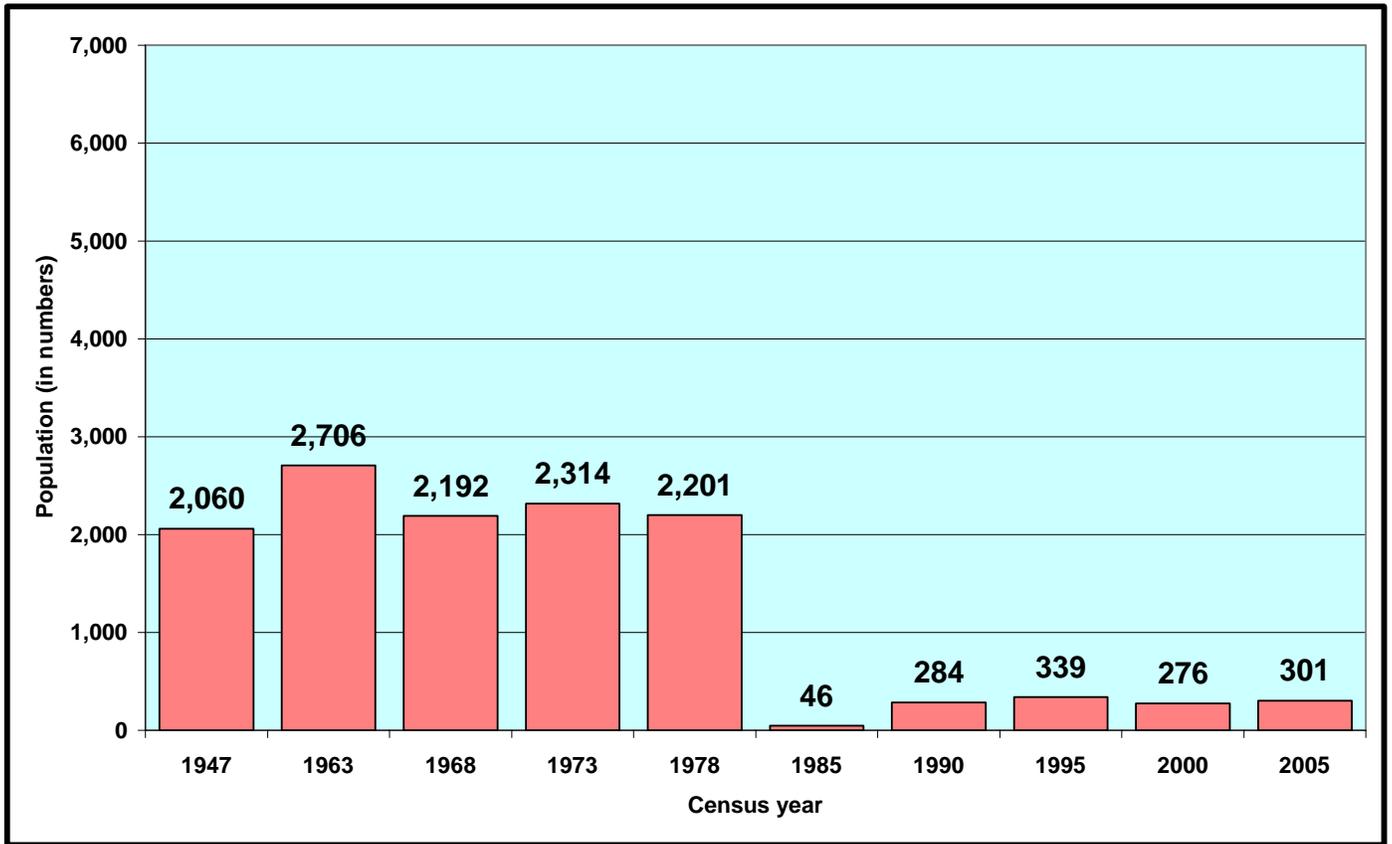
Teeraina
Tabuaeran
Kiritimati

Phoenix Group islands:

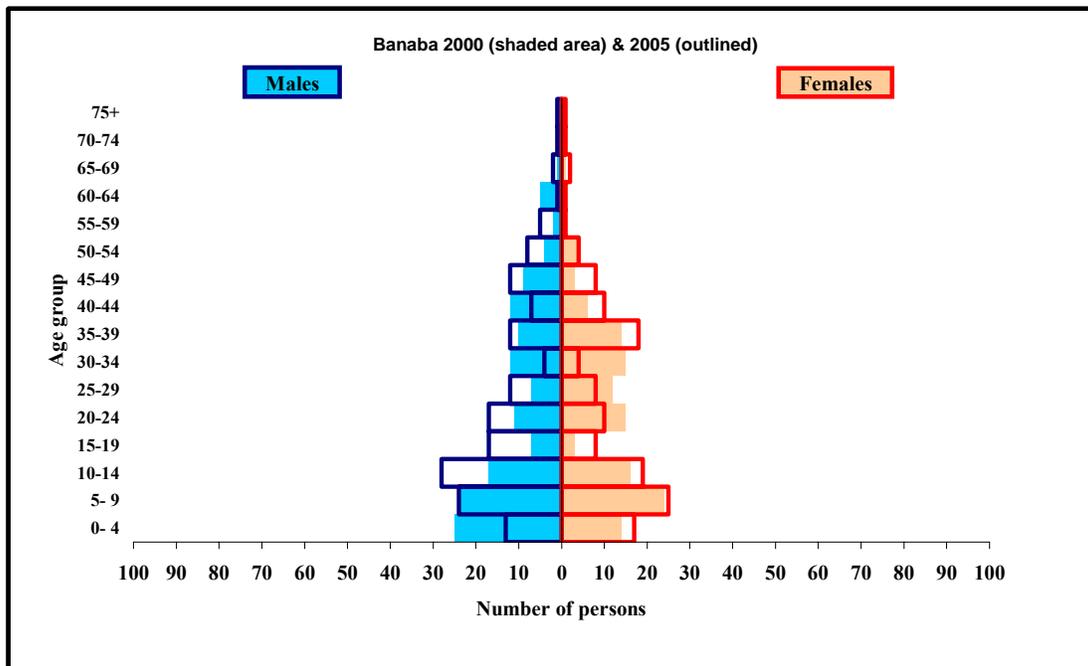
Kanton

BANABA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	25	14	39	0-4	13	17	30
5-9	24	24	48	5-9	24	25	49
10-14	17	16	33	10-14	28	19	47
15-19	7	3	10	15-19	17	8	25
20-24	11	15	26	20-24	17	10	27
25-29	7	12	19	25-29	12	8	20
30-34	12	15	27	30-34	4	4	8
35-39	10	14	24	35-39	12	18	30
40-44	12	6	18	40-44	7	10	17
45-49	9	3	12	45-49	12	8	20
50-54	4	4	8	50-54	8	4	12
55-59	2	1	3	55-59	5	1	6
60-64	5	1	6	60-64	1	1	2
65-69	1	1	2	65-69	2	2	4
70-74	1	0	1	70-74	1	1	2
75+	0	0	0	75+	1	1	2
Total	147	129	276	Total	164	137	301

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	66	54	120	0-14	65	61	126
15-24	18	18	36	15-24	34	18	52
15-59	74	73	147	15-59	94	71	165
15-64	79	74	153	15-64	95	72	167
60+	7	2	9	60+	5	5	10
65+	2	1	3	65+	4	4	8

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	45	42	43	0-14	40	45	42
15-24	12	14	13	15-24	21	13	17
15-59	50	57	53	15-59	57	52	55
15-64	54	57	55	15-64	58	53	55
60+	5	2	3	60+	3	4	3
65+	1	1	1	65+	2	3	3

Age dependency ratio

2000		2005	
15-59	88	15-59	82
15-64	80	15-64	80

Sex ratio (males per 100 females)

2000	2005
114	120

Median age (years)

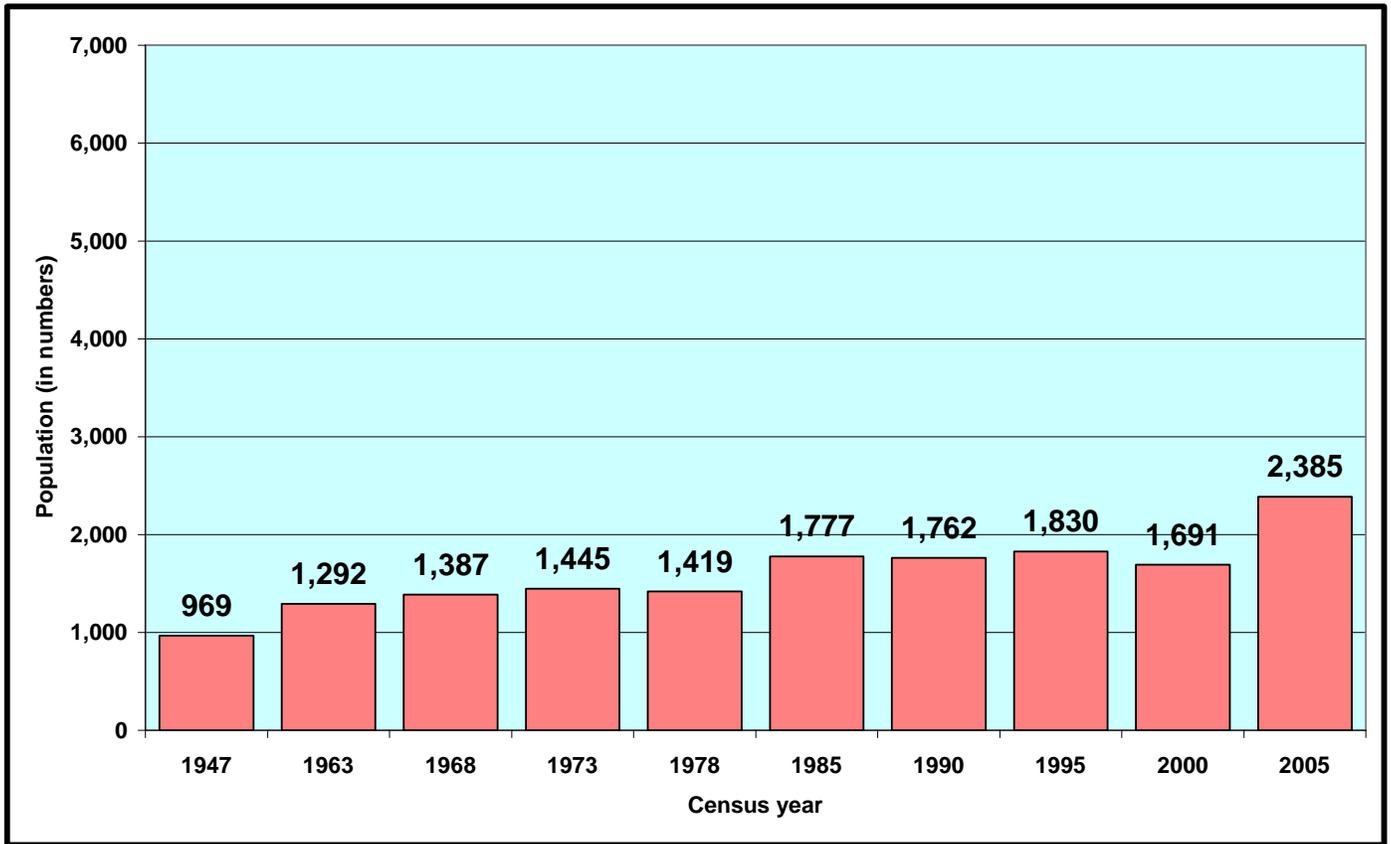
2000				2005			
	Males	Females	Total		Males	Females	Total
	20.5	22.7	21.6		20.1	20.0	20.0

Population growth

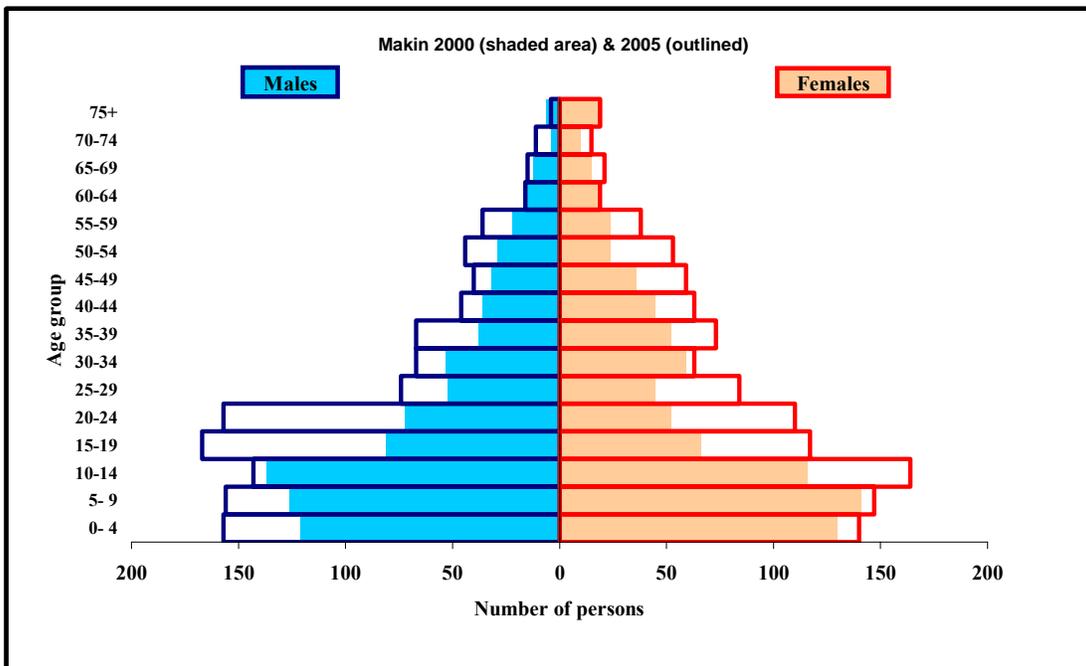
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	17	8	25
Total growth (%)	11.6	6.2	9.1
Average annual growth rate (%)	2.2	1.2	1.7

MAKIN

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	121	130	251	0-4	157	140	297
5-9	126	141	267	5-9	156	147	303
10-14	137	116	253	10-14	143	164	307
15-19	81	66	147	15-19	167	117	284
20-24	72	52	124	20-24	157	110	267
25-29	52	45	97	25-29	74	84	158
30-34	53	59	112	30-34	67	63	130
35-39	38	52	90	35-39	67	73	140
40-44	36	45	81	40-44	46	63	109
45-49	32	36	68	45-49	40	59	99
50-54	29	24	53	50-54	44	53	97
55-59	22	24	46	55-59	36	38	74
60-64	16	19	35	60-64	16	19	35
65-69	12	15	27	65-69	15	21	36
70-74	4	10	14	70-74	11	15	26
75+	6	20	26	75+	4	19	23
Total	837	854	1,691	Total	1,200	1,185	2,385

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	384	387	771	0-14	456	451	907
15-24	153	118	271	15-24	324	227	551
15-59	415	403	818	15-59	698	660	1,358
15-64	431	422	853	15-64	714	679	1,393
60+	38	64	102	60+	46	74	120
65+	22	45	67	65+	30	55	85

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	46	45	46	0-14	38	38	38
15-24	18	14	16	15-24	27	19	23
15-59	50	47	48	15-59	58	56	57
15-64	51	49	50	15-64	60	57	58
60+	5	7	6	60+	4	6	5
65+	3	5	4	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	107	15-59	76
15-64	98	15-64	71

Sex ratio (males per 100 females)

2000	2005
98	101

Median age (years)

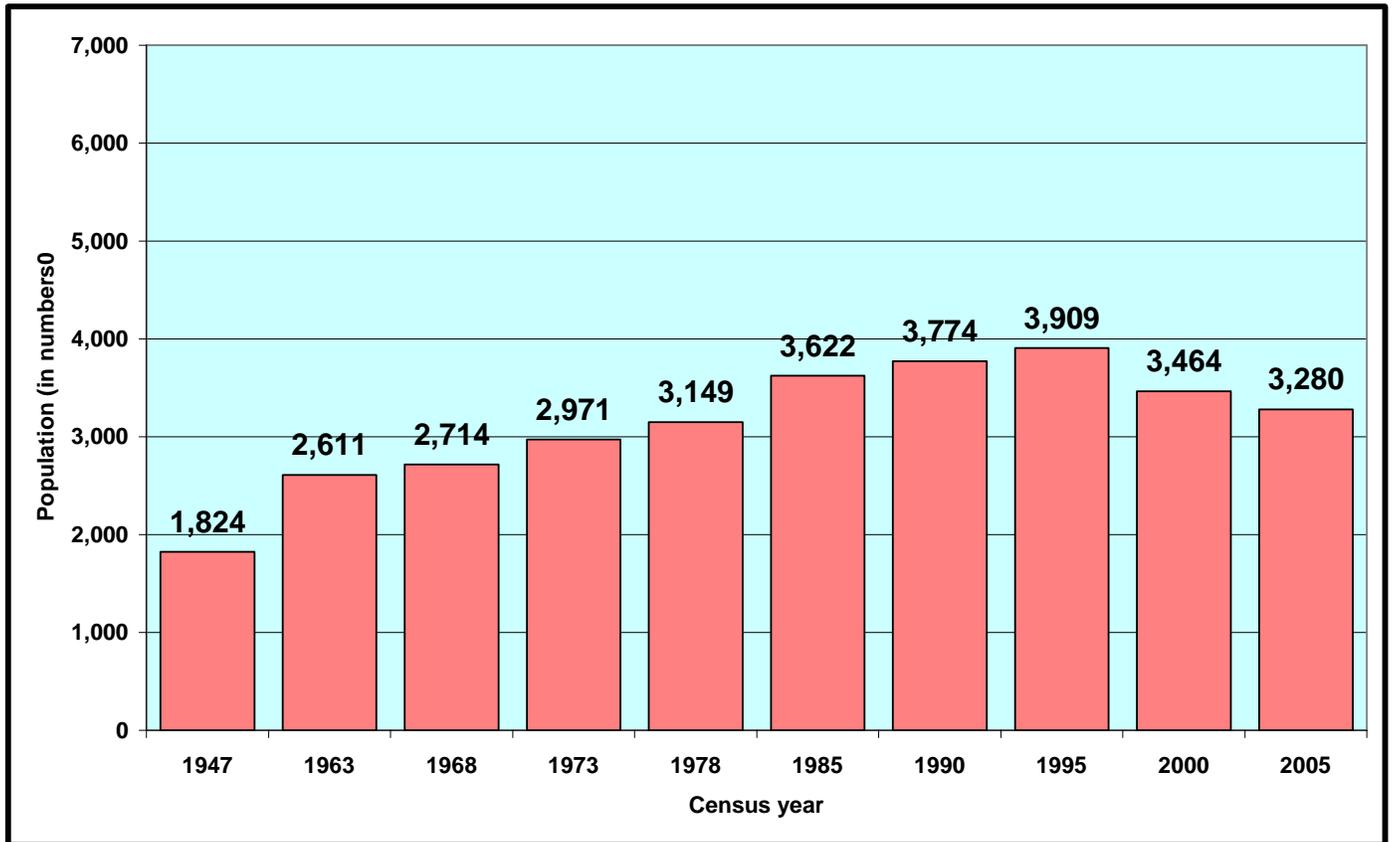
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.2	18.1	17.6		19.3	21.1	20.0

Population growth

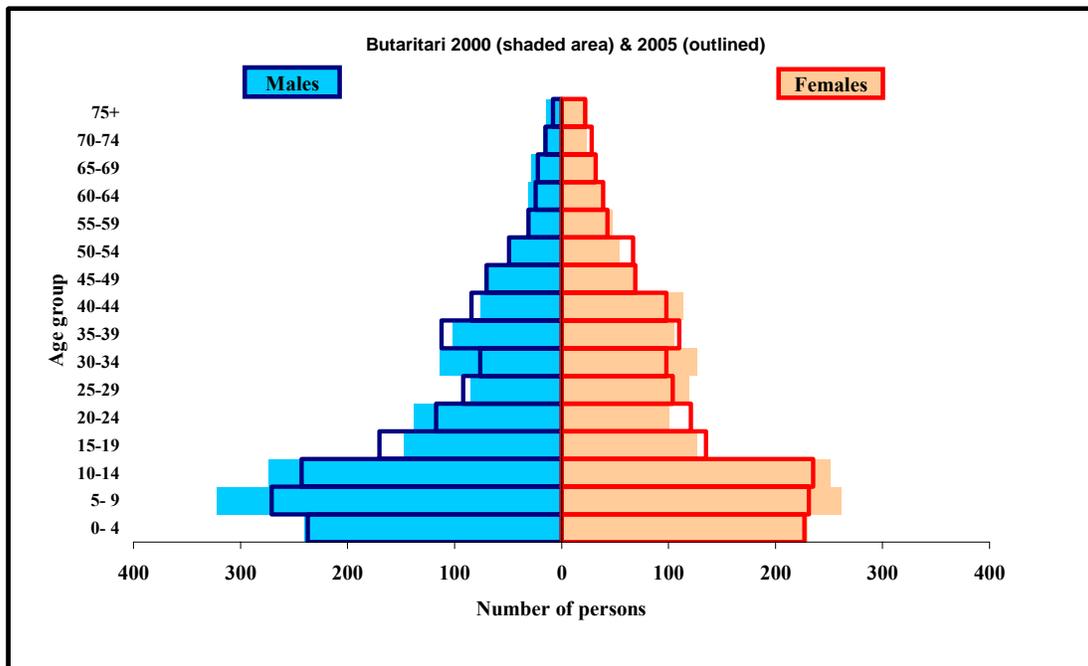
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	363	331	694
Total growth (%)	43.4	38.8	41.0
Average annual growth rate (%)	7.2	6.6	6.9

BUTARITARI

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	240	230	470	0-4	237	227	464
5-9	322	261	583	5-9	271	231	502
10-14	274	251	525	10-14	243	235	478
15-19	147	127	274	15-19	170	135	305
20-24	138	101	239	20-24	117	121	238
25-29	85	119	204	25-29	92	104	196
30-34	114	127	241	30-34	76	98	174
35-39	102	105	207	35-39	112	110	222
40-44	76	113	189	40-44	84	98	182
45-49	72	69	141	45-49	70	69	139
50-54	47	54	101	50-54	49	67	116
55-59	31	48	79	55-59	31	43	74
60-64	31	40	71	60-64	24	39	63
65-69	28	34	62	65-69	22	32	54
70-74	17	23	40	70-74	15	28	43
75+	14	24	38	75+	8	22	30
Total	1,738	1,726	3,464	Total	1,621	1,659	3,280

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	836	742	1,578	0-14	751	693	1,444
15-24	285	228	513	15-24	287	256	543
15-59	812	863	1,675	15-59	801	845	1,646
15-64	843	903	1,746	15-64	825	884	1,709
60+	90	121	211	60+	69	121	190
65+	59	81	140	65+	45	82	127

