Solomon Islands Government

## 2009 POPULATION \＆HOUSING CENSUS

## NATIONAL REPORT <br> （Volume 2）



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## PREFACE

This report provides the basic analysis of the 2009 Population and Housing Census at the national level. The report complements the Report of the 2009 Population and Housing Census - Basic Tables and Census Description (Volume 1) and thus forms the aggregate level analysis for the country. The set of tables presented are consistent with United Nations Principles and Recommendations for Population and Housing Censuses and thus ensures a standard of comparability with the previous censuses.

In the census history of the Solomon Islands, the 2009 Census of Population and Housing is the fourth full national census completed in the country following from the 1976 Census. Further information on the history of the censuses is discussed in the Volume 1 report.

This report basically provides an analysis about the population of the country and its social, demographic and housing characteristics. There are 6 chapters focusing on various topics such as: population profile and change, demographic components, social characteristics, household and housing, population projections, and implications of demographic trends. The data is referenced to the midnight of 22nd of November 2009, the census date.

The report is a timely initiative for the National Statistical Office (NSO) within the Ministry of Finance and Treasury (MOFT) to continue to meet its mandate as the official government agency responsible for implementing key national statistical projects (e.g., census), collecting relevant data from such projects, analysing and disseminating the results for policy and planning, decision making and public consumption. The information and indicators from this analysis also responds to the growing demand for data and statistics. The information herein is highly relevant for the monitoring and evaluation of the country's National Development Strategy (NDS) 2011-2020, the Millennium Development Goals (MDGs) and other sector policies and programs as well as in assessing the current and future socio-economic conditions of the country.

The contributions of many people and organizations in Solomon Islands towards the successful accomplishment of the 2009 Population and Housing Census ought to be acknowledged. These includes the Government of Solomon Islands through the former and current Ministers of Finance and Treasury (MOFT), and the Permanent Secretary for MOFT, Mr. Shadrach Fanega, under whose ministerial authority the 2009 Population and Housing Census for the Solomon Islands was undertaken; Mr. Martin Butterfield for his initial contribution on the strategic census planning and management; the Chairperson of the Steering Committee, and the former Acting Government Statistician (late) Mr. Nick Gagahe for his leadership and coordination of the Committee; the Chairperson of the Census Population Management Committee (CPMC), the Under Secretary for Finance and Treasury Ms. Elizabeth Kausimae for her leadership and coordination of the Committee; and to all the members of the Committee, for their valuable contributions in ensuring the final conclusion of the census operations.

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Douglas Kimi
Government Statistician

## Contents

SUMMARY OF MAIN INDICATORS ..... xxi
EXECUTIVE SUMMARY ..... xxvi

1. INTRODUCTION .....
1.1 Report: purpose and structure ..... 1
1.2 Country profile ..... 1
2. POPULATION PROFILE AND CHANGE ..... 4
2.1 Introduction ..... 4
2.2 Historical background ..... 4
2.3 Population size and trend ..... 6
2.4 Population distribution .....  9
2.4.1 Population by province .....  9
2.4.2 Population by urban-rural residence and urbanization ..... 11
2.5 Population density ..... 20
2.6 Population structure ..... 22
3. DEMOGRAPHIC COMPONENTS ..... 34
3.1 Fertility ..... 34
3.1.1 National estimates ..... 34
3.1.2 Sub national estimates ..... 43
3.2 Mortality ..... 47
3.2.1 National level estimates ..... 47
3.2.1.1 Household deaths ..... 47
3.2.1.2 Maternal mortality ..... 49
3.2.1.3 Child mortality ..... 51
3.2.1.4 Adult mortality ..... 57
3.2.1.5 Complete life table ..... 62
3.2.2 Sub national estimates ..... 67
3.3 International migration. ..... 73
4. SOCIAL CHARACTERISTICS ..... 75
4.1 Marital status ..... 75
4.2 Religion ..... 81
4.3 Ethnic origin ..... 83
4.4 Disability ..... 84
4.5 Educational characteristics ..... 90
4.5.1 School enrollment ..... 90
4.5.2 Educational attainment. ..... 97
4.5.3 Literacy and language ability ..... 99
4.5.3.1 Literacy ..... 99
4.5.3.2 Language ability ..... 102
5. HOUSEHOLD AND HOUSING ..... 107
5.1 Introduction ..... 107
5.2 Number and size of households ..... 108
5.3 Household Characteristics ..... 112
5.3.1 Household composition ..... 112
5.3.2 Household income ..... 113
5.3.2.1 Main household income ..... 113
5.3.2.2 Remittances ..... 114
5.4. Agricultural cash crop, livestock and fisheries activities. ..... 117
5.4.1 Agricultural activities ..... 118
5.4.2 Livestock ..... 123
5.4.3 Fishing activities ..... 126
5.4.3.1 Fish consumption ..... 127
5.5 Housing ..... 130
5.5.1 Introduction ..... 130
5.5.2 Housing and land tenure ..... 131
5.5.3 Type of living quarters ..... 133
5.5.4 Number of rooms ..... 134
5.5.5 Construction material used for dwellings ..... 135
5.5.6 Water source for drinking and washing ..... 138
5.5.6.1 Introduction ..... 138
5.5.7 Main energy source for lighting and cooking ..... 140
5.5.8 Main toilet facility. ..... 141
5.5.9 Means of waste disposal ..... 142
5.6 Amenities and capital goods ..... 144
5.6.1 Means of communication. ..... 144
5.6.2 Household utility appliances ..... 146
5.6.3 Entertainment and communications appliances ..... 148
5.6.4 Means of transportation ..... 151
5.6.5 Bednets ..... 154
6. POPULATION PROJECTIONS ..... 156
6.1 National projections ..... 157
6.2 Sub-national projections ..... 172
7. IMPLICATIONS OF DEMOGRAPHIC TRENDS ..... 192
7.1. Population dynamics ..... 192
7.1.1 Growth rate ..... 192
7.1.2 Fertility ..... 192
7.1.3 Mortality ..... 194
7.1.4 Internal Migration ..... 195
7.1.5 International migration ..... 196
7.1.6 Population projections ..... 197
7.2 Crosscutting issues ..... 198
7.2.1 Vital statistics ..... 198
7.2.2 The environment ..... 199
7.2.3 Households ..... 199
7.2.4 Health services and well-being ..... 201
7.2.5 Disabilities ..... 202
7.2.6 Education ..... 203
7.2.7 Economic activity and labour market ..... 204
7.2.8 Communication and internet use ..... 205
7.2.9 Good governance ..... 206
GLOSSARY ..... 207
APPENDICES ..... 210