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	48	43	46	0-14	46	42	44
15-24	16	13	15	15-24	18	15	17
15-59	47	50	48	15-59	49	51	50
15-64	49	52	50	15-64	51	53	52
60+	5	7	6	60+	4	7	6
65+	3	5	4	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	107	15-59	99
15-64	98	15-64	92

Sex ratio (males per 100 females)

2000	2005
101	98

Median age (years)

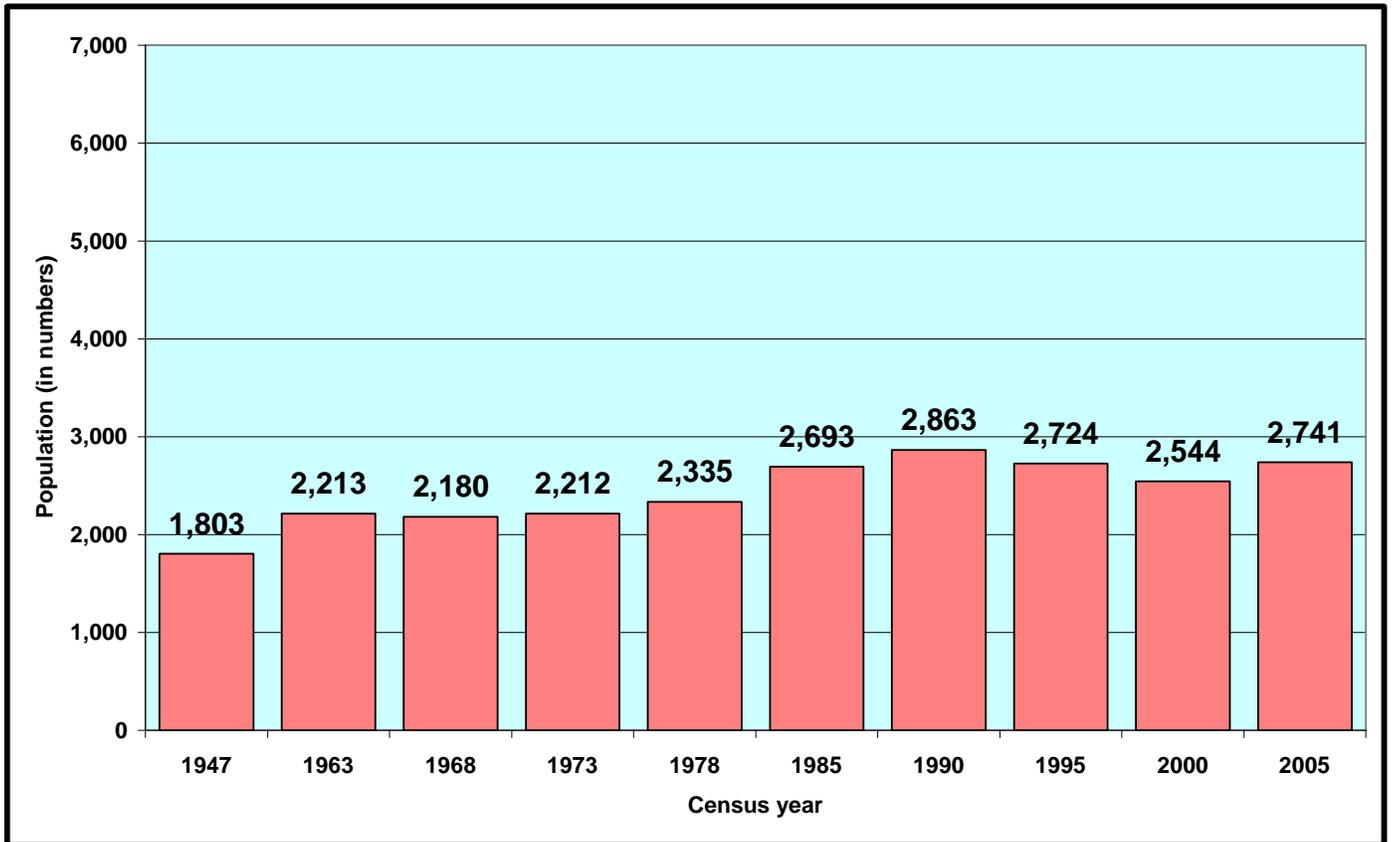
2000				2005			
	Males	Females	Total		Males	Females	Total
	16.1	19.8	17.8		16.8	20.1	18.2

Population growth

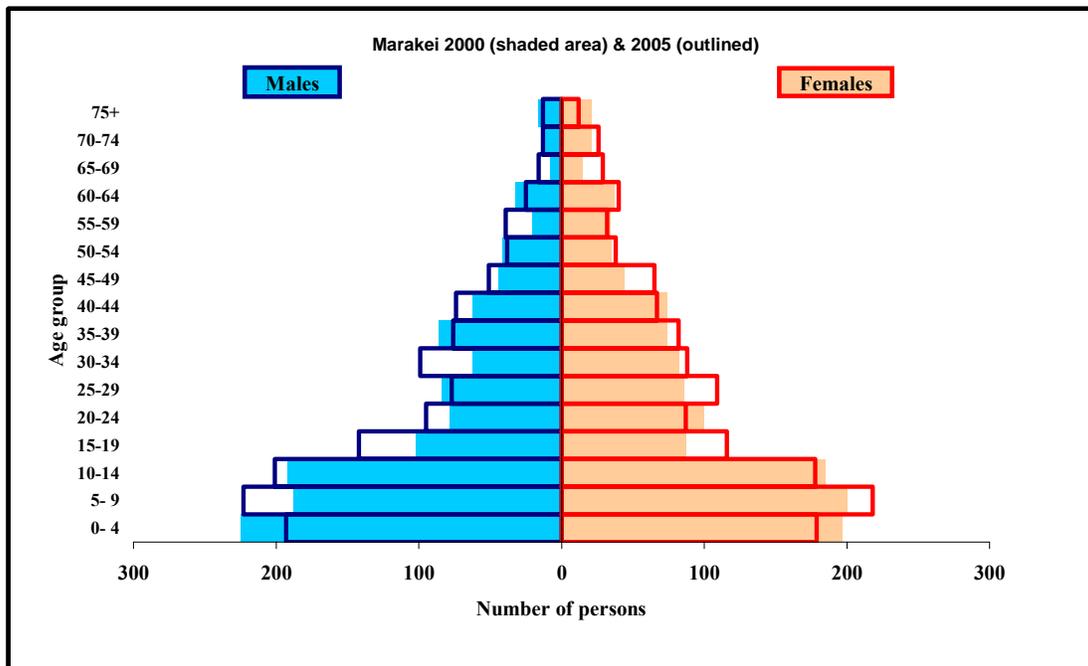
2000-2005			
	Males	Females	Total
Total growth (in numbers)	-117	-67	-184
Total growth (%)	-6.7	-3.9	-5.3
Average annual growth rate (%)	-1.4	-0.8	-1.1

MARAKEI

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	225	197	422	0-4	193	179	372
5-9	188	200	388	5-9	223	218	441
10-14	192	185	377	10-14	201	178	379
15-19	102	87	189	15-19	142	116	258
20-24	78	100	178	20-24	95	87	182
25-29	84	86	170	25-29	77	109	186
30-34	62	82	144	30-34	99	88	187
35-39	86	74	160	35-39	76	82	158
40-44	62	74	136	40-44	74	67	141
45-49	44	44	88	45-49	51	65	116
50-54	41	35	76	50-54	38	38	76
55-59	20	34	54	55-59	39	32	71
60-64	32	37	69	60-64	25	40	65
65-69	8	15	23	65-69	16	29	45
70-74	12	21	33	70-74	13	26	39
75+	16	21	37	75+	13	12	25
Total	1,252	1,292	2,544	Total	1,375	1,366	2,741

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	605	582	1,187	0-14	617	575	1,192
15-24	180	187	367	15-24	237	203	440
15-59	579	616	1,195	15-59	691	684	1,375
15-64	611	653	1,264	15-64	716	724	1,440
60+	68	94	162	60+	67	107	174
65+	36	57	93	65+	42	67	109

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	48	45	47	0-14	45	42	43
15-24	14	14	14	15-24	17	15	16
15-59	46	48	47	15-59	50	50	50
15-64	49	51	50	15-64	52	53	53
60+	5	7	6	60+	5	8	6
65+	3	4	4	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	113	15-59	99
15-64	101	15-64	90

Sex ratio (males per 100 females)

2000	2005
97	101

Median age (years)

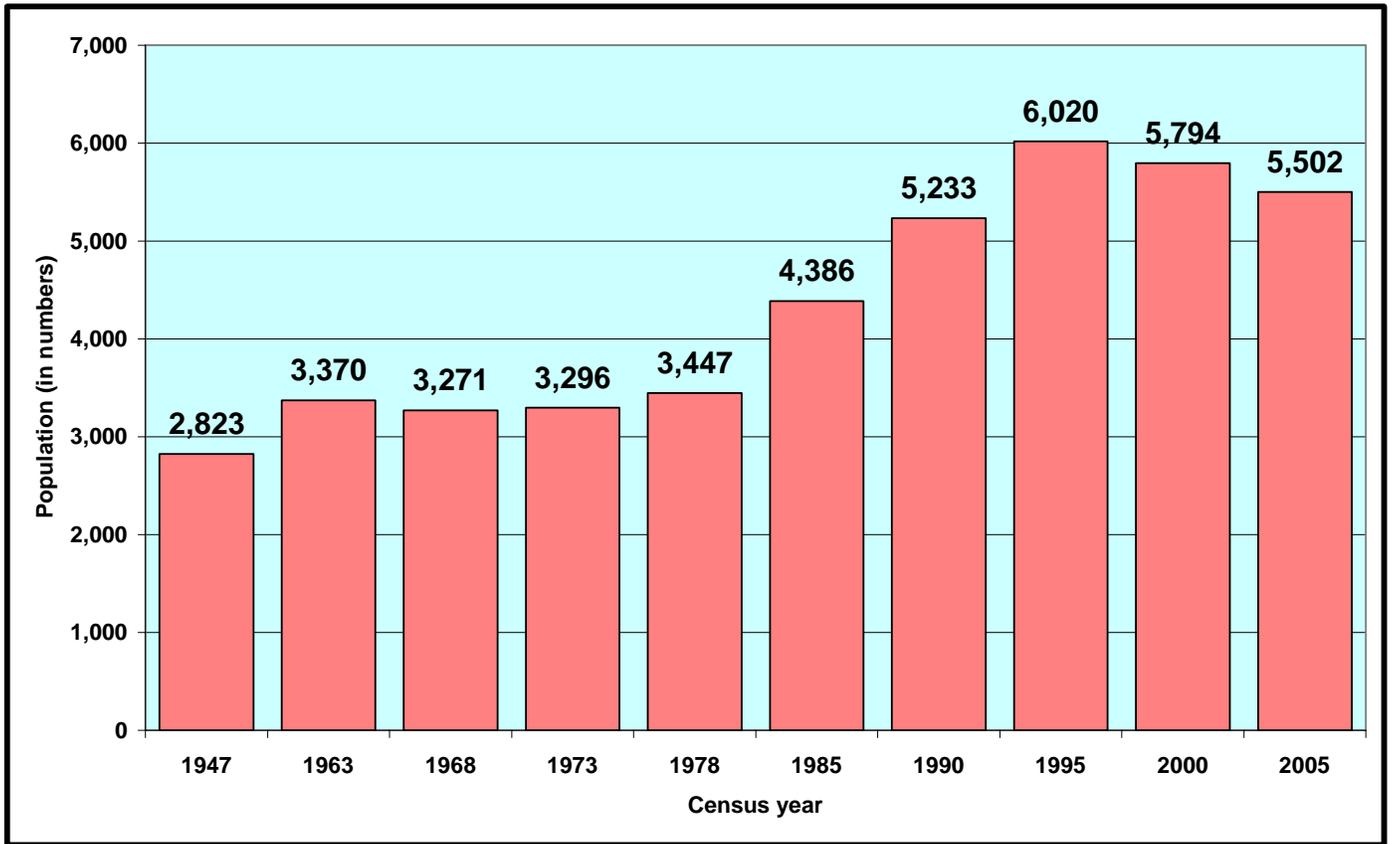
2000				2005			
	Males	Females	Total		Males	Females	Total
	16.1	18.7	17.3		17.5	19.7	18.5

Population growth

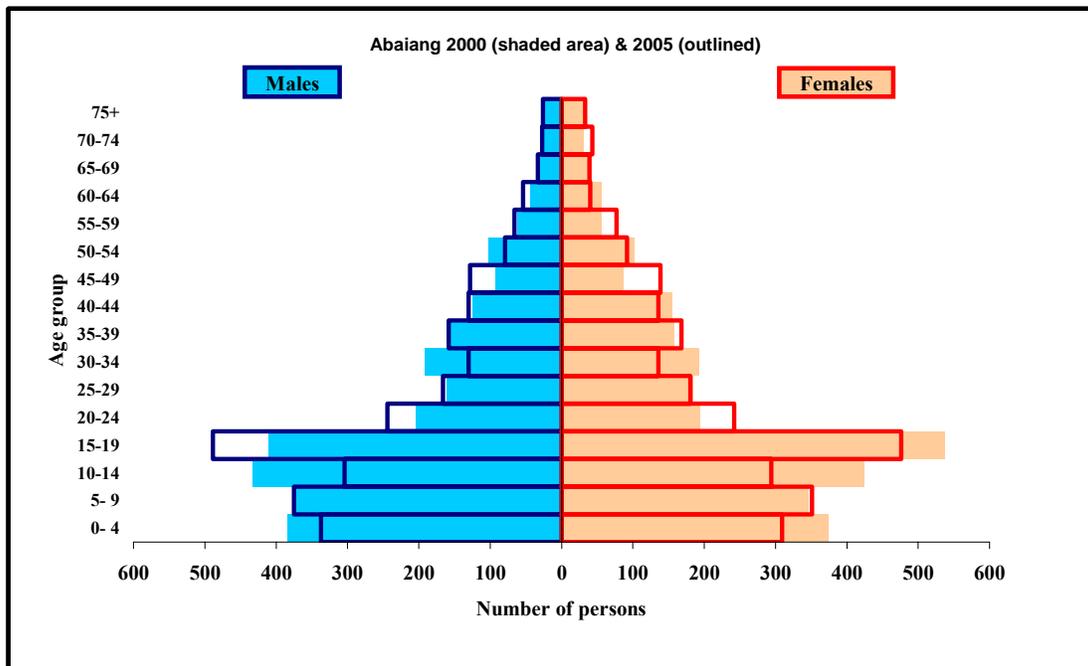
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	123	74	197
Total growth (%)	9.8	5.7	7.7
Average annual growth rate (%)	1.9	1.1	1.5

ABAIANG

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	384	374	758	0-4	337	309	646
5-9	376	346	722	5-9	375	351	726
10-14	432	424	856	10-14	304	294	598
15-19	410	537	947	15-19	489	476	965
20-24	204	194	398	20-24	244	242	486
25-29	161	184	345	25-29	166	181	347
30-34	191	193	384	30-34	130	136	266
35-39	155	158	313	35-39	158	168	326
40-44	124	155	279	40-44	130	136	266
45-49	93	87	180	45-49	128	139	267
50-54	102	102	204	50-54	79	92	171
55-59	62	56	118	55-59	66	77	143
60-64	44	56	100	60-64	54	40	94
65-69	35	42	77	65-69	33	39	72
70-74	27	31	58	70-74	27	43	70
75+	24	31	55	75+	26	33	59
Total	2,824	2,970	5,794	Total	2,746	2,756	5,502

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	1,192	1,144	2,336	0-14	1,016	954	1,970
15-24	614	731	1,345	15-24	733	718	1,451
15-59	1,502	1,666	3,168	15-59	1,590	1,647	3,237
15-64	1,546	1,722	3,268	15-64	1,644	1,687	3,331
60+	130	160	290	60+	140	155	295
65+	86	104	190	65+	86	115	201

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	42	39	40	0-14	37	35	36
15-24	22	25	23	15-24	27	26	26
15-59	53	56	55	15-59	58	60	59
15-64	55	58	56	15-64	60	61	61
60+	5	5	5	60+	5	6	5
65+	3	4	3	65+	3	4	4

Age dependency ratio

2000		2005	
15-59	83	15-59	70
15-64	77	15-64	65

Sex ratio (males per 100 females)

2000	2005
95	100

Median age (years)

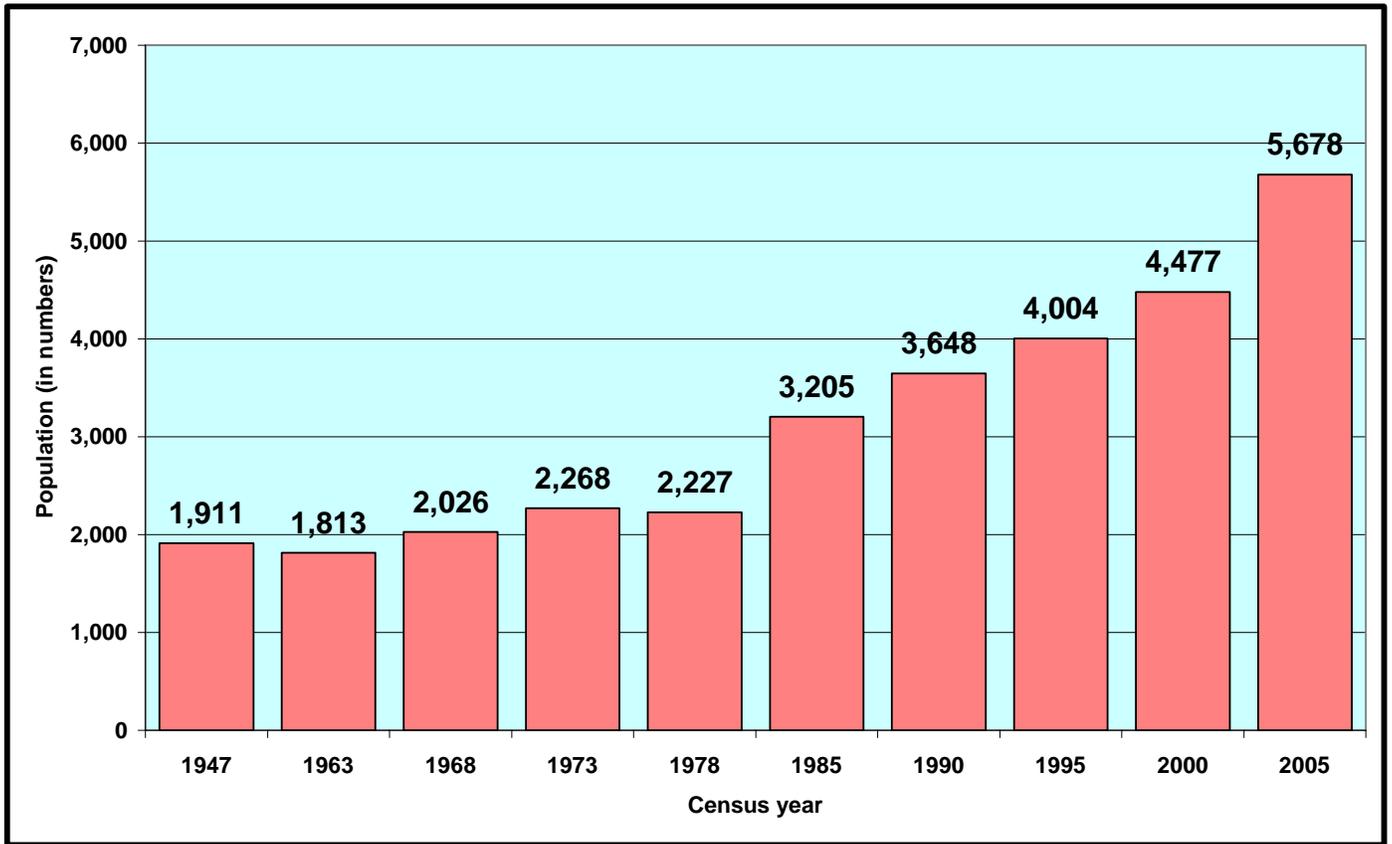
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.7	18.2	18.0		18.7	19.5	19.0

Population growth

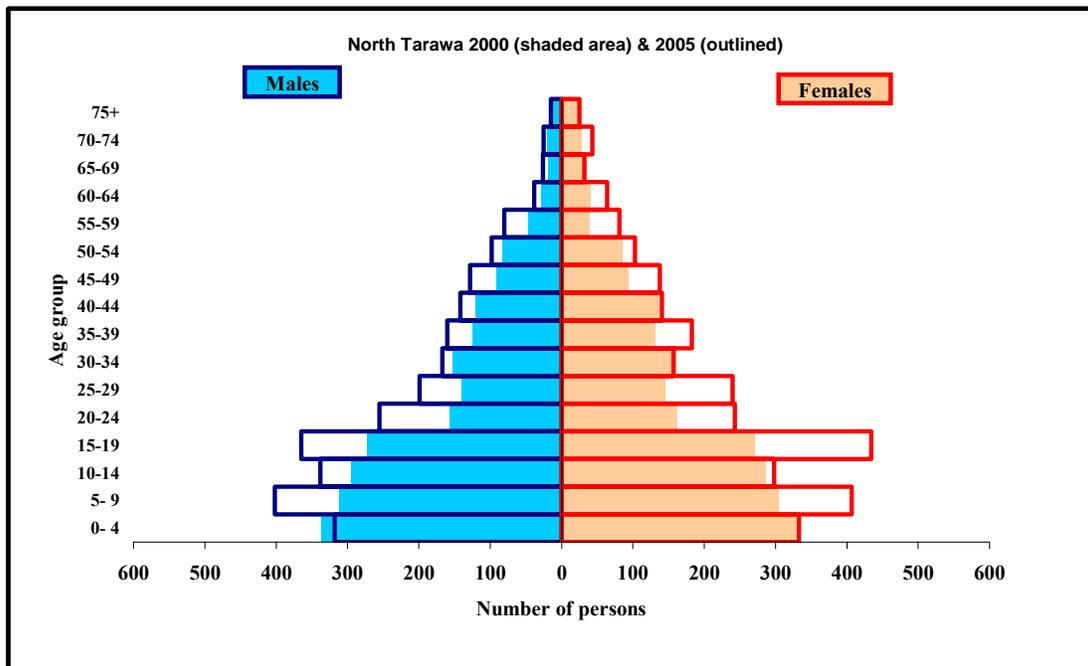
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	-78	-214	-292
Total growth (%)	-2.8	-7.2	-5.0
Average annual growth rate (%)	-0.6	-1.5	-1.0

TARAWA NORTH

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	337	332	669	0-4	318	333	651
5-9	311	304	615	5-9	402	407	809
10-14	294	286	580	10-14	338	298	636
15-19	273	271	544	15-19	365	434	799
20-24	156	162	318	20-24	255	243	498
25-29	140	145	285	25-29	199	240	439
30-34	152	161	313	30-34	167	157	324
35-39	124	131	255	35-39	160	183	343
40-44	120	137	257	40-44	142	141	283
45-49	91	94	185	45-49	128	138	266
50-54	82	85	167	50-54	98	103	201
55-59	46	39	85	55-59	80	81	161
60-64	28	40	68	60-64	38	64	102
65-69	19	35	54	65-69	26	32	58
70-74	20	28	48	70-74	25	43	68
75+	12	22	34	75+	15	25	40
Total	2,205	2,272	4,477	Total	2,756	2,922	5,678

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	942	922	1,864	0-14	1,058	1,038	2,096
15-24	429	433	862	15-24	620	677	1,297
15-59	1,184	1,225	2,409	15-59	1,594	1,720	3,314
15-64	1,212	1,265	2,477	15-64	1,632	1,784	3,416
60+	79	125	204	60+	104	164	268
65+	51	85	136	65+	66	100	166

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	43	41	42	0-14	38	36	37
15-24	19	19	19	15-24	22	23	23
15-59	54	54	54	15-59	58	59	58
15-64	55	56	55	15-64	59	61	60
60+	4	6	5	60+	4	6	5
65+	2	4	3	65+	2	3	3

Age dependency ratio

2000		2005	
15-59	86	15-59	71
15-64	81	15-64	66

Sex ratio (males per 100 females)

2000	2005
97	94

Median age (years)

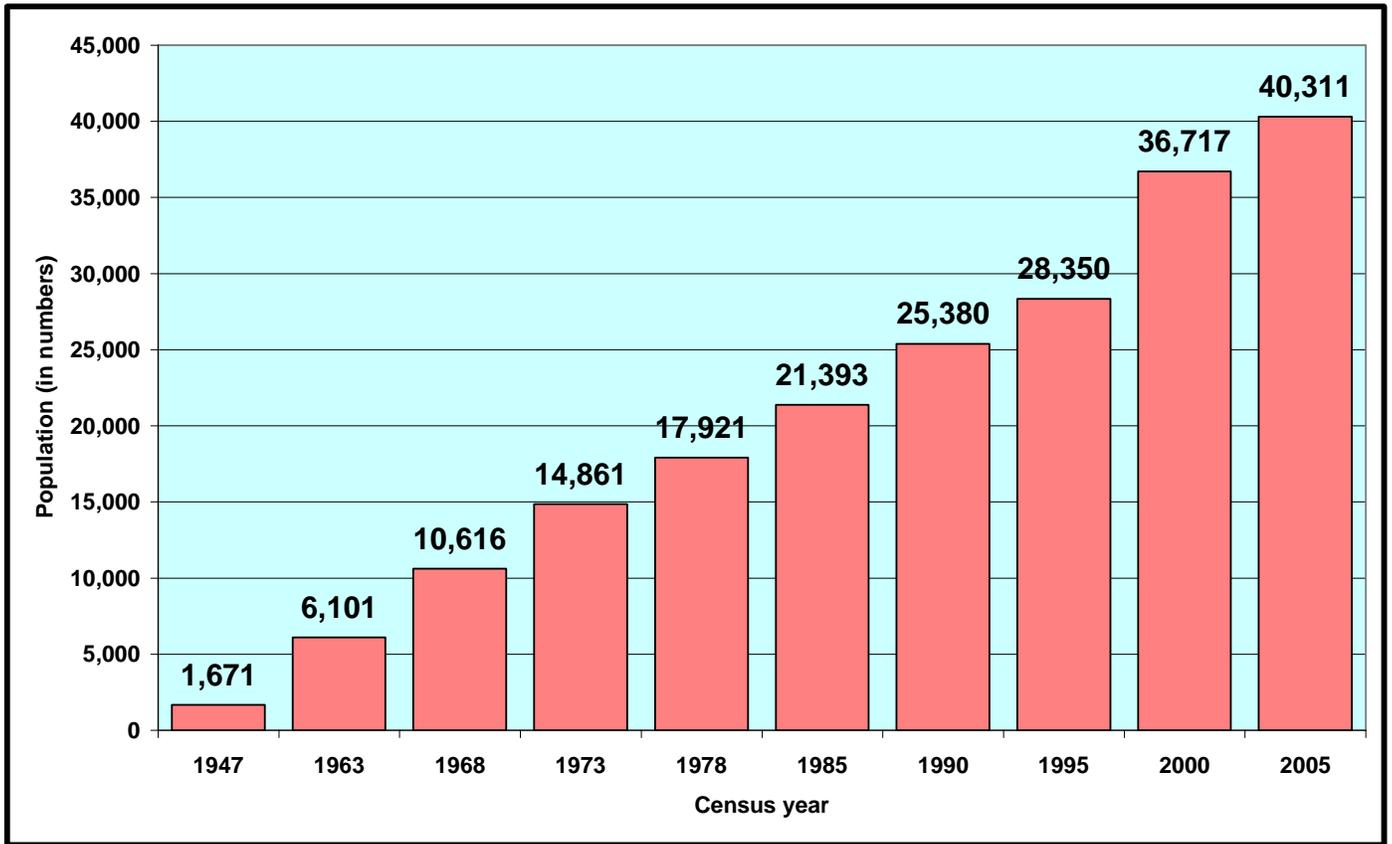
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.9	19.0	18.4		19.4	19.9	19.7

Population growth

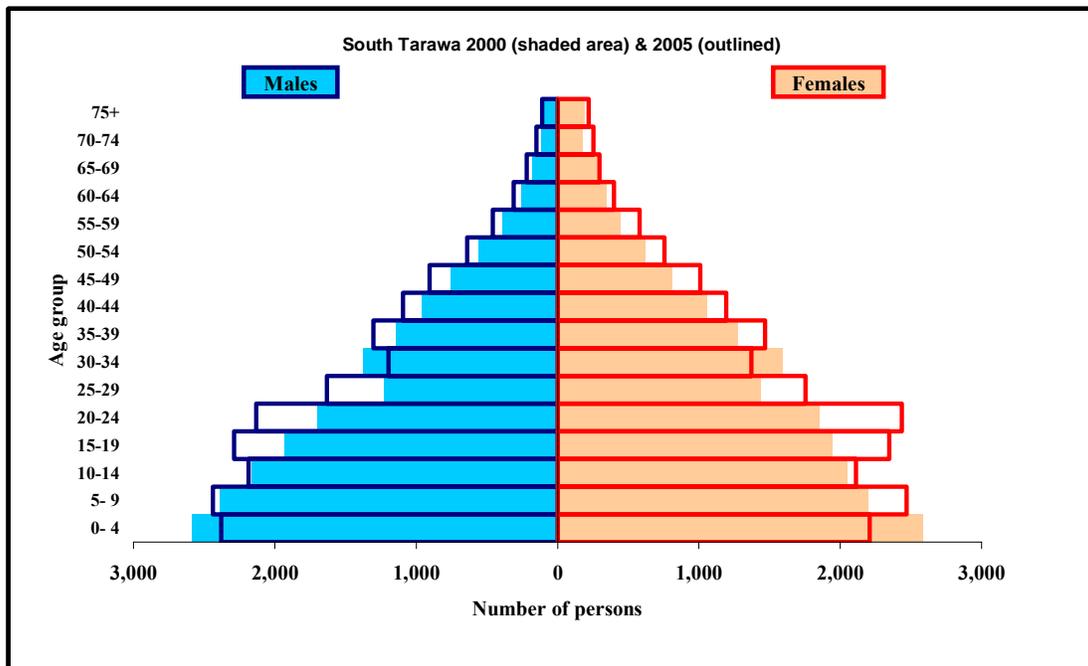
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	551	650	1,201
Total growth (%)	25.0	28.6	26.8
Average annual growth rate (%)	4.5	5.0	4.8

TARAWA SOUTH

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	2,583	2,585	5,168	0-4	2,379	2,208	4,587
5-9	2,388	2,199	4,587	5-9	2,438	2,470	4,908
10-14	2,164	2,054	4,218	10-14	2,185	2,112	4,297
15-19	1,932	1,945	3,877	15-19	2,288	2,346	4,634
20-24	1,702	1,851	3,553	20-24	2,132	2,436	4,568
25-29	1,229	1,441	2,670	25-29	1,631	1,754	3,385
30-34	1,374	1,590	2,964	30-34	1,196	1,371	2,567
35-39	1,145	1,277	2,422	35-39	1,304	1,470	2,774
40-44	959	1,060	2,019	40-44	1,093	1,193	2,286
45-49	751	812	1,563	45-49	905	1,010	1,915
50-54	555	618	1,173	50-54	639	757	1,396
55-59	393	449	842	55-59	458	580	1,038
60-64	258	344	602	60-64	309	399	708
65-69	174	300	474	65-69	219	297	516
70-74	116	179	295	70-74	150	253	403
75+	99	191	290	75+	109	220	329
Total	17,822	18,895	36,717	Total	19,435	20,876	40,311

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	7,135	6,838	13,973	0-14	7,002	6,790	13,792
15-24	3,634	3,796	7,430	15-24	4,420	4,782	9,202
15-59	10,040	11,043	21,083	15-59	11,646	12,917	24,563
15-64	10,298	11,387	21,685	15-64	11,955	13,316	25,271
60+	647	1,014	1,661	60+	787	1,169	1,956
65+	389	670	1,059	65+	478	770	1,248

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	40	36	38	0-14	36	33	34
15-24	20	20	20	15-24	23	23	23
15-59	56	58	57	15-59	60	62	61
15-64	58	60	59	15-64	62	64	63
60+	4	5	5	60+	4	6	5
65+	2	4	3	65+	2	4	3

Age dependency ratio

2000		2005	
15-59	74	15-59	64
15-64	69	15-64	60

Sex ratio (males per 100 females)

2000	2005
94	93

Median age (years)

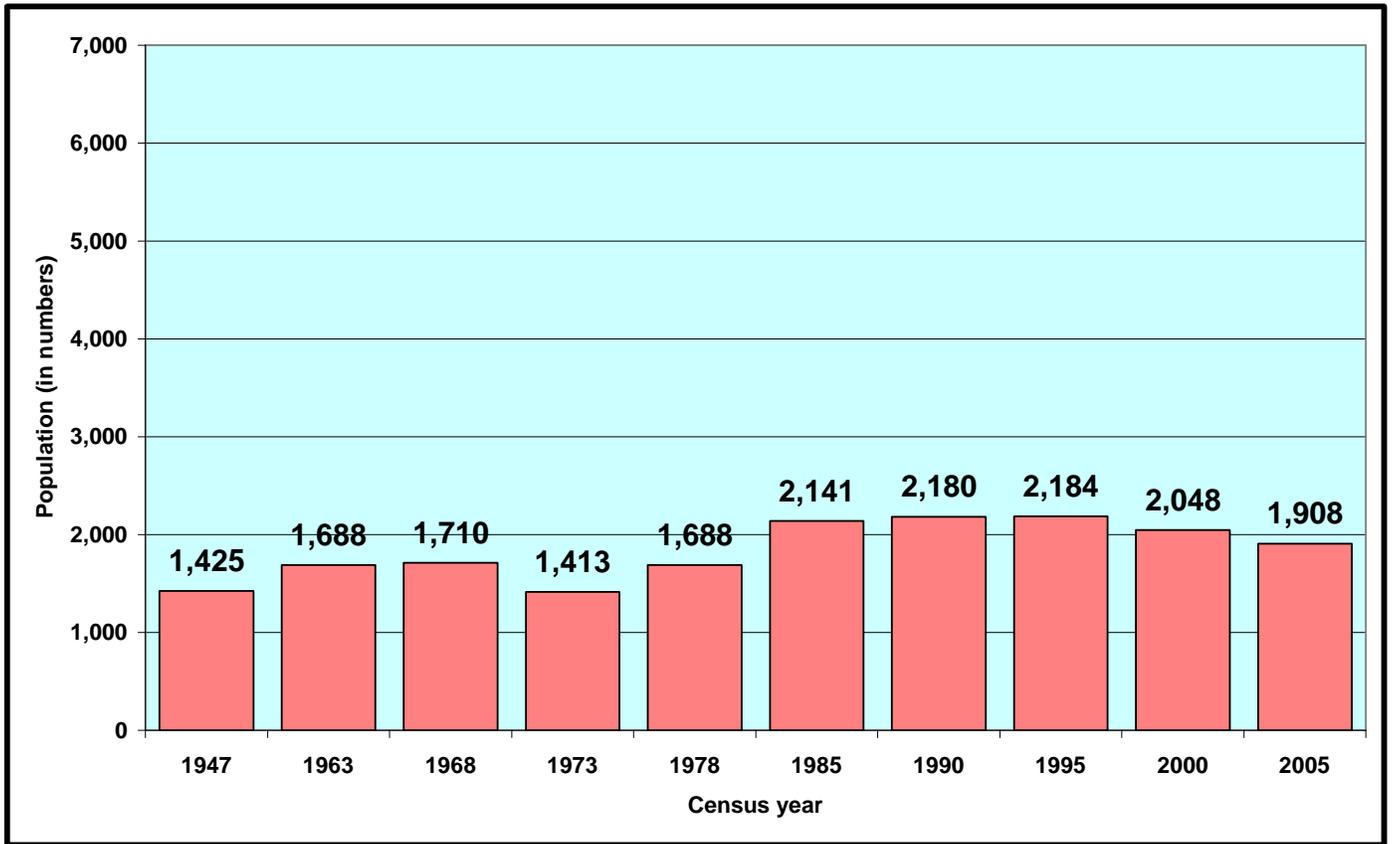
2000				2005			
	Males	Females	Total		Males	Females	Total
	19.6	21.8	20.7		21.0	22.7	21.9

Population growth

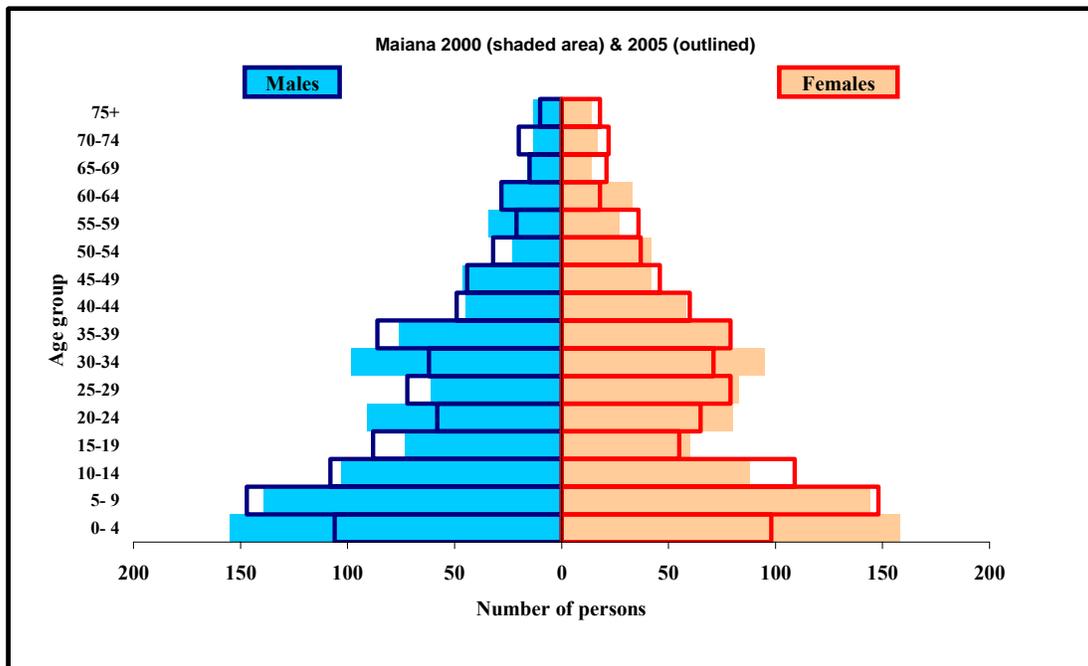
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	1,613	1,981	3,594
Total growth (%)	9.1	10.5	9.8
Average annual growth rate (%)	1.7	2.0	1.9

MAIANA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	155	158	313	0-4	106	98	204
5-9	139	144	283	5-9	147	148	295
10-14	103	88	191	10-14	108	109	217
15-19	73	60	133	15-19	88	55	143
20-24	91	80	171	20-24	58	65	123
25-29	61	83	144	25-29	72	79	151
30-34	98	95	193	30-34	62	71	133
35-39	76	78	154	35-39	86	79	165
40-44	45	58	103	40-44	49	60	109
45-49	46	42	88	45-49	44	46	90
50-54	23	42	65	50-54	32	37	69
55-59	34	27	61	55-59	21	36	57
60-64	29	33	62	60-64	28	18	46
65-69	16	14	30	65-69	15	21	36
70-74	13	17	30	70-74	20	22	42
75+	13	14	27	75+	10	18	28
Total	1,015	1,033	2,048	Total	946	962	1,908

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	397	390	787	0-14	361	355	716
15-24	164	140	304	15-24	146	120	266
15-59	547	565	1,112	15-59	512	528	1,040
15-64	576	598	1,174	15-64	540	546	1,086
60+	71	78	149	60+	73	79	152
65+	42	45	87	65+	45	61	106

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	39	38	38	0-14	38	37	38
15-24	16	14	15	15-24	15	12	14
15-59	54	55	54	15-59	54	55	55
15-64	57	58	57	15-64	57	57	57
60+	7	8	7	60+	8	8	8
65+	4	4	4	65+	5	6	6

Age dependency ratio

2000		2005	
15-59	84	15-59	83
15-64	74	15-64	76

Sex ratio (males per 100 females)

2000	2005
98	98

Median age (years)

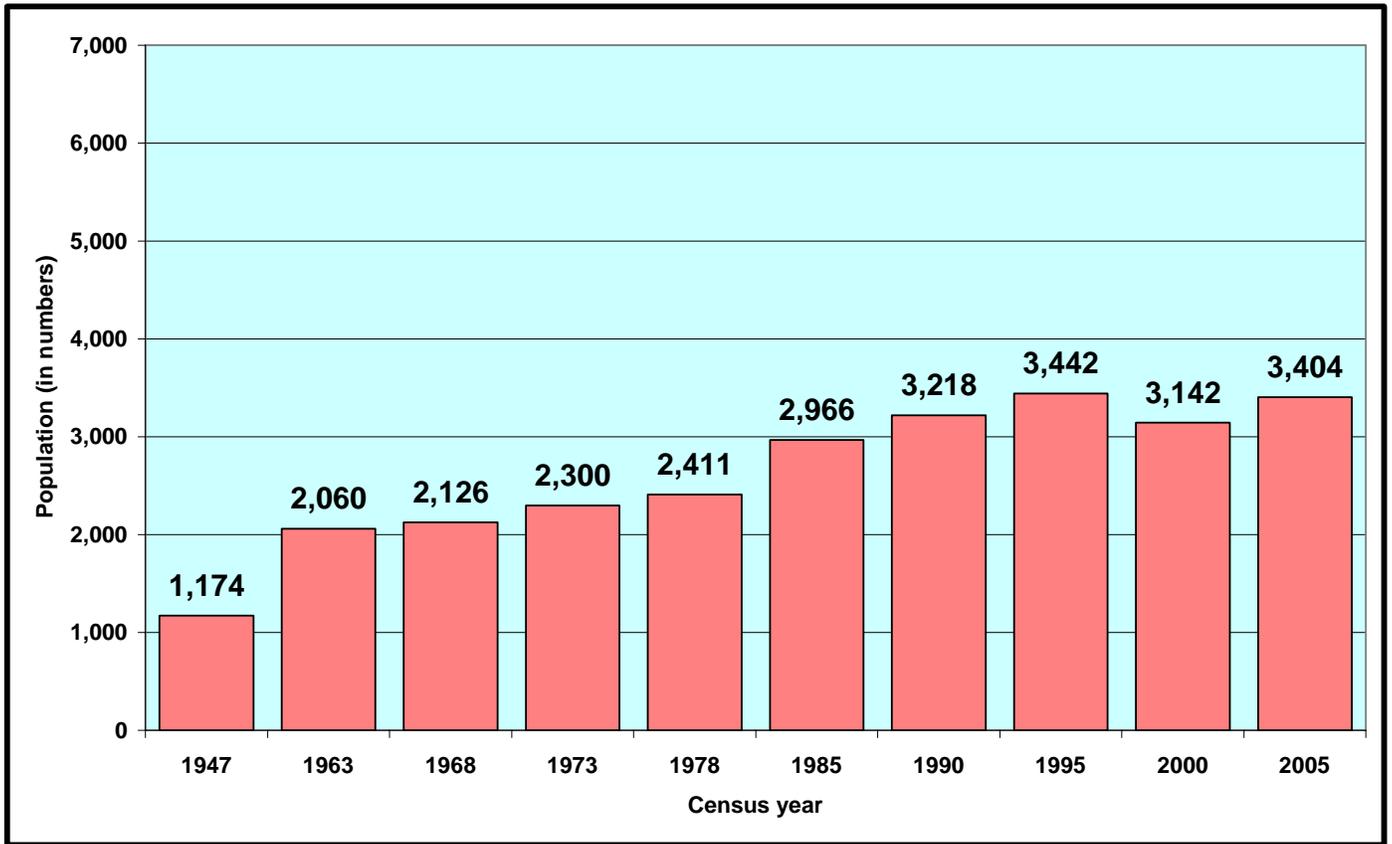
2000				2005			
	Males	Females	Total		Males	Females	Total
	22.1	24.2	23.1		22.1	25.4	23.9

Population growth

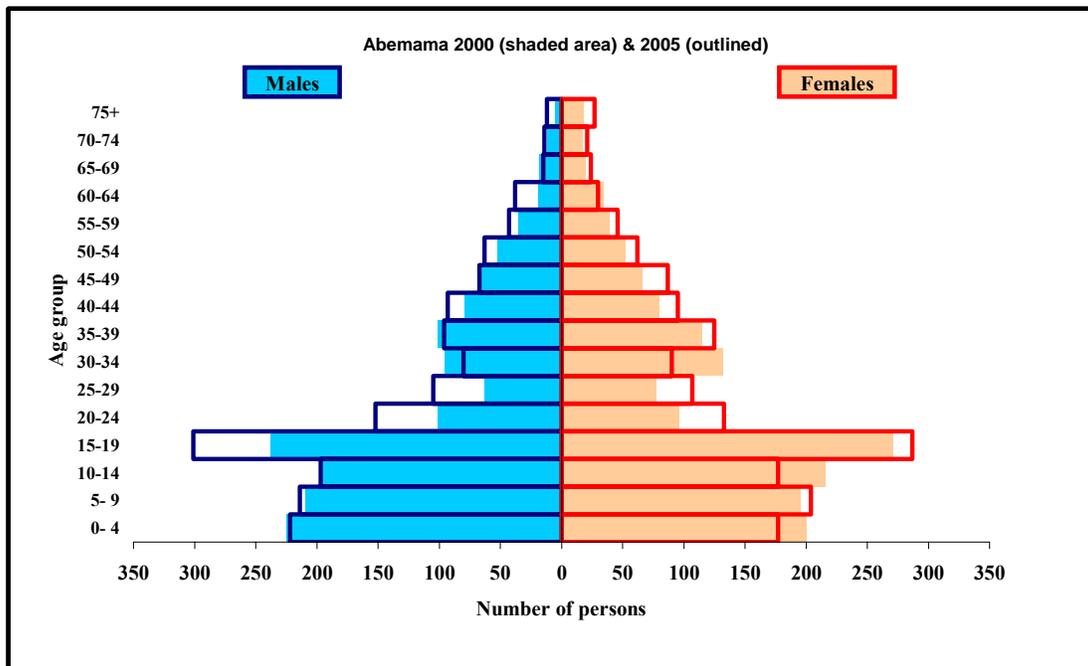
2000-2005			
	Males	Females	Total
Total growth (in numbers)	-69	-71	-140
Total growth (%)	-6.8	-6.9	-6.8
Average annual growth rate (%)	-1.4	-1.4	-1.4

ABEMAMA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	225	200	425	0-4	222	177	399
5-9	209	195	404	5-9	214	204	418
10-14	197	216	413	10-14	197	177	374
15-19	238	271	509	15-19	301	287	588
20-24	101	96	197	20-24	152	133	285
25-29	63	77	140	25-29	105	107	212
30-34	95	132	227	30-34	80	90	170
35-39	101	115	216	35-39	96	125	221
40-44	79	80	159	40-44	93	95	188
45-49	65	66	131	45-49	67	87	154
50-54	52	52	104	50-54	63	62	125
55-59	35	39	74	55-59	43	46	89
60-64	19	34	53	60-64	38	30	68
65-69	18	20	38	65-69	15	24	39
70-74	12	17	29	70-74	14	21	35
75+	5	18	23	75+	12	27	39
Total	1,514	1,628	3,142	Total	1,712	1,692	3,404

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	631	611	1,242	0-14	633	558	1,191
15-24	339	367	706	15-24	453	420	873
15-59	829	928	1,757	15-59	1,000	1,032	2,032
15-64	848	962	1,810	15-64	1,038	1,062	2,100
60+	54	89	143	60+	79	102	181
65+	35	55	90	65+	41	72	113

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	42	38	40	0-14	37	33	35
15-24	22	23	22	15-24	26	25	26
15-59	55	57	56	15-59	58	61	60
15-64	56	59	58	15-64	61	63	62
60+	4	5	5	60+	5	6	5
65+	2	3	3	65+	2	4	3

Age dependency ratio

2000		2005	
15-59	79	15-59	68
15-64	74	15-64	62

Sex ratio (males per 100 females)

2000	2005
93	101

Median age (years)

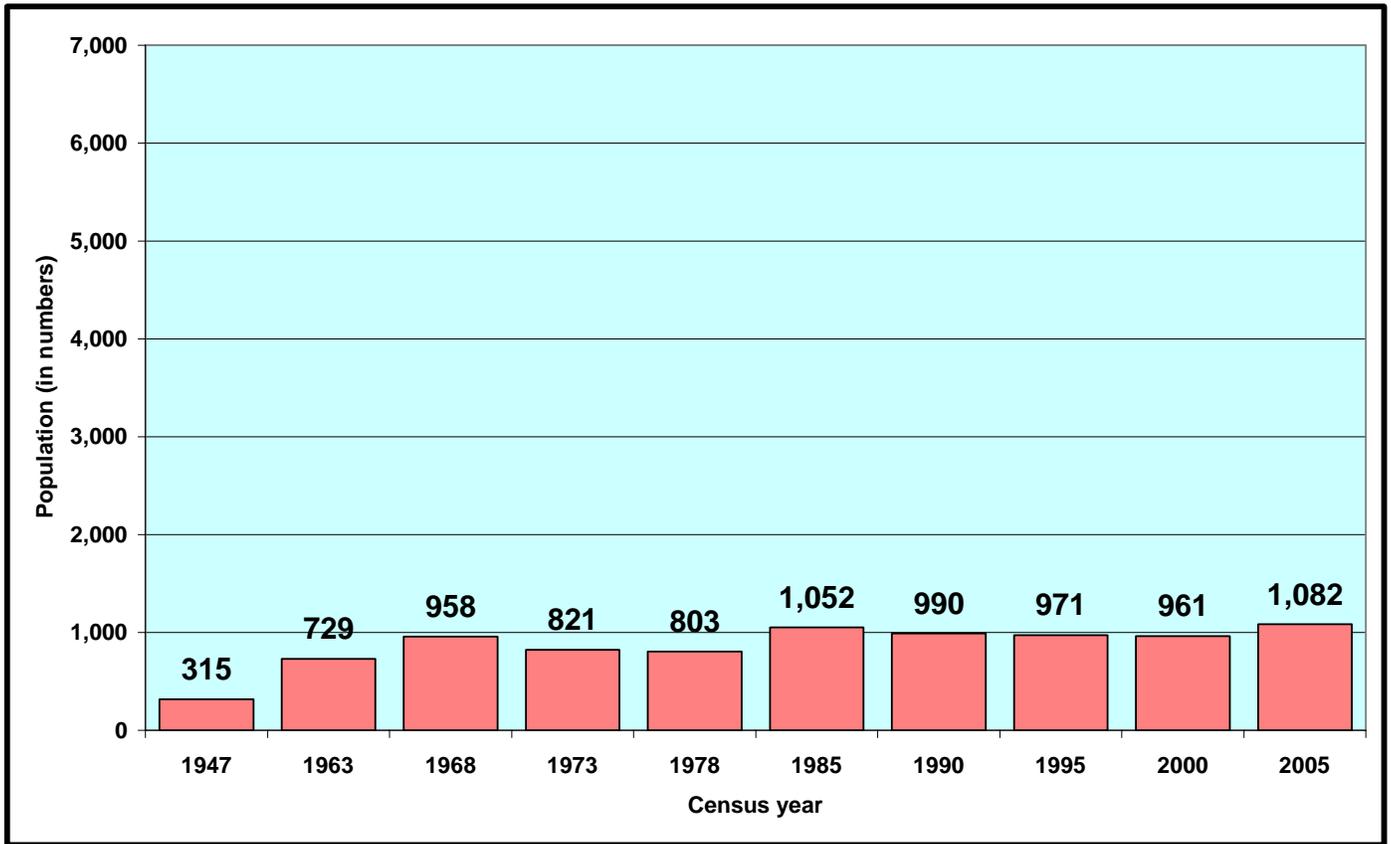
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.7	18.8	18.2		18.7	20.1	19.3

Population growth

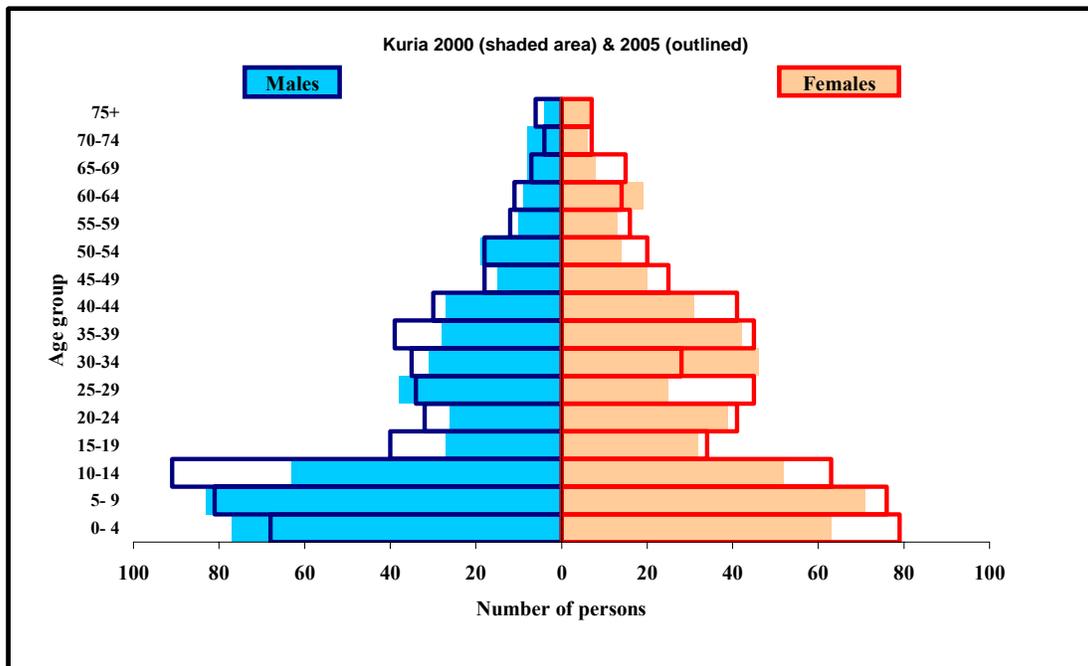
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	198	64	262
Total growth (%)	13.1	3.9	8.3
Average annual growth rate (%)	2.5	0.8	1.6

KURIA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	77	63	140	0-4	68	79	147
5-9	83	71	154	5-9	81	76	157
10-14	63	52	115	10-14	91	63	154
15-19	27	32	59	15-19	40	34	74
20-24	26	39	65	20-24	32	41	73
25-29	38	25	63	25-29	34	45	79
30-34	31	46	77	30-34	35	28	63
35-39	28	42	70	35-39	39	45	84
40-44	27	31	58	40-44	30	41	71
45-49	15	20	35	45-49	18	25	43
50-54	19	14	33	50-54	18	20	38
55-59	10	13	23	55-59	12	16	28
60-64	9	19	28	60-64	11	14	25
65-69	8	8	16	65-69	7	15	22
70-74	8	6	14	70-74	4	7	11
75+	4	7	11	75+	6	7	13
Total	473	488	961	Total	526	556	1,082

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	223	186	409	0-14	240	218	458
15-24	53	71	124	15-24	72	75	147
15-59	221	262	483	15-59	258	295	553
15-64	230	281	511	15-64	269	309	578
60+	29	40	69	60+	28	43	71
65+	20	21	41	65+	17	29	46

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	47	38	43	0-14	46	39	42
15-24	11	15	13	15-24	14	13	14
15-59	47	54	50	15-59	49	53	51
15-64	49	58	53	15-64	51	56	53
60+	6	8	7	60+	5	8	7
65+	4	4	4	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	99	15-59	96
15-64	88	15-64	87

Sex ratio (males per 100 females)

2000	2005
97	95

Median age (years)

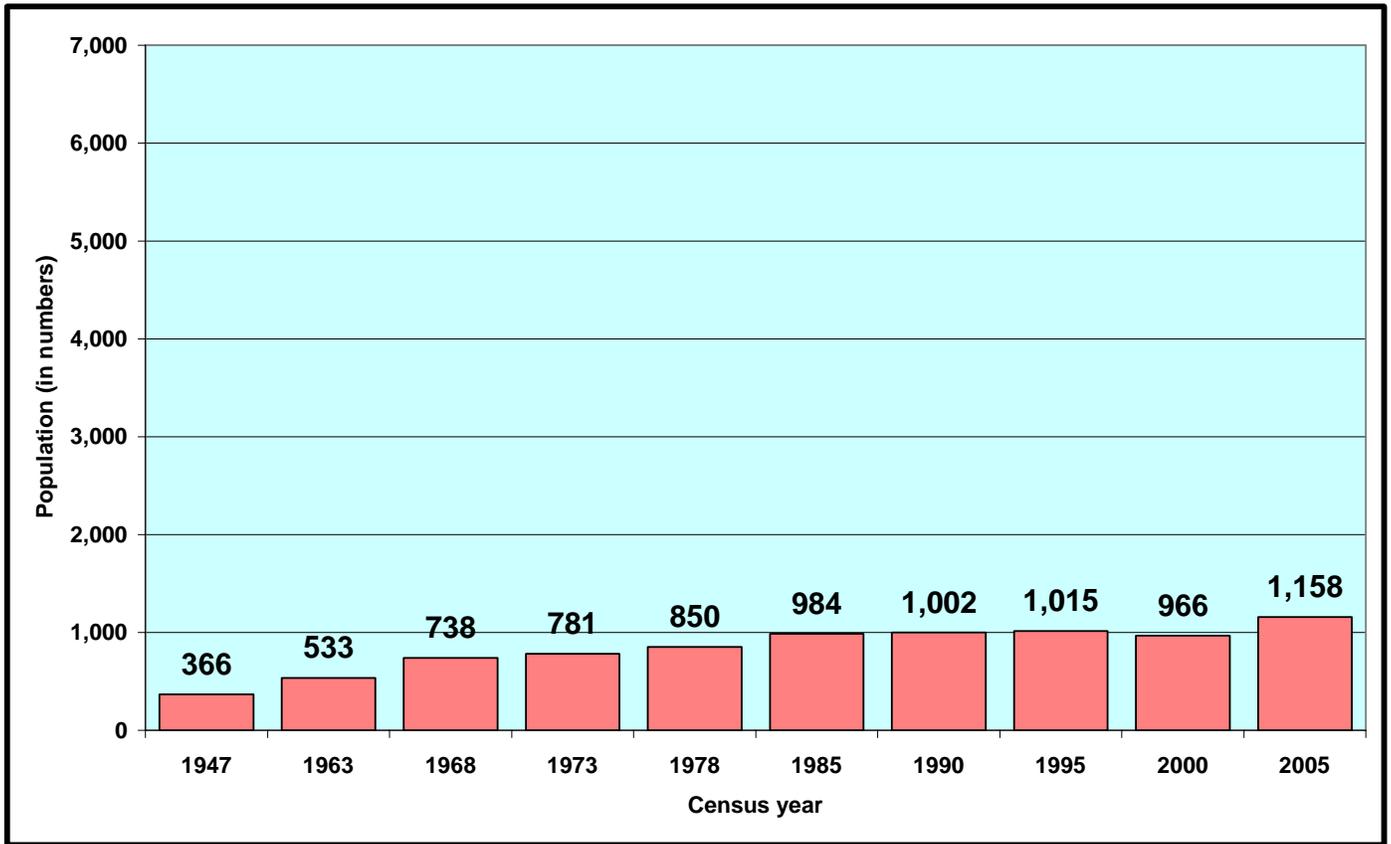
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.6	23.4	21.0		17.9	23.2	20.7

Population growth

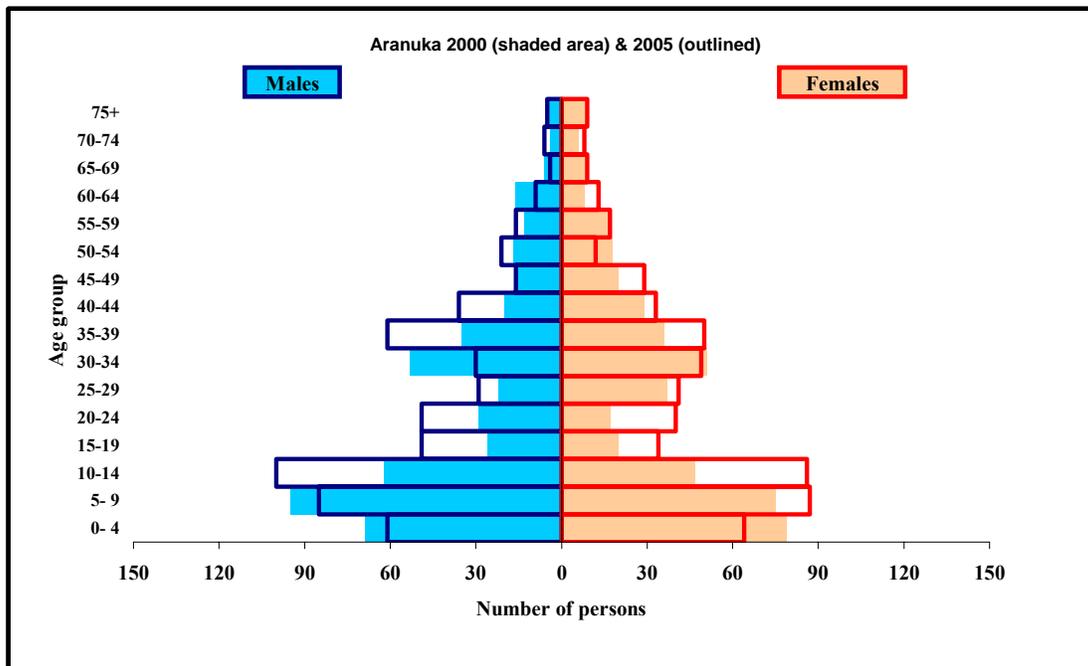
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	53	68	121
Total growth (%)	11.2	13.9	12.6
Average annual growth rate (%)	2.1	2.6	2.4

ARANUKA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	69	79	148	0-4	61	64	125
5-9	95	75	170	5-9	85	87	172
10-14	62	47	109	10-14	100	86	186
15-19	26	20	46	15-19	49	34	83
20-24	29	17	46	20-24	49	40	89
25-29	22	37	59	25-29	29	41	70
30-34	53	51	104	30-34	30	49	79
35-39	35	36	71	35-39	61	50	111
40-44	20	29	49	40-44	36	33	69
45-49	16	20	36	45-49	16	29	45
50-54	17	18	35	50-54	21	12	33
55-59	13	17	30	55-59	16	17	33
60-64	16	8	24	60-64	9	13	22
65-69	6	9	15	65-69	4	9	13
70-74	4	6	10	70-74	6	8	14
75+	5	9	14	75+	5	9	14
Total	488	478	966	Total	577	581	1,158

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	226	201	427	0-14	246	237	483
15-24	55	37	92	15-24	98	74	172
15-59	231	245	476	15-59	307	305	612
15-64	247	253	500	15-64	316	318	634
60+	31	32	63	60+	24	39	63
65+	15	24	39	65+	15	26	41

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	46	42	44	0-14	43	41	42
15-24	11	8	10	15-24	17	13	15
15-59	47	51	49	15-59	53	52	53
15-64	51	53	52	15-64	55	55	55
60+	6	7	7	60+	4	7	5
65+	3	5	4	65+	3	4	4

Age dependency ratio

2000		2005	
15-59	103	15-59	89
15-64	93	15-64	83

Sex ratio (males per 100 females)

2000	2005
102	99

Median age (years)

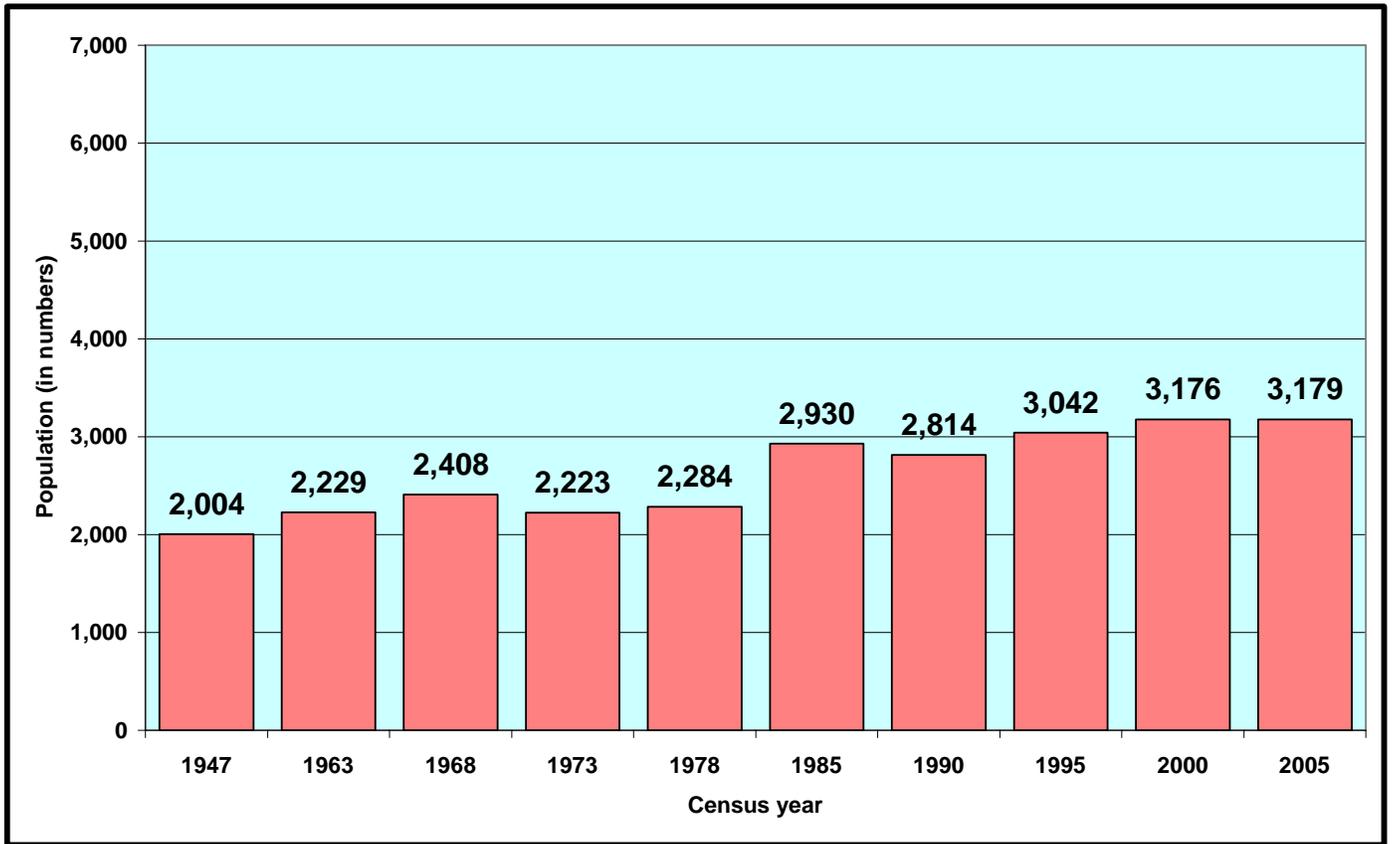
2000				2005			
	Males	Females	Total		Males	Females	Total
	18.6	25.2	21.1		19.4	22.5	20.8

Population growth

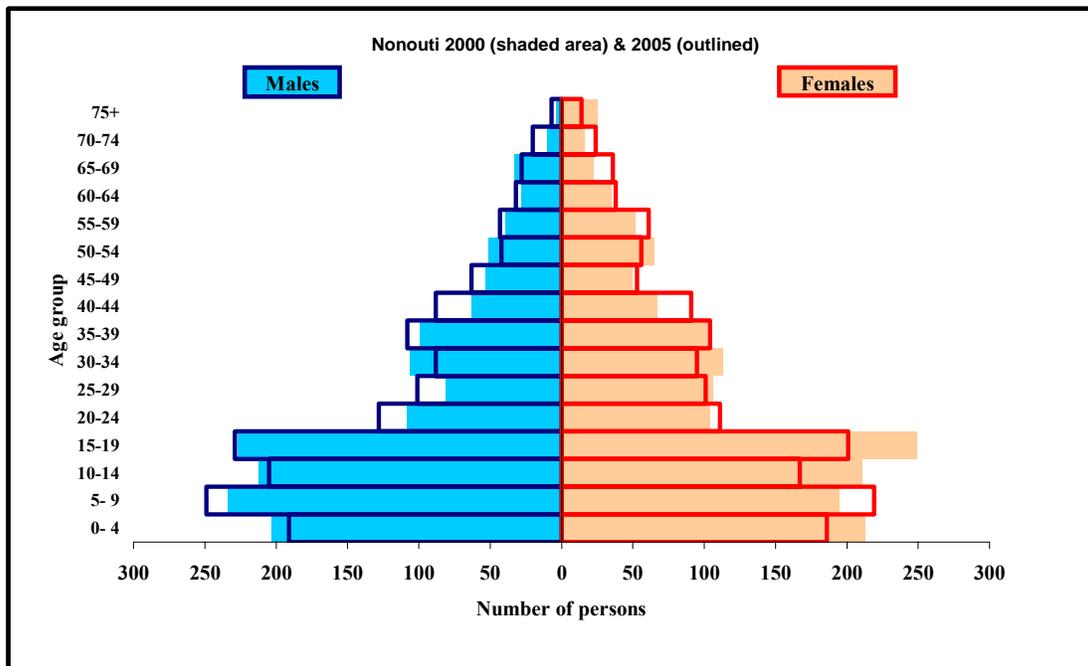
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	89	103	192
Total growth (%)	18.2	21.5	19.9
Average annual growth rate (%)	3.4	3.9	3.6

NONOUTI

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	203	213	416	0-4	191	186	377
5-9	234	195	429	5-9	249	219	468
10-14	212	211	423	10-14	205	167	372
15-19	227	249	476	15-19	229	201	430
20-24	108	104	212	20-24	128	111	239
25-29	81	106	187	25-29	101	101	202
30-34	106	113	219	30-34	88	95	183
35-39	99	102	201	35-39	108	104	212
40-44	63	67	130	40-44	88	91	179
45-49	53	50	103	45-49	63	53	116
50-54	51	65	116	50-54	42	56	98
55-59	39	52	91	55-59	43	61	104
60-64	28	35	63	60-64	32	38	70
65-69	33	22	55	65-69	28	36	64
70-74	10	16	26	70-74	20	24	44
75+	4	25	29	75+	7	14	21
Total	1,551	1,625	3,176	Total	1,622	1,557	3,179

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	649	619	1,268	0-14	645	572	1,217
15-24	335	353	688	15-24	357	312	669
15-59	827	908	1,735	15-59	890	873	1,763
15-64	855	943	1,798	15-64	922	911	1,833
60+	75	98	173	60+	87	112	199
65+	47	63	110	65+	55	74	129

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	42	38	40	0-14	40	37	38
15-24	22	22	22	15-24	22	20	21
15-59	53	56	55	15-59	55	56	55
15-64	55	58	57	15-64	57	59	58
60+	5	6	5	60+	5	7	6
65+	3	4	3	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	83	15-59	80
15-64	77	15-64	73

Sex ratio (males per 100 females)

2000	2005
95	104

Median age (years)

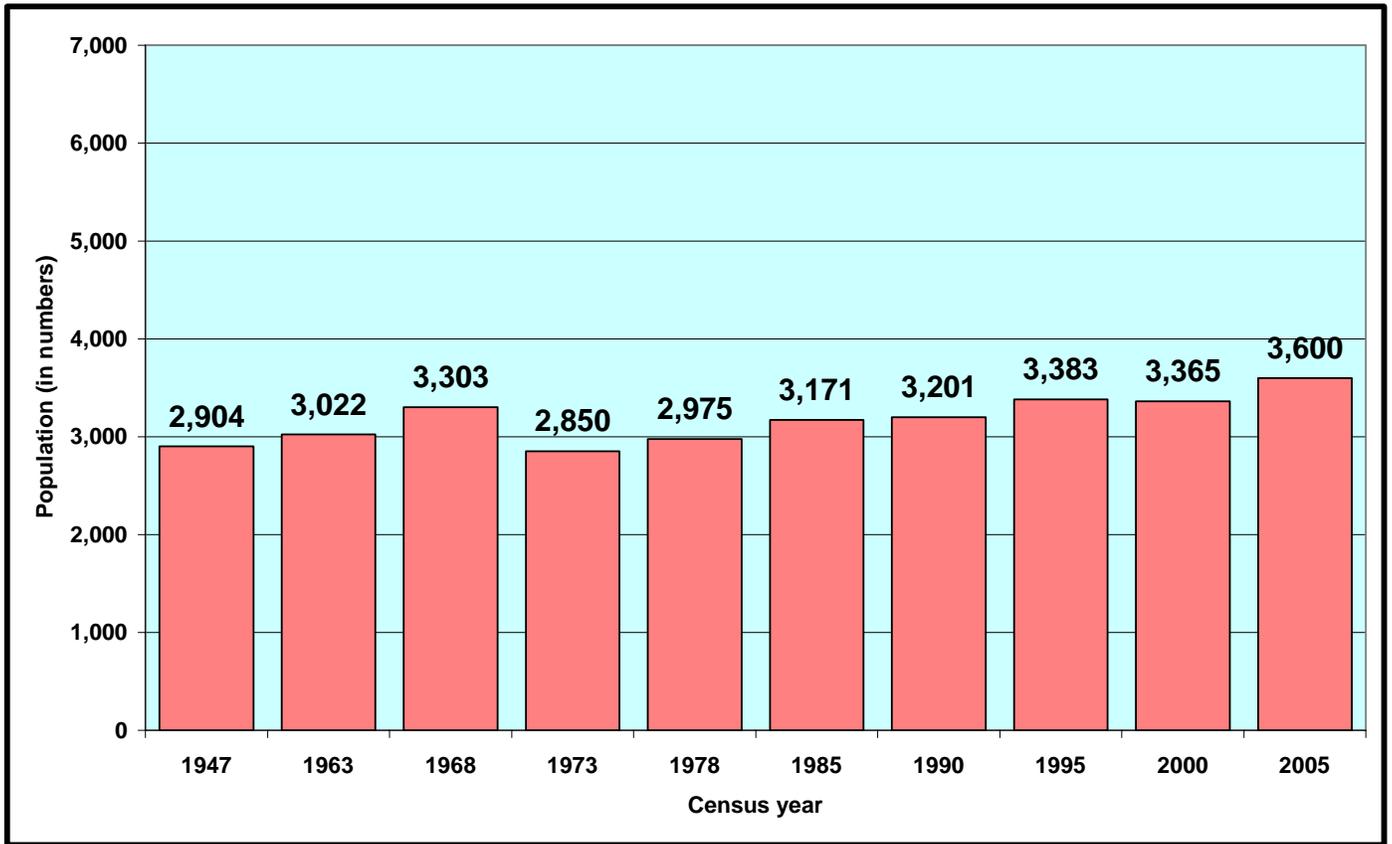
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.8	18.9	18.4		18.6	20.3	19.3

Population growth

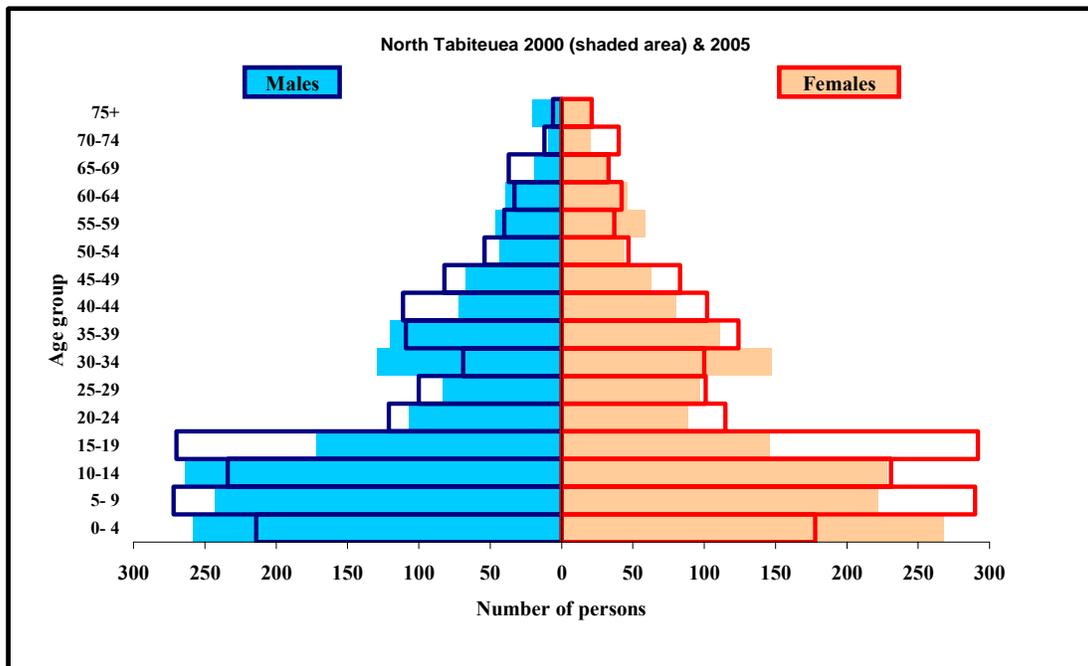
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	71	-68	3
Total growth (%)	4.6	-4.2	0.1
Average annual growth rate (%)	0.9	-0.9	0.0

TABITEUEA NORTH

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	258	268	526	0-4	214	178	392
5-9	243	222	465	5-9	272	290	562
10-14	264	228	492	10-14	234	231	465
15-19	172	146	318	15-19	270	292	562
20-24	107	89	196	20-24	121	115	236
25-29	83	97	180	25-29	100	101	201
30-34	129	147	276	30-34	69	100	169
35-39	120	111	231	35-39	109	124	233
40-44	72	80	152	40-44	111	102	213
45-49	67	63	130	45-49	82	83	165
50-54	43	44	87	50-54	54	47	101
55-59	46	59	105	55-59	40	37	77
60-64	39	46	85	60-64	33	42	75
65-69	19	32	51	65-69	37	33	70
70-74	9	20	29	70-74	12	40	52
75+	20	22	42	75+	6	21	27
Total	1,691	1,674	3,365	Total	1,764	1,836	3,600

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	765	718	1,483	0-14	720	699	1,419
15-24	279	235	514	15-24	391	407	798
15-59	839	836	1,675	15-59	956	1,001	1,957
15-64	878	882	1,760	15-64	989	1,043	2,032
60+	87	120	207	60+	88	136	224
65+	48	74	122	65+	55	94	149

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	45	43	44	0-14	41	38	39
15-24	16	14	15	15-24	22	22	22
15-59	50	50	50	15-59	54	55	54
15-64	52	53	52	15-64	56	57	56
60+	5	7	6	60+	5	7	6
65+	3	4	4	65+	3	5	4

Age dependency ratio

2000		2005	
15-59	101	15-59	84
15-64	91	15-64	77

Sex ratio (males per 100 females)

2000	2005
101	96

Median age (years)

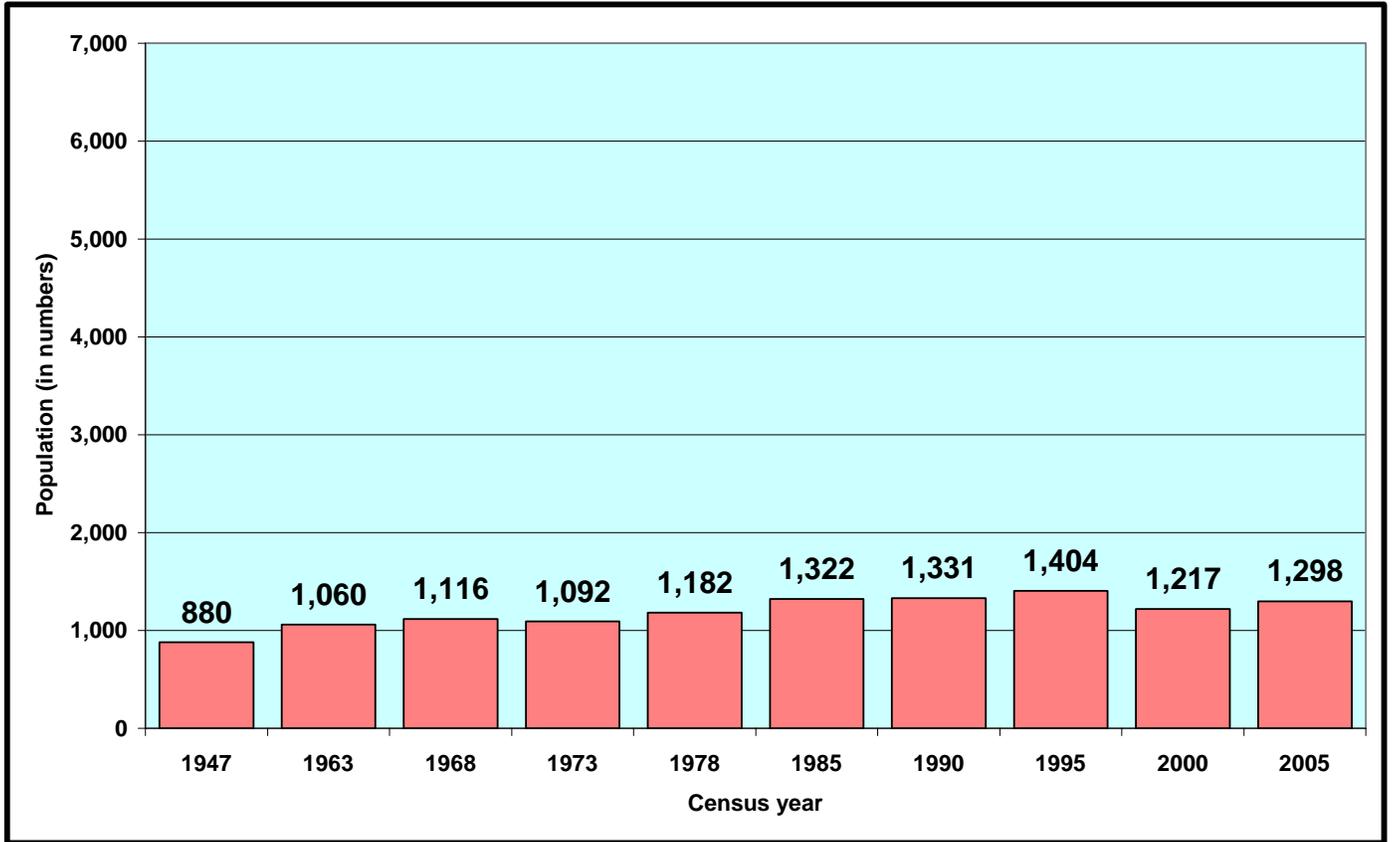
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.4	19.1	18.1		18.0	18.8	18.4

Population growth

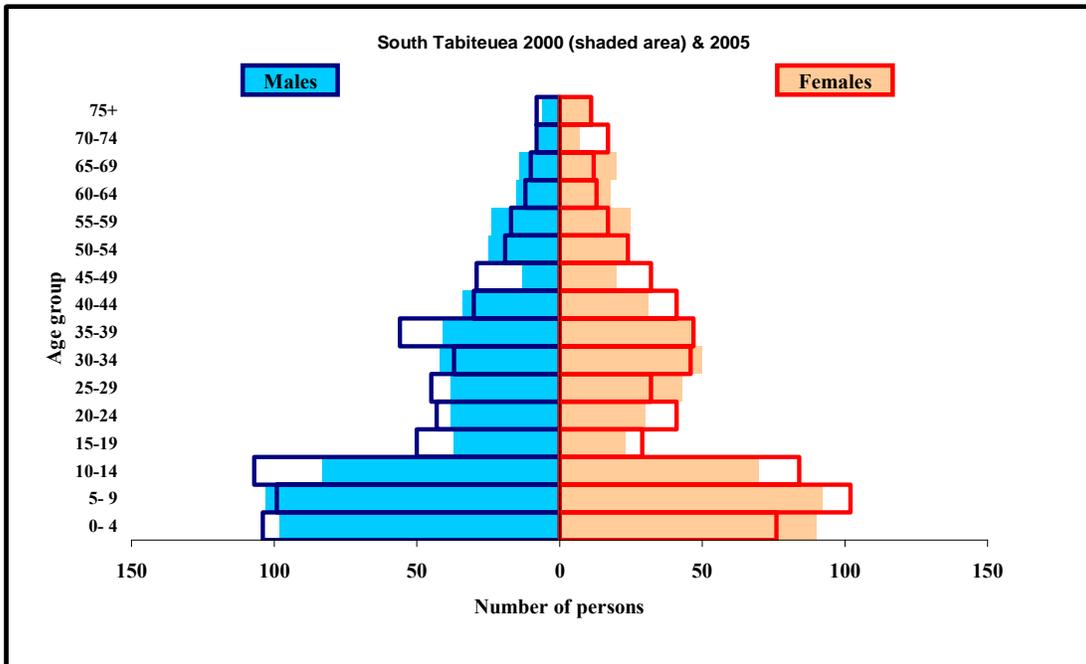
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	73	162	235
Total growth (%)	4.3	9.7	7.0
Average annual growth rate (%)	0.8	1.8	1.4

TABITEUEA SOUTH

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	98	90	188	0-4	104	76	180
5-9	103	92	195	5-9	99	102	201
10-14	83	70	153	10-14	107	84	191
15-19	37	23	60	15-19	50	29	79
20-24	38	30	68	20-24	43	41	84
25-29	38	43	81	25-29	45	32	77
30-34	42	50	92	30-34	37	46	83
35-39	41	46	87	35-39	56	47	103
40-44	34	31	65	40-44	30	41	71
45-49	13	20	33	45-49	29	32	61
50-54	25	23	48	50-54	19	24	43
55-59	24	25	49	55-59	17	17	34
60-64	15	18	33	60-64	12	13	25
65-69	14	20	34	65-69	10	12	22
70-74	7	7	14	70-74	8	17	25
75+	6	11	17	75+	8	11	19
Total	618	599	1,217	Total	674	624	1,298

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	284	252	536	0-14	310	262	572
15-24	75	53	128	15-24	93	70	163
15-59	292	291	583	15-59	326	309	635
15-64	307	309	616	15-64	338	322	660
60+	42	56	98	60+	38	53	91
65+	27	38	65	65+	26	40	66

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	46	42	44	0-14	46	42	44
15-24	12	9	11	15-24	14	11	13
15-59	47	49	48	15-59	48	50	49
15-64	50	52	51	15-64	50	52	51
60+	7	9	8	60+	6	8	7
65+	4	6	5	65+	4	6	5

Age dependency ratio

2000		2005	
15-59	109	15-59	104
15-64	98	15-64	97

Sex ratio (males per 100 females)

2000	2005
103	108

Median age (years)

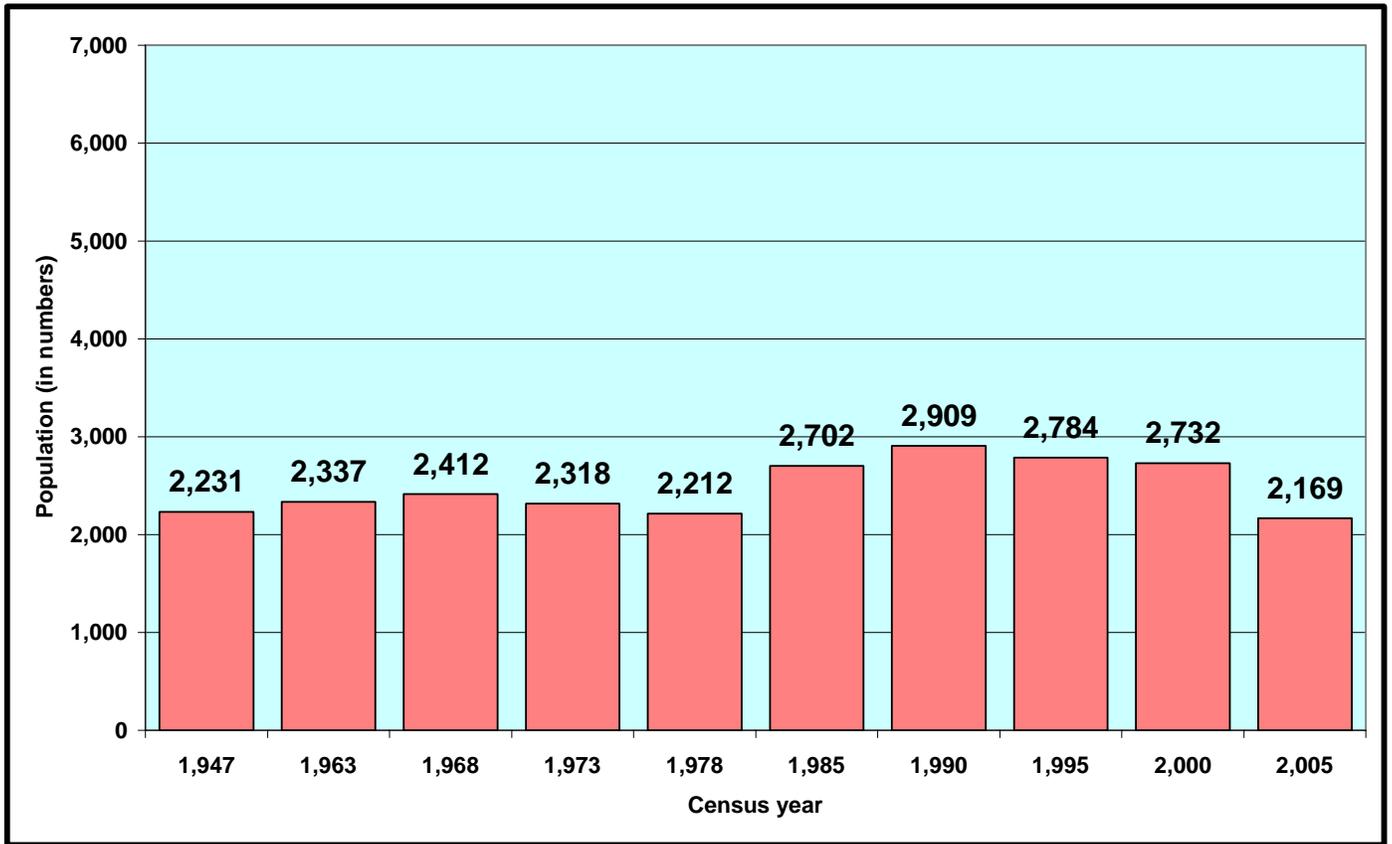
2000				2005			
	Males	Females	Total		Males	Females	Total
	18.4	24.2	21.0		17.8	22.6	19.9

Population growth

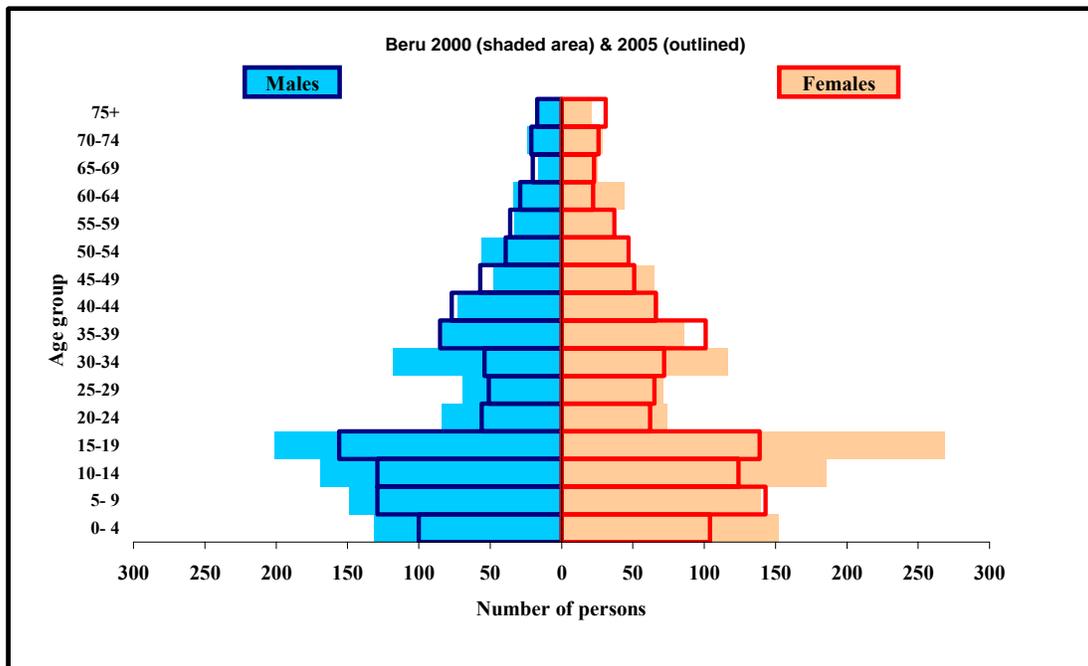
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	56	25	81
Total growth (%)	9.1	4.2	6.7
Average annual growth rate (%)	1.7	0.8	1.3

BERU

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	131	152	283	0-4	100	104	204
5-9	149	140	289	5-9	129	143	272
10-14	169	186	355	10-14	129	124	253
15-19	201	269	470	15-19	156	139	295
20-24	84	74	158	20-24	56	62	118
25-29	69	71	140	25-29	51	65	116
30-34	118	117	235	30-34	54	72	126
35-39	83	86	169	35-39	85	101	186
40-44	73	68	141	40-44	77	66	143
45-49	48	65	113	45-49	57	51	108
50-54	56	45	101	50-54	39	47	86
55-59	33	35	68	55-59	36	37	73
60-64	34	44	78	60-64	29	22	51
65-69	16	25	41	65-69	20	23	43
70-74	24	29	53	70-74	21	26	47
75+	17	21	38	75+	17	31	48
Total	1,305	1,427	2,732	Total	1,056	1,113	2,169

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	449	478	927	0-14	358	371	729
15-24	285	343	628	15-24	212	201	413
15-59	765	830	1,595	15-59	611	640	1,251
15-64	799	874	1,673	15-64	640	662	1,302
60+	91	119	210	60+	87	102	189
65+	57	75	132	65+	58	80	138

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	34	33	34	0-14	34	33	34
15-24	22	24	23	15-24	20	18	19
15-59	59	58	58	15-59	58	58	58
15-64	61	61	61	15-64	61	59	60
60+	7	8	8	60+	8	9	9
65+	4	5	5	65+	5	7	6

Age dependency ratio

2000		2005	
15-59	71	15-59	73
15-64	63	15-64	67

Sex ratio (males per 100 females)

2000	2005
91	95

Median age (years)

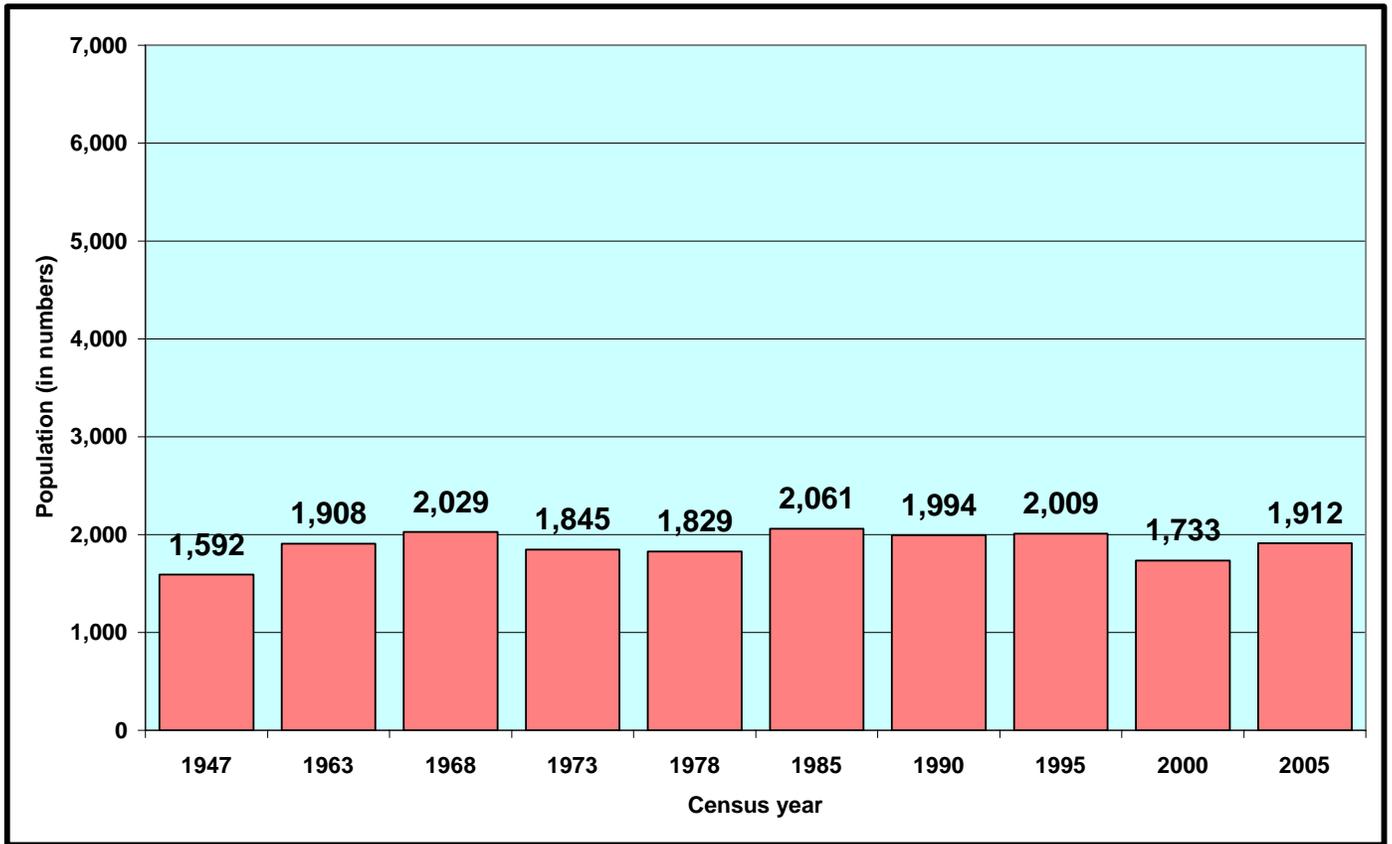
2000				2005			
	Males	Females	Total		Males	Females	Total
	20.2	19.4	19.7		21.3	23.8	22.6

Population growth

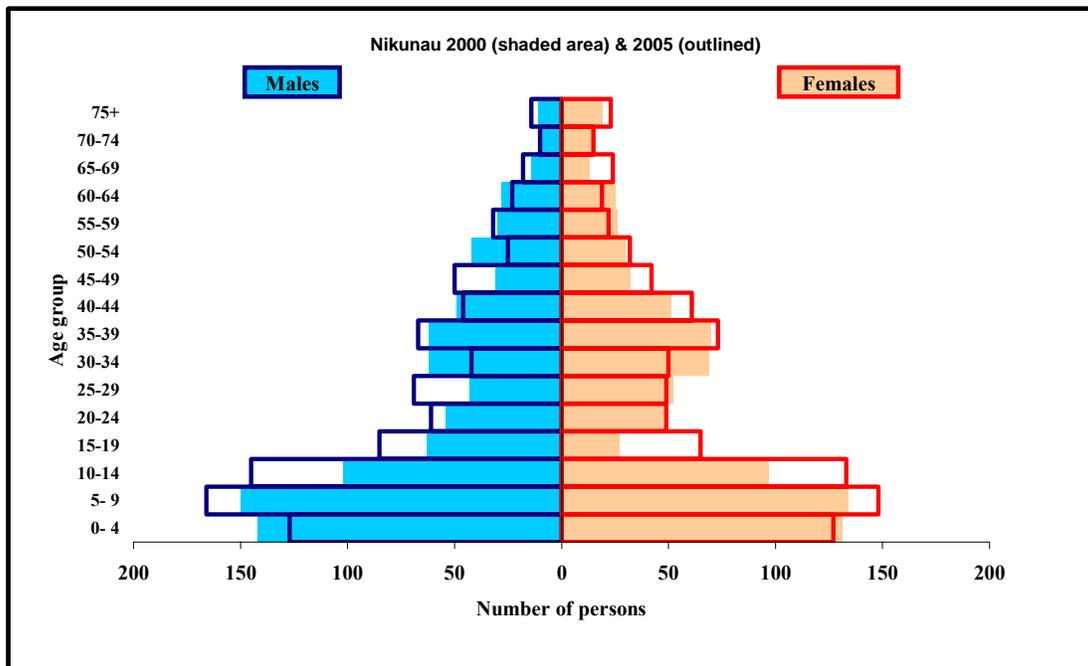
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	-249	-314	-563
Total growth (%)	-19.1	-22.0	-20.6
Average annual growth rate (%)	-4.2	-5.0	-4.6

NIKUNAU

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	142	131	273	0-4	127	127	254
5-9	150	134	284	5-9	166	148	314
10-14	102	97	199	10-14	145	133	278
15-19	63	27	90	15-19	85	65	150
20-24	54	48	102	20-24	61	49	110
25-29	43	52	95	25-29	69	49	118
30-34	62	69	131	30-34	42	50	92
35-39	62	70	132	35-39	67	73	140
40-44	49	51	100	40-44	46	61	107
45-49	31	32	63	45-49	50	42	92
50-54	42	30	72	50-54	25	32	57
55-59	30	26	56	55-59	32	22	54
60-64	28	25	53	60-64	23	19	42
65-69	14	13	27	65-69	18	24	42
70-74	11	15	26	70-74	10	15	25
75+	11	19	30	75+	14	23	37
Total	894	839	1,733	Total	980	932	1,912

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	394	362	756	0-14	438	408	846
15-24	117	75	192	15-24	146	114	260
15-59	436	405	841	15-59	477	443	920
15-64	464	430	894	15-64	500	462	962
60+	64	72	136	60+	65	81	146
65+	36	47	83	65+	42	62	104

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	44	43	44	0-14	45	44	44
15-24	13	9	11	15-24	15	12	14
15-59	49	48	49	15-59	49	48	48
15-64	52	51	52	15-64	51	50	50
60+	7	9	8	60+	7	9	8
65+	4	6	5	65+	4	7	5

Age dependency ratio

2000		2005	
15-59	106	15-59	108
15-64	94	15-64	99

Sex ratio (males per 100 females)

2000	2005
107	105

Median age (years)

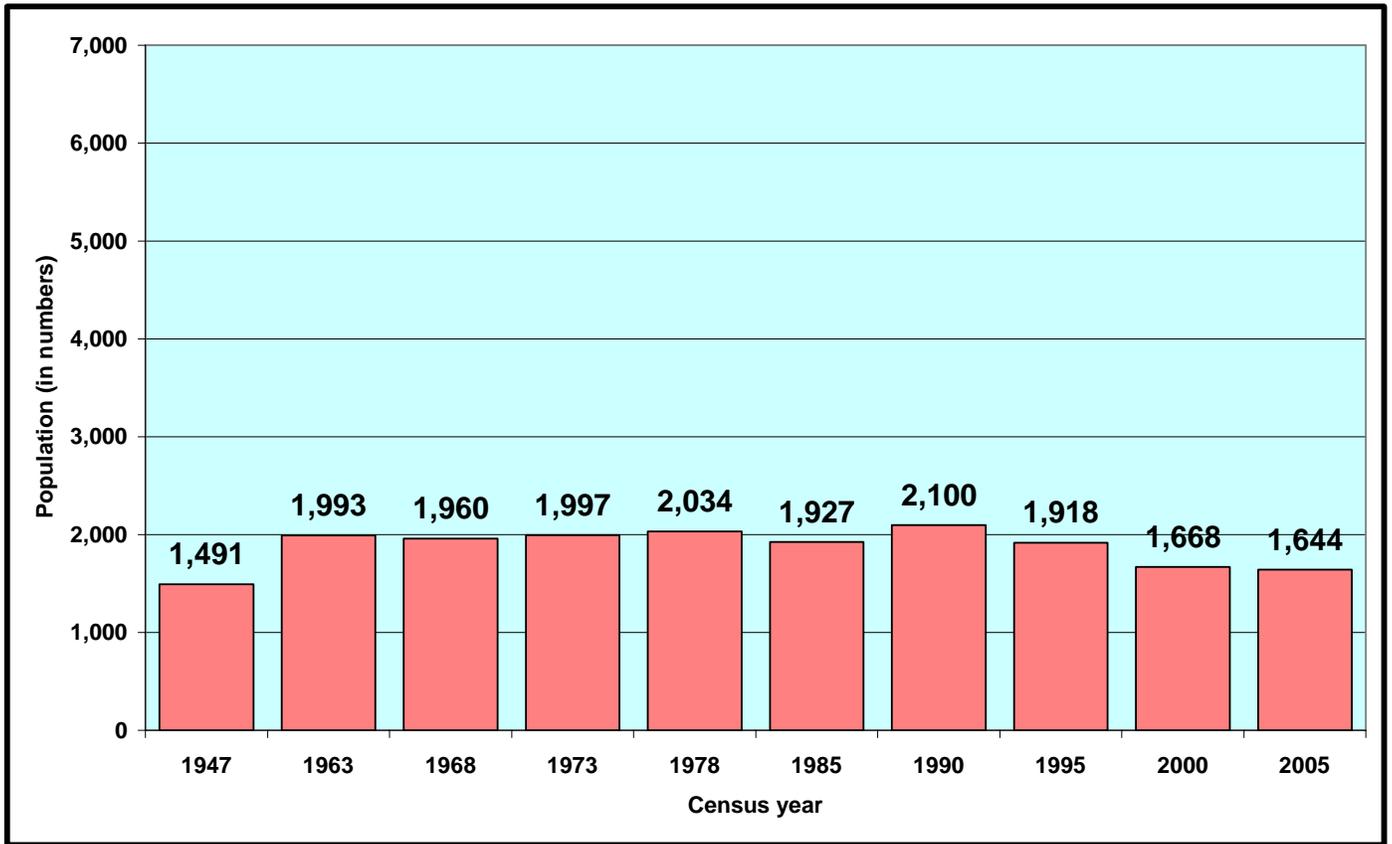
2000				2005			
	Males	Females	Total		Males	Females	Total
	19.2	23.2	21.0		18.1	19.5	18.7

Population growth

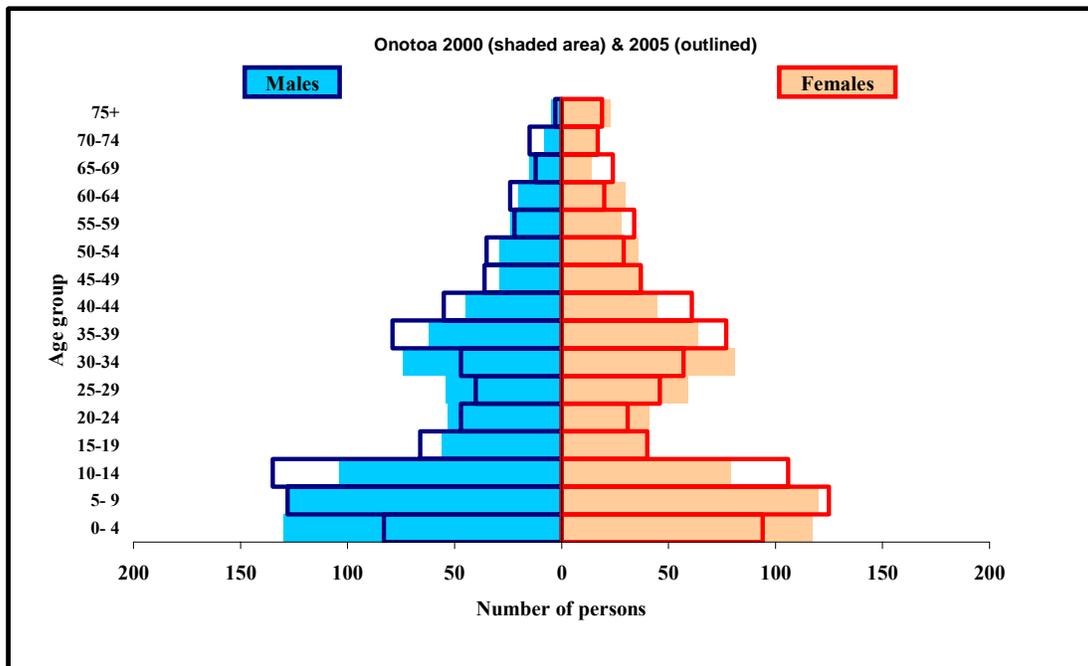
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	86	93	179
Total growth (%)	9.6	11.1	10.3
Average annual growth rate (%)	1.8	2.1	2.0

ONOTOA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	130	117	247	0-4	83	94	177
5-9	127	120	247	5-9	128	125	253
10-14	104	79	183	10-14	135	106	241
15-19	56	40	96	15-19	66	40	106
20-24	53	41	94	20-24	47	31	78
25-29	54	59	113	25-29	40	46	86
30-34	74	81	155	30-34	47	57	104
35-39	62	64	126	35-39	79	77	156
40-44	45	45	90	40-44	55	61	116
45-49	29	38	67	45-49	36	37	73
50-54	29	36	65	50-54	35	29	64
55-59	24	28	52	55-59	22	34	56
60-64	20	30	50	60-64	24	20	44
65-69	15	14	29	65-69	12	24	36
70-74	8	18	26	70-74	15	17	32
75+	5	23	28	75+	3	19	22
Total	835	833	1,668	Total	827	817	1,644

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	361	316	677	0-14	346	325	671
15-24	109	81	190	15-24	113	71	184
15-59	426	432	858	15-59	427	412	839
15-64	446	462	908	15-64	451	432	883
60+	48	85	133	60+	54	80	134
65+	28	55	83	65+	30	60	90

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	43	38	41	0-14	42	40	41
15-24	13	10	11	15-24	14	9	11
15-59	51	52	51	15-59	52	50	51
15-64	53	55	54	15-64	55	53	54
60+	6	10	8	60+	7	10	8
65+	3	7	5	65+	4	7	5

Age dependency ratio

2000		2005	
15-59	94	15-59	96
15-64	84	15-64	86

Sex ratio (males per 100 females)

2000	2005
100	101

Median age (years)

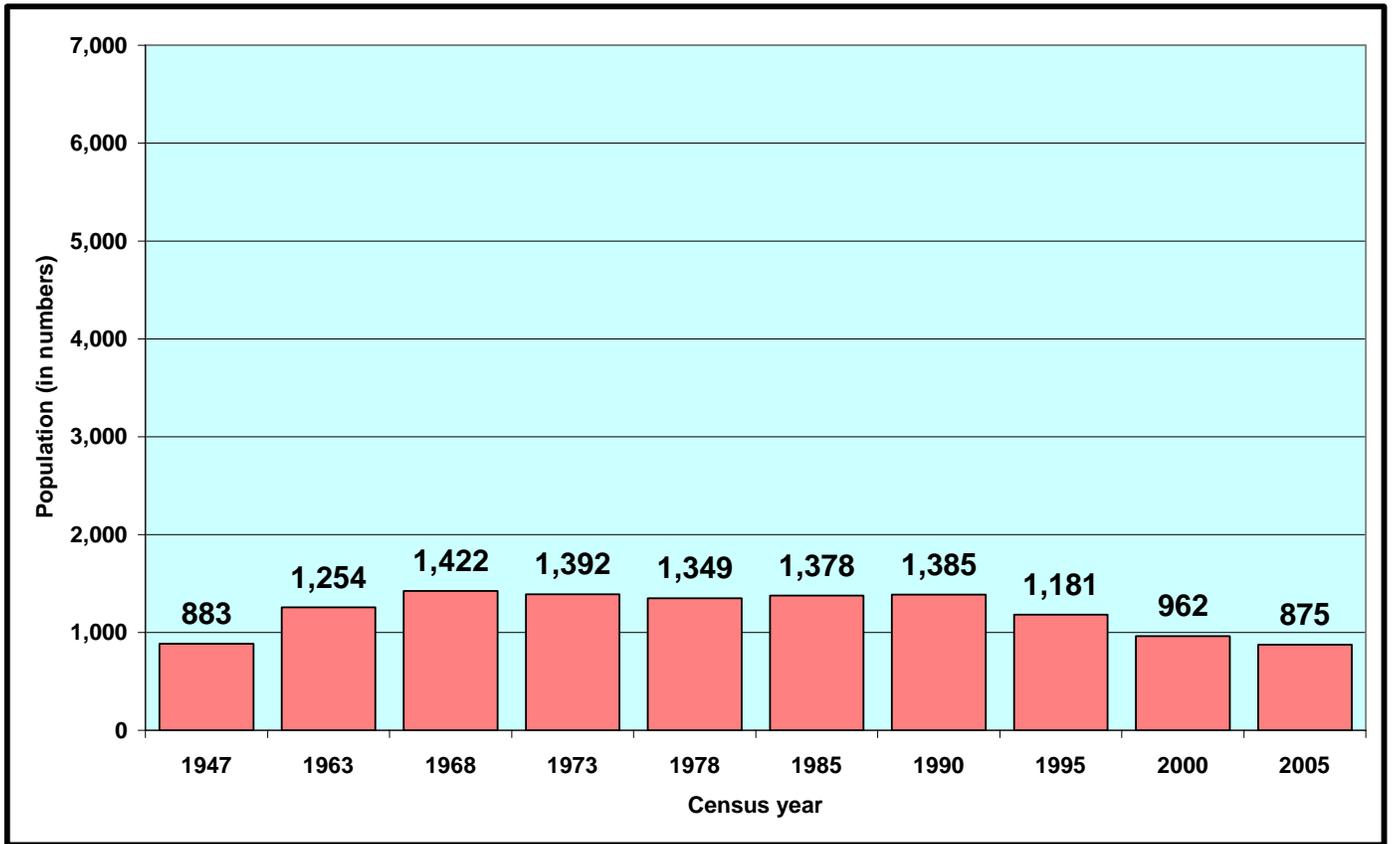
2000				2005			
	Males	Females	Total		Males	Females	Total
	20.1	26.7	23.3		20.2	26.4	22.9

Population growth

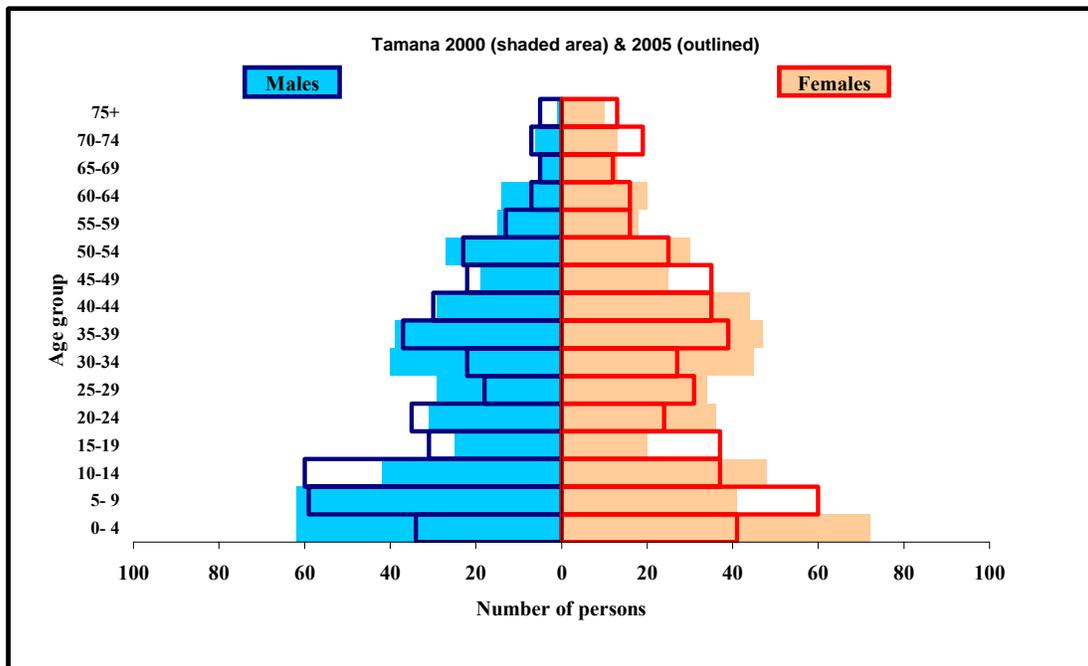
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	-8	-16	-24
Total growth (%)	-1.0	-1.9	-1.4
Average annual growth rate (%)	-0.2	-0.4	-0.3

TAMANA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	62	72	134	0-4	34	41	75
5-9	62	41	103	5-9	59	60	119
10-14	42	48	90	10-14	60	37	97
15-19	25	20	45	15-19	31	37	68
20-24	31	36	67	20-24	35	24	59
25-29	29	34	63	25-29	18	31	49
30-34	40	45	85	30-34	22	27	49
35-39	39	47	86	35-39	37	39	76
40-44	29	44	73	40-44	30	35	65
45-49	19	25	44	45-49	22	35	57
50-54	27	30	57	50-54	23	25	48
55-59	15	18	33	55-59	13	16	29
60-64	14	20	34	60-64	7	16	23
65-69	5	13	18	65-69	5	12	17
70-74	6	13	19	70-74	7	19	26
75+	1	10	11	75+	5	13	18
Total	446	516	962	Total	408	467	875

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	166	161	327	0-14	153	138	291
15-24	56	56	112	15-24	66	61	127
15-59	254	299	553	15-59	231	269	500
15-64	268	319	587	15-64	238	285	523
60+	26	56	82	60+	24	60	84
65+	12	36	48	65+	17	44	61

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	37	31	34	0-14	38	30	33
15-24	13	11	12	15-24	16	13	15
15-59	57	58	57	15-59	57	58	57
15-64	60	62	61	15-64	58	61	60
60+	6	11	9	60+	6	13	10
65+	3	7	5	65+	4	9	7

Age dependency ratio

2000		2005	
15-59	74	15-59	75
15-64	64	15-64	67

Sex ratio (males per 100 females)

2000	2005
86	87

Median age (years)

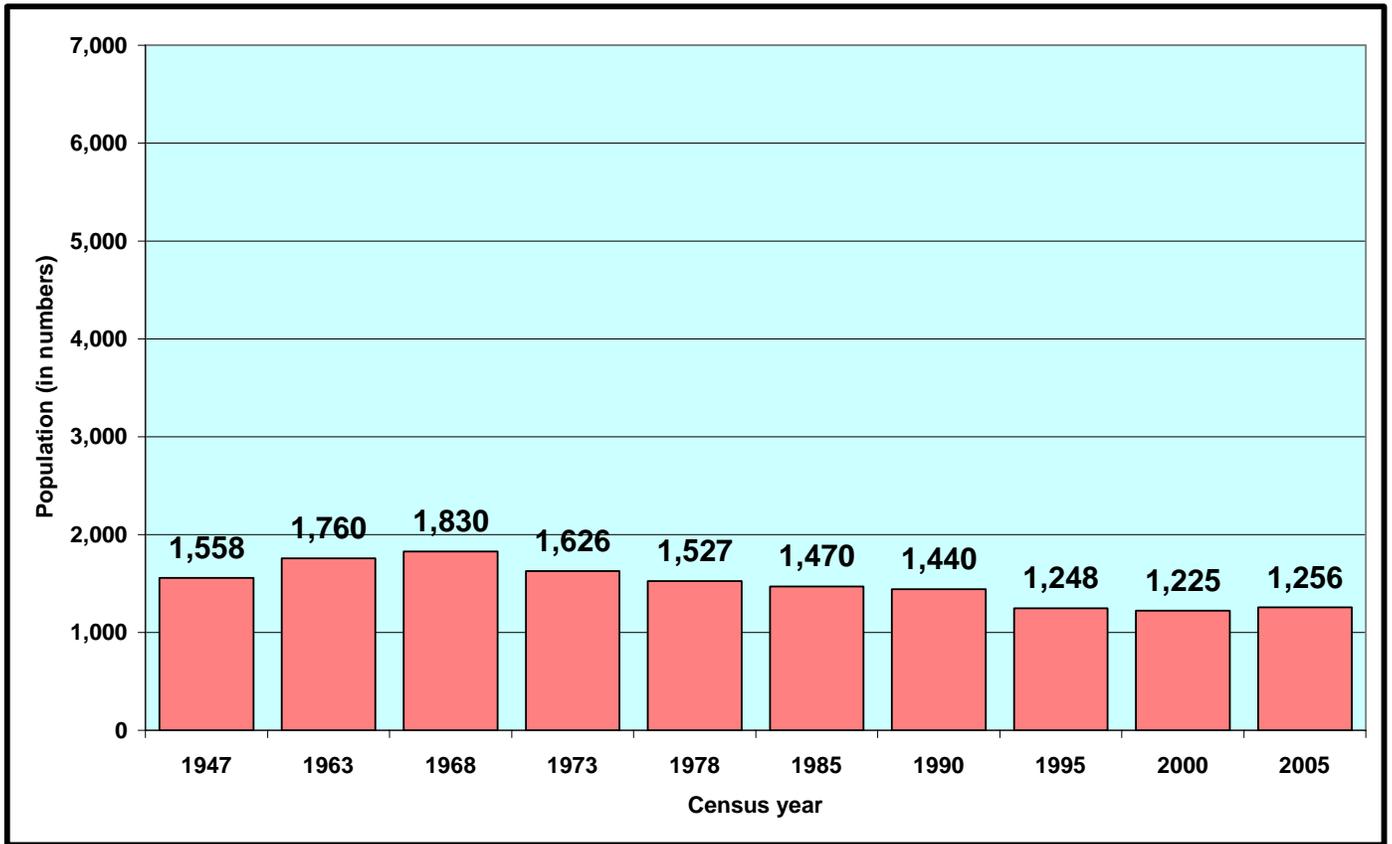
2000				2005			
	Males	Females	Total		Males	Females	Total
	25.3	30.8	28.4		22.9	30.7	27.0

Population growth

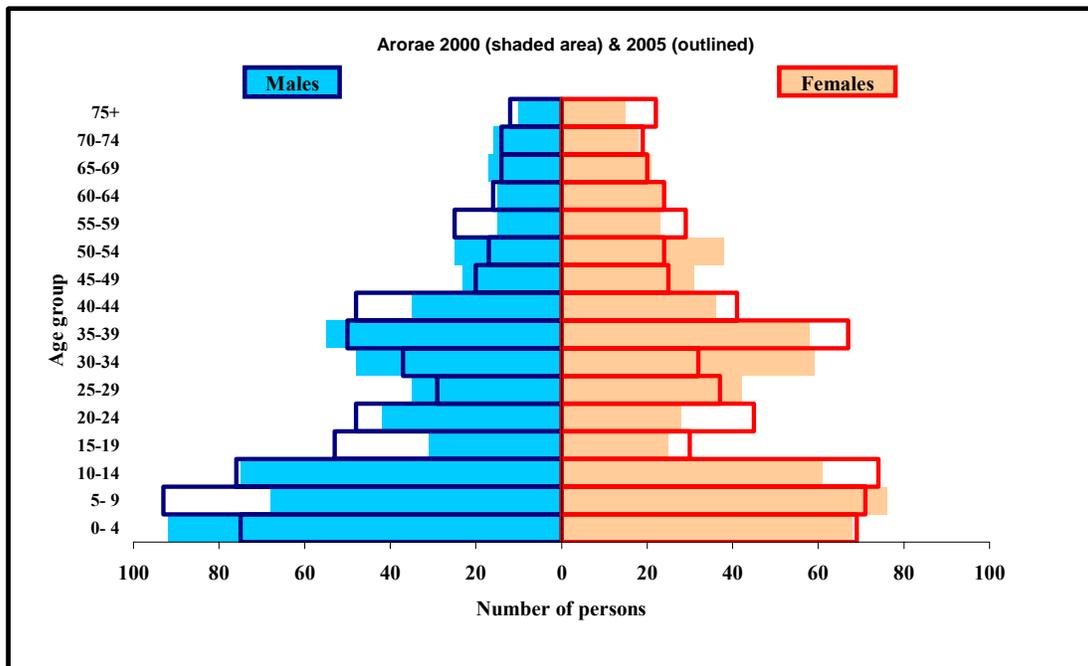
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	-38	-49	-87
Total growth (%)	-8.5	-9.5	-9.0
Average annual growth rate (%)	-1.8	-2.0	-1.9

ARORAE

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	92	68	160	0-4	75	69	144
5-9	68	76	144	5-9	93	71	164
10-14	75	61	136	10-14	76	74	150
15-19	31	25	56	15-19	53	30	83
20-24	42	28	70	20-24	48	45	93
25-29	35	42	77	25-29	29	37	66
30-34	48	59	107	30-34	37	32	69
35-39	55	58	113	35-39	50	67	117
40-44	35	36	71	40-44	48	41	89
45-49	23	31	54	45-49	20	25	45
50-54	25	38	63	50-54	17	24	41
55-59	15	23	38	55-59	25	29	54
60-64	15	24	39	60-64	16	24	40
65-69	17	21	38	65-69	14	20	34
70-74	16	18	34	70-74	14	19	33
75+	10	15	25	75+	12	22	34
Total	602	623	1,225	Total	627	629	1,256

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	235	205	440	0-14	244	214	458
15-24	73	53	126	15-24	101	75	176
15-59	309	340	649	15-59	327	330	657
15-64	324	364	688	15-64	343	354	697
60+	58	78	136	60+	56	85	141
65+	43	54	97	65+	40	61	101

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	39	33	36	0-14	39	34	36
15-24	12	9	10	15-24	16	12	14
15-59	51	55	53	15-59	52	52	52
15-64	54	58	56	15-64	55	56	55
60+	10	13	11	60+	9	14	11
65+	7	9	8	65+	6	10	8

Age dependency ratio

2000		2005	
15-59	89	15-59	91
15-64	78	15-64	80

Sex ratio (males per 100 females)

2000	2005
97	100

Median age (years)

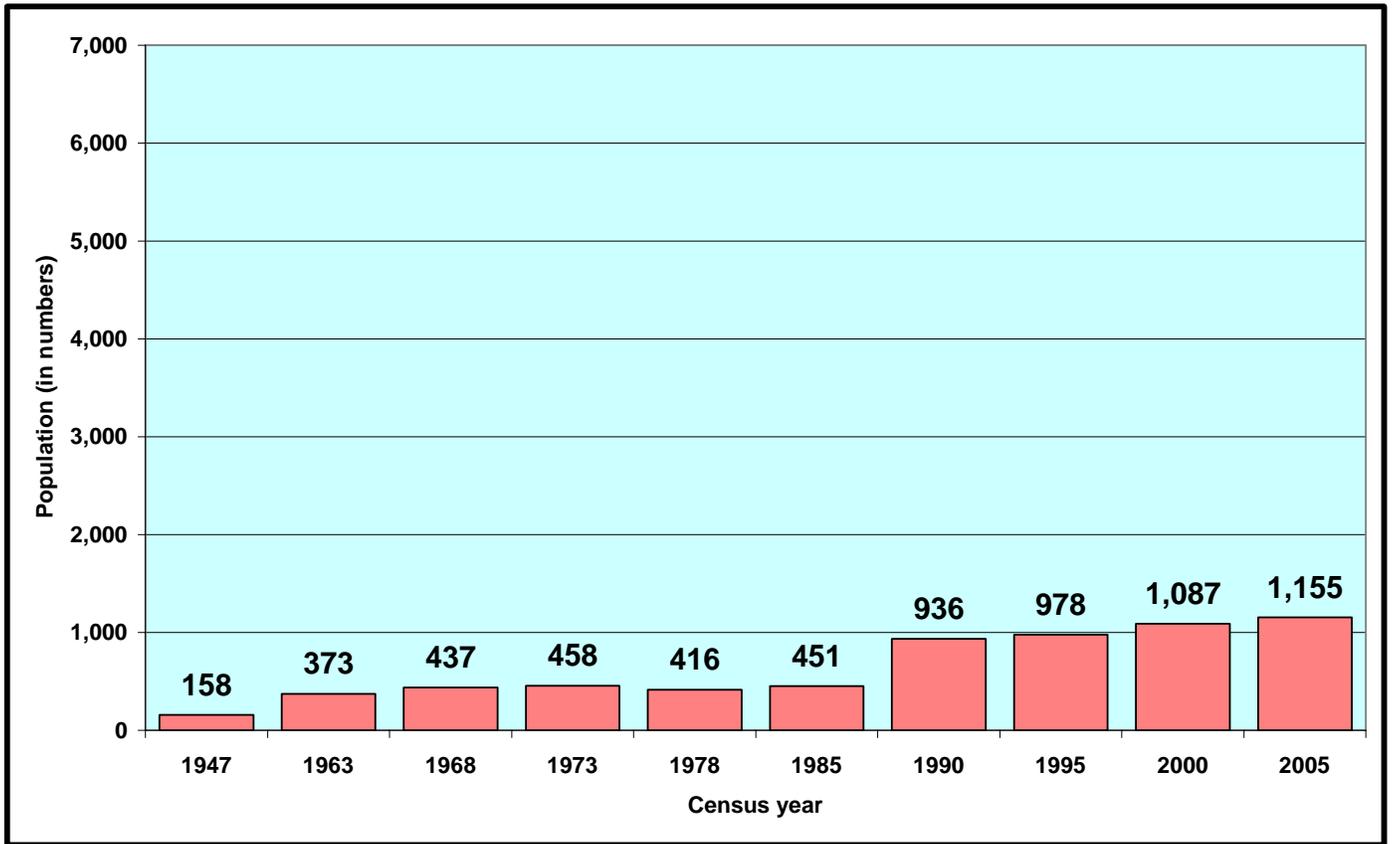
2000				2005			
	Males	Females	Total		Males	Females	Total
	24.2	31.0	28.1		21.8	28.5	24.7

Population growth

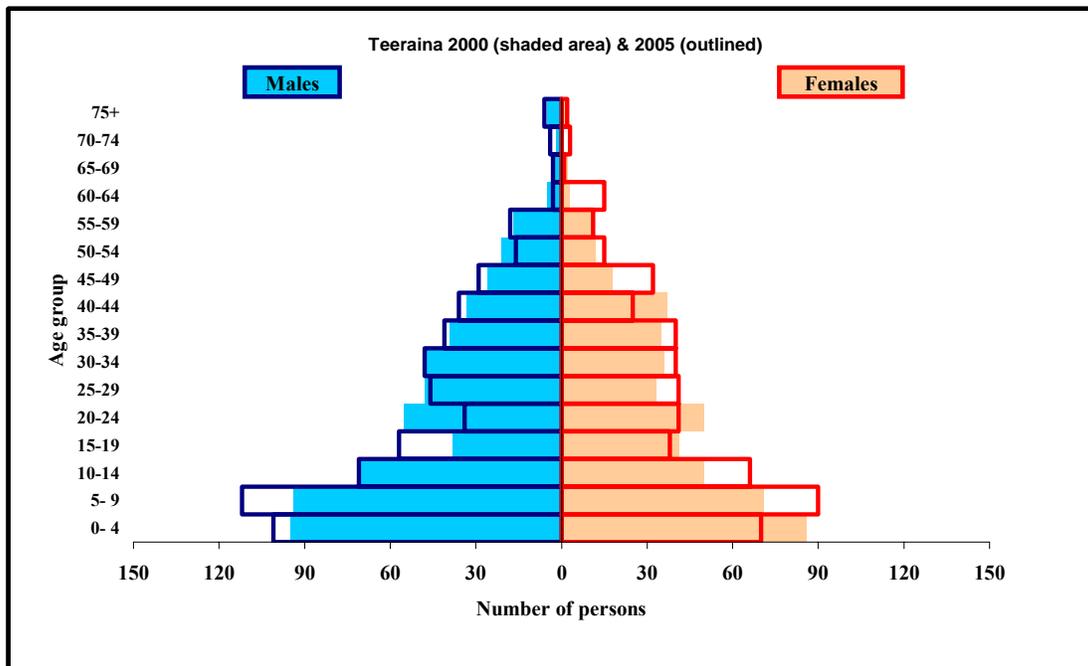
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	25	6	31
Total growth (%)	4.2	1.0	2.5
Average annual growth rate (%)	0.8	0.2	0.5

TEERAINA

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	95	86	181	0-4	101	70	171
5-9	94	71	165	5-9	112	90	202
10-14	71	50	121	10-14	71	66	137
15-19	38	41	79	15-19	57	38	95
20-24	55	50	105	20-24	34	41	75
25-29	48	33	81	25-29	46	41	87
30-34	48	36	84	30-34	48	40	88
35-39	39	35	74	35-39	41	40	81
40-44	33	37	70	40-44	36	25	61
45-49	26	18	44	45-49	29	32	61
50-54	21	12	33	50-54	16	15	31
55-59	17	11	28	55-59	18	11	29
60-64	5	3	8	60-64	3	15	18
65-69	3	2	5	65-69	3	1	4
70-74	2	0	2	70-74	4	3	7
75+	5	2	7	75+	6	2	8
Total	600	487	1,087	Total	625	530	1,155

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	260	207	467	0-14	284	226	510
15-24	93	91	184	15-24	91	79	170
15-59	325	273	598	15-59	325	283	608
15-64	330	276	606	15-64	328	298	626
60+	15	7	22	60+	16	21	37
65+	10	4	14	65+	13	6	19

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	43	43	43	0-14	45	43	44
15-24	16	19	17	15-24	15	15	15
15-59	54	56	55	15-59	52	53	53
15-64	55	57	56	15-64	52	56	54
60+	3	1	2	60+	3	4	3
65+	2	1	1	65+	2	1	2

Age dependency ratio

2000		2005	
15-59	82	15-59	90
15-64	79	15-64	85

Sex ratio (males per 100 females)

2000	2005
123	118

Median age (years)

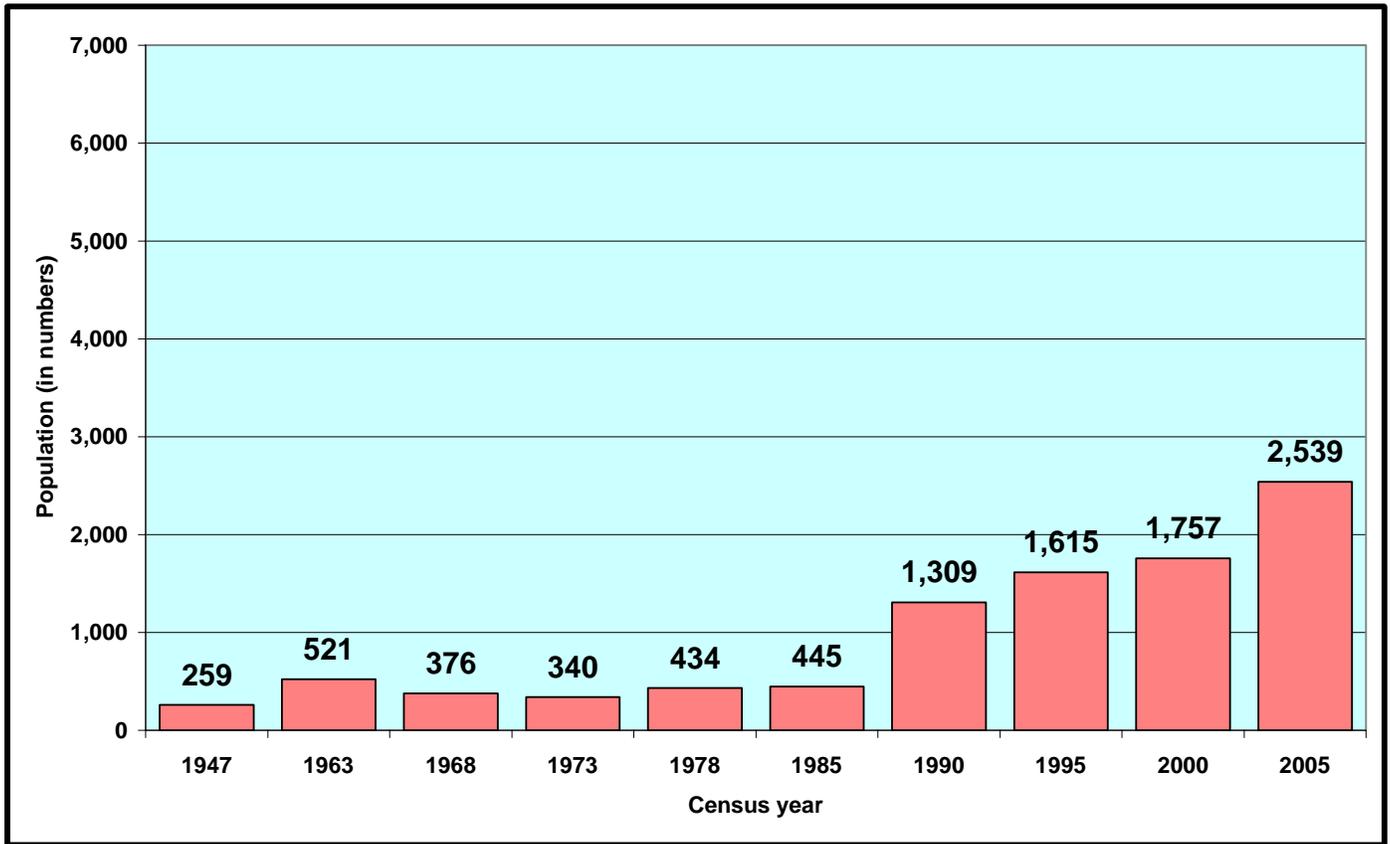
2000				2005			
	Males	Females	Total		Males	Females	Total
	20.2	19.5	19.9		17.5	20.2	18.6

Population growth

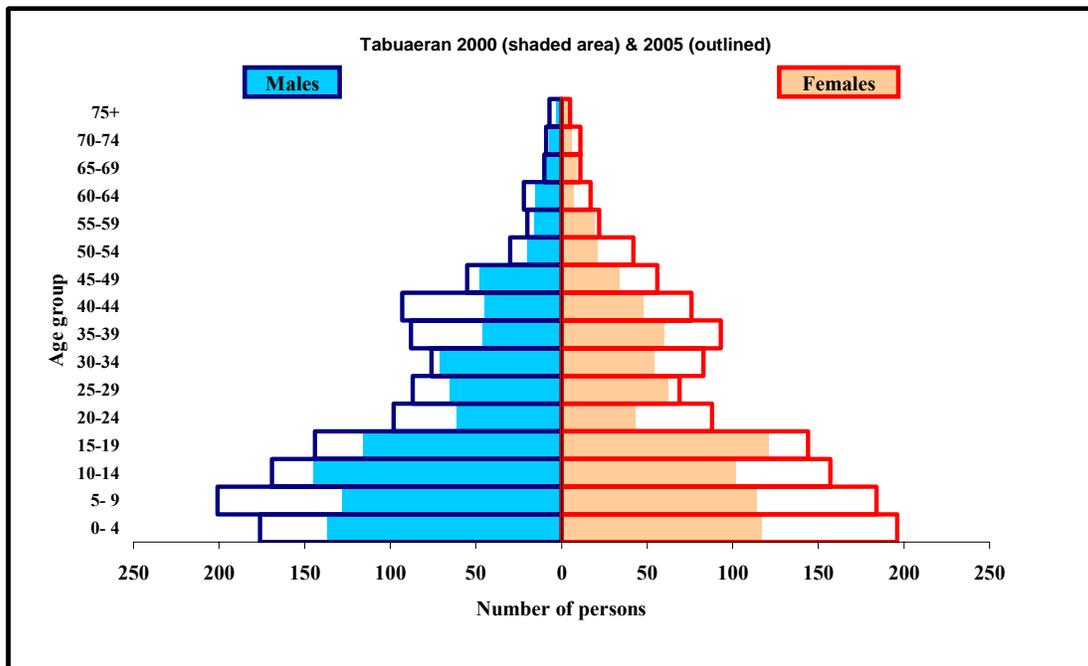
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	25	43	68
Total growth (%)	4.2	8.8	6.3
Average annual growth rate (%)	0.8	1.7	1.2

TABUAERAN

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	137	117	254	0-4	176	196	372
5-9	128	114	242	5-9	201	184	385
10-14	145	102	247	10-14	169	157	326
15-19	116	121	237	15-19	144	144	288
20-24	61	43	104	20-24	98	88	186
25-29	65	62	127	25-29	87	69	156
30-34	71	54	125	30-34	76	83	159
35-39	46	60	106	35-39	88	93	181
40-44	45	48	93	40-44	93	76	169
45-49	48	34	82	45-49	55	56	111
50-54	20	21	41	50-54	30	42	72
55-59	16	19	35	55-59	20	22	42
60-64	15	7	22	60-64	22	17	39
65-69	11	9	20	65-69	10	11	21
70-74	7	6	13	70-74	9	11	20
75+	3	6	9	75+	7	5	12
Total	934	823	1,757	Total	1,285	1,254	2,539

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	410	333	743	0-14	546	537	1,083
15-24	177	164	341	15-24	242	232	474
15-59	488	462	950	15-59	691	673	1,364
15-64	503	469	972	15-64	713	690	1,403
60+	36	28	64	60+	48	44	92
65+	21	21	42	65+	26	27	53

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	44	40	42	0-14	42	43	43
15-24	19	20	19	15-24	19	19	19
15-59	52	56	54	15-59	54	54	54
15-64	54	57	55	15-64	55	55	55
60+	4	3	4	60+	4	4	4
65+	2	3	2	65+	2	2	2

Age dependency ratio

2000		2005	
15-59	85	15-59	86
15-64	81	15-64	81

Sex ratio (males per 100 females)

2000	2005
113	102

Median age (years)

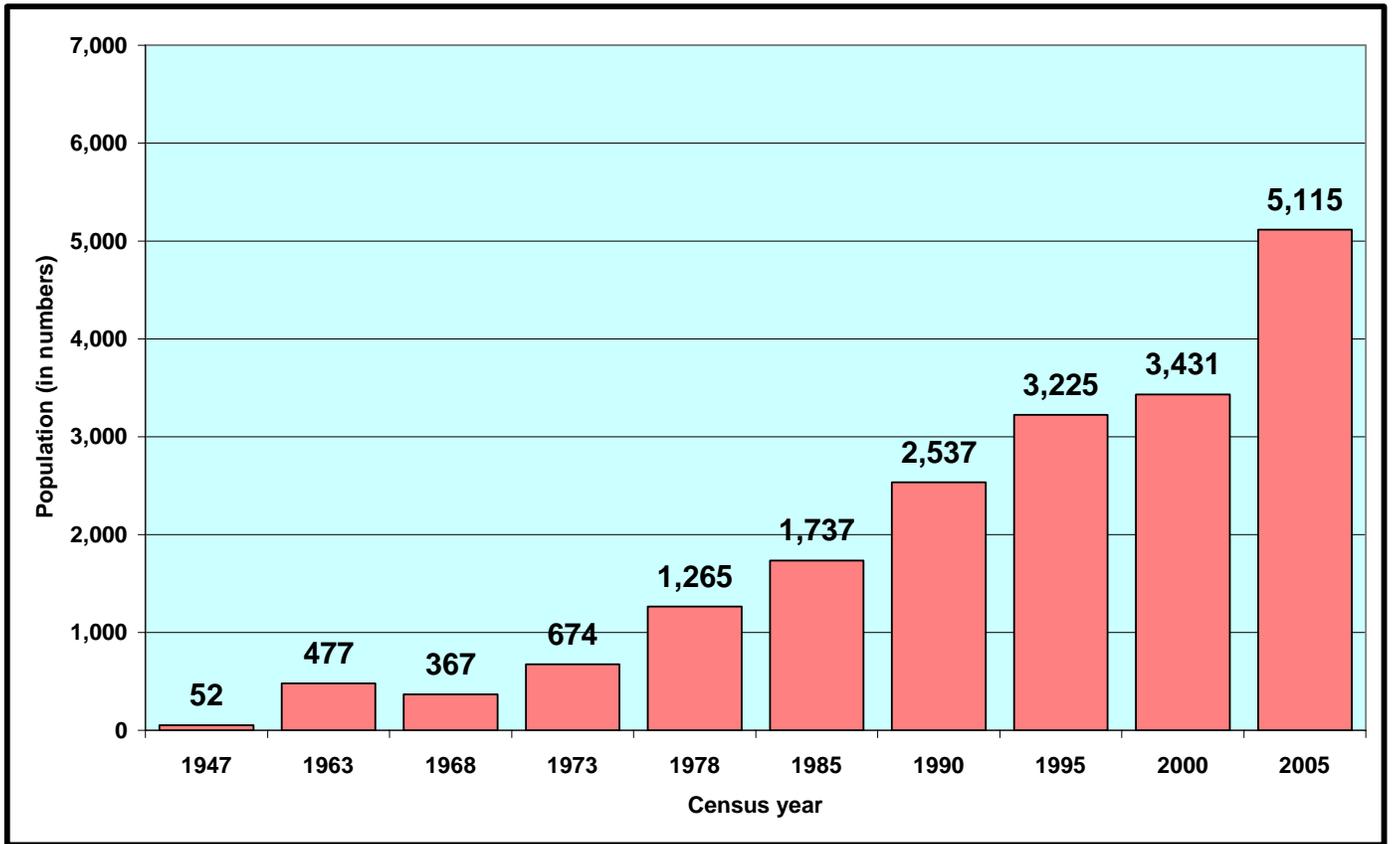
2000				2005			
	Males	Females	Total		Males	Females	Total
	17.5	18.3	17.9		18.4	18.1	18.2

Population growth

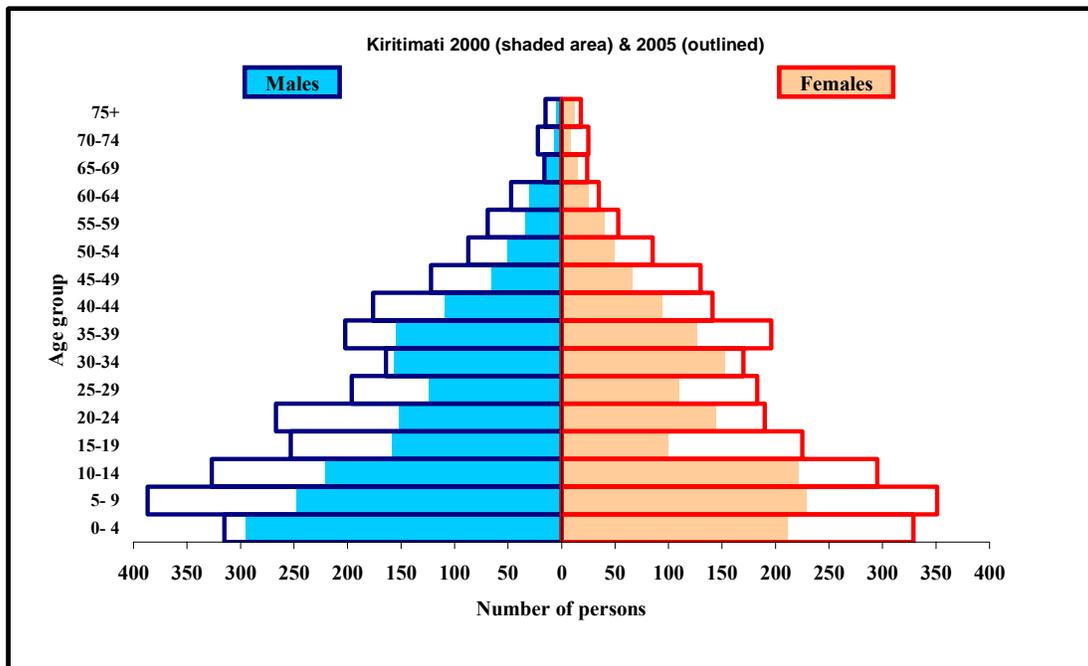
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	351	431	782
Total growth (%)	37.6	52.4	44.5
Average annual growth rate (%)	6.4	8.4	7.4

KIRITIMATI

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	295	211	506	0-4	315	329	644
5-9	248	229	477	5-9	387	351	738
10-14	221	221	442	10-14	327	295	622
15-19	158	100	258	15-19	253	225	478
20-24	152	144	296	20-24	267	190	457
25-29	124	110	234	25-29	196	183	379
30-34	157	153	310	30-34	164	170	334
35-39	155	127	282	35-39	202	196	398
40-44	109	94	203	40-44	176	141	317
45-49	65	66	131	45-49	122	130	252
50-54	50	49	99	50-54	87	85	172
55-59	34	40	74	55-59	69	53	122
60-64	30	25	55	60-64	47	35	82
65-69	16	15	31	65-69	16	24	40
70-74	7	9	16	70-74	22	25	47
75+	5	12	17	75+	15	18	33
Total	1,826	1,605	3,431	Total	2,665	2,450	5,115

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	764	661	1,425	0-14	1,029	975	2,004
15-24	310	244	554	15-24	520	415	935
15-59	1,004	883	1,887	15-59	1,536	1,373	2,909
15-64	1,034	908	1,942	15-64	1,583	1,408	2,991
60+	58	61	119	60+	100	102	202
65+	28	36	64	65+	53	67	120

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	42	41	42	0-14	39	40	39
15-24	17	15	16	15-24	20	17	18
15-59	55	55	55	15-59	58	56	57
15-64	57	57	57	15-64	59	57	58
60+	3	4	3	60+	4	4	4
65+	2	2	2	65+	2	3	2

Age dependency ratio

2000		2005	
15-59	82	15-59	76
15-64	77	15-64	71

Sex ratio (males per 100 females)

2000	2005
114	109

Median age (years)

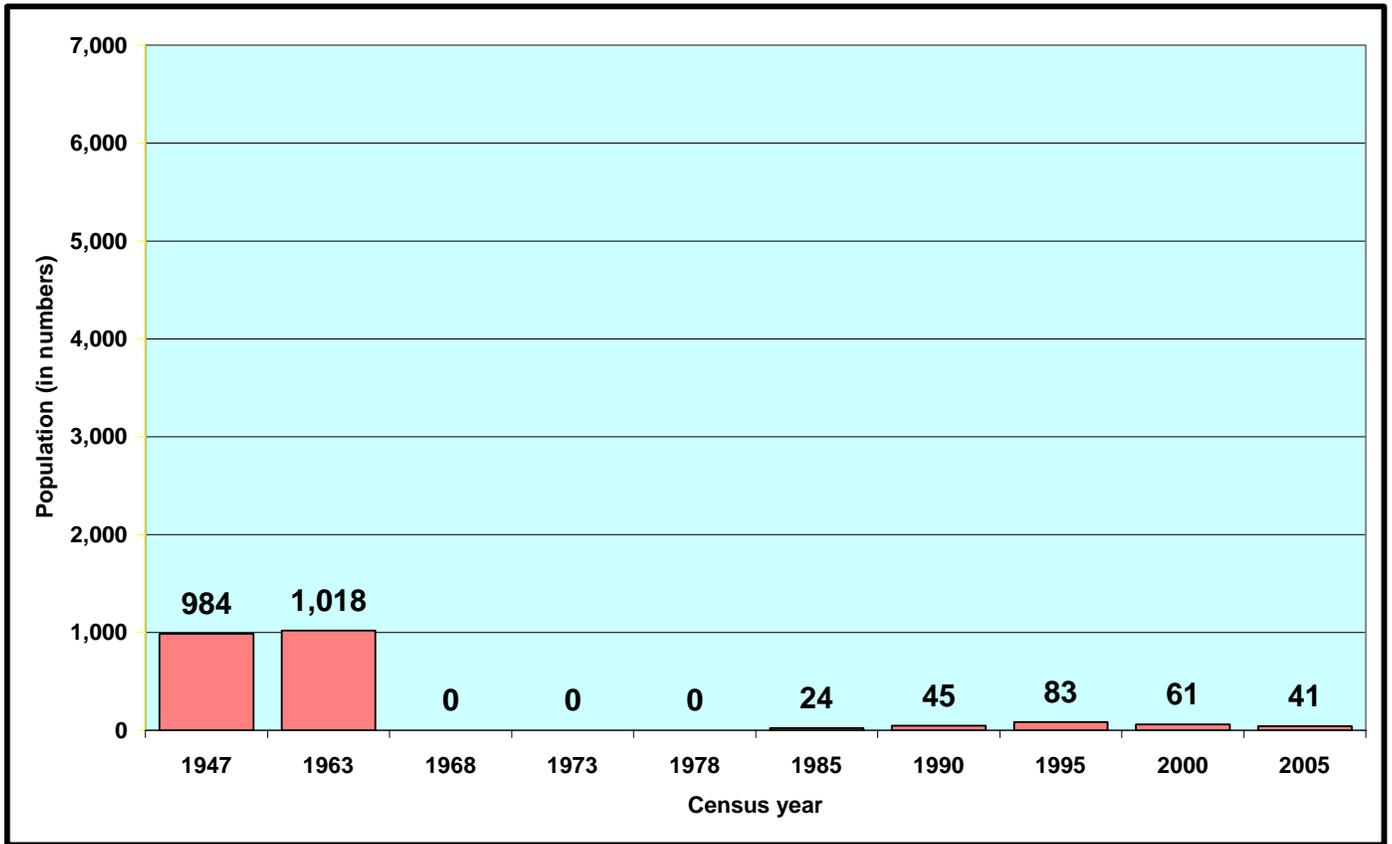
2000				2005			
	Males	Females	Total		Males	Females	Total
	19.7	21.5	20.6		21.0	20.7	20.8

Population growth

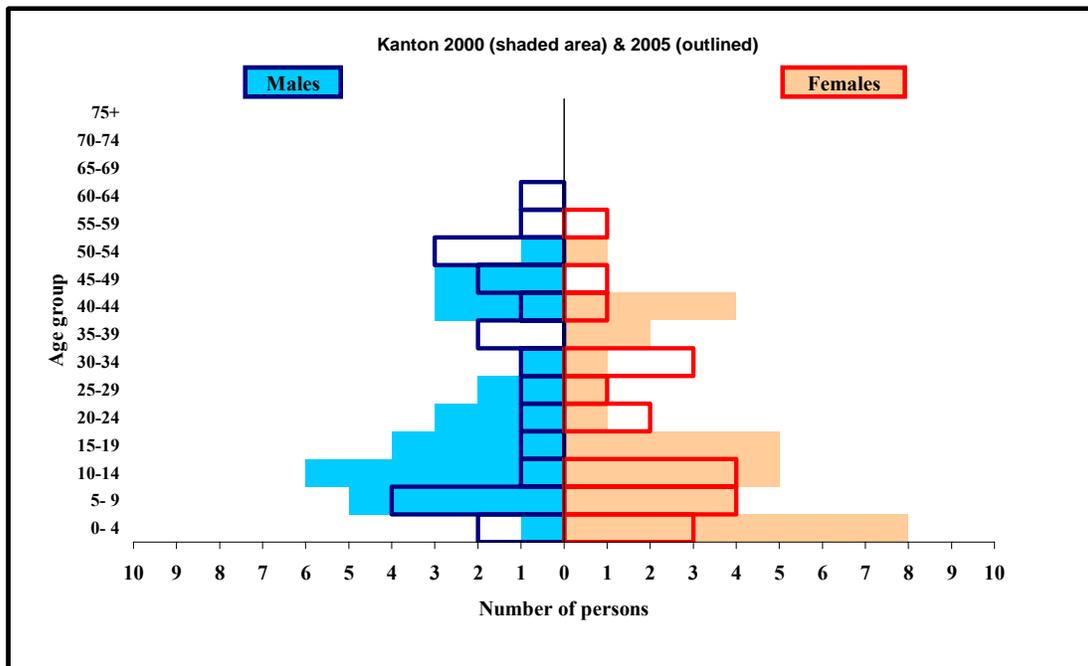
	2000-2005		
	Males	Females	Total
Total growth (in numbers)	839	845	1,684
Total growth (%)	45.9	52.6	49.1
Average annual growth rate (%)	7.6	8.5	8.0

KANTON

Population trend: 1947-2005



Population pyramid by 5-year age group and sex, 2000 and 2005



Population by 5-year age groups and sex

2000				2005			
Age	Males	Females	Total	Age	Males	Females	Total
0-4	1	8	9	0-4	2	3	5
5-9	5	4	9	5-9	4	4	8
10-14	6	5	11	10-14	1	4	5
15-19	4	5	9	15-19	1	0	1
20-24	3	1	4	20-24	1	2	3
25-29	2	1	3	25-29	1	1	2
30-34	1	1	2	30-34	1	3	4
35-39	0	2	2	35-39	2	0	2
40-44	3	4	7	40-44	1	1	2
45-49	3	0	3	45-49	2	1	3
50-54	1	1	2	50-54	3	0	3
55-59	0	0	0	55-59	1	1	2
60-64	0	0	0	60-64	1	0	1
65-69	0	0	0	65-69	0	0	0
70-74	0	0	0	70-74	0	0	0
75+	0	0	0	75+	0	0	0
Total	29	32	61	Total	21	20	41

Population by broad age groups (in numbers)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	12	17	29	0-14	7	11	18
15-24	7	6	13	15-24	2	2	4
15-59	17	15	32	15-59	13	9	22
15-64	17	15	32	15-64	14	9	23
60+	0	0	0	60+	1	0	1
65+	0	0	0	65+	0	0	0

Population by broad age groups (in percentages)

2000				2005			
	Males	Females	Total		Males	Females	Total
0-14	41	53	48	0-14	33	55	44
15-24	24	19	21	15-24	10	10	10
15-59	59	47	52	15-59	62	45	54
15-64	59	47	52	15-64	67	45	56
60+	0	0	0	60+	5	0	2
65+	0	0	0	65+	0	0	0

Age dependency ratio

2000		2005	
15-59	91	15-59	86
15-64	91	15-64	78

Sex ratio (males per 100 females)

2000	2005
91	105

Median age (years)

2000				2005			
	Males	Females	Total		Males	Females	Total
	18.8	14.5	16.1		35.0	14.4	23.3

Population growth

2000-2005			
	Males	Females	Total
Total growth (in numbers)	-8	-12	-20
Total growth (%)	-27.6	-37.5	-32.8
Average annual growth rate (%)	-6.5	-9.4	-7.9