## LIST OF TABLES

Page
Table 1: Population size and growth rate by place of residence, Solomon Islands: 1986, 1999 and 2009
Table 2: Population size by urban localities and province, Solomon Islands: 1986-2009 ..... 17
Table 3: Selected demographic and socio-economic indicators by urban-rural residence, Solomon Islands: 2009
Table 4: Population density (number of people $/ \mathrm{km}^{2}$ ) by province, Solomon Islands: 1986, 1999 and 2009
Table 5: Population distribution by broad age group, dependency ratio, median age, and sex ratio, Solomon Islands: 1999 and 2009
Table 6: Female population aged 15 and older by number of children ever born alive, ..... 34 Solomon Islands: 2009
Table 7: Reported number of births during the one-year period before the census (23 ..... 36
November 2008-22 November 2009) by age group of women, Solomon Islands: 2009
Table 8: Comparison of TFR estimates derived by various methods, Solomon Islands: ..... 40
1999 and 2009
Table 9: Estimated age-specific fertility rate (ASFR), annual number of births, total ..... 42 fertility rate (TFR), and mean age at childbearing (MAC), Solomon Islands: 2009
Table 10: Number of deaths of household residents by age and sex during the 12 months ..... 48 preceding the census and whether death was pregnancy related, Solomon Islands: 2009
Table 11: National data on maternal mortality by women's age group, Solomon Islands: ..... 50 ..... 2009
Table 12: Female population aged 15 and older by number of children ever born, number of ..... 52 children dead, and number of children still alive, Solomon Islands: 2009
Table 13: Female population aged 15 and older by proportion of children ever born and still ..... 53 alive, and proportion now dead, Solomon Islands: 2009
Table 14: Child mortality indicators, Solomon Islands: 2009 ..... 55
Table 15: Population by 5 year age group and whether biological father or mother is still ..... 58 alive, Solomon Islands: 2009
Table 16: Life expectancy at age 20 (in years), based on the orphanhood method, ..... 59
MORTPAK's procedure ORPHAN, Solomon Islands: 1999 and 2009
Table 17: Population 15 years and older by sex and widowed, Solomon Islands: 2009 ..... 60
Table 18: Child and adult mortality indicators used to calculate complete life table, ..... 63 Solomon Islands: 2009
Table 19: Abridged life table for Solomon Islands males: 2009 ..... 64
Table 20: Abridged life table for Solomon Islands females: 2009 ..... 64
Table 21: Estimated number of deaths, and crude death rates (CDR) based on life table's ..... 66 age-specific-death rates $[\mathrm{m}(\mathrm{x})$ ] and enumerated population size, Solomon Islands: 2009
Table 22: Life expectancy at birth in years (e0), Solomon Islands: 1999 and 2009 ..... 67
Table 23: Singulate mean age at marriage (SMAM) and percentage married at young ages ..... 76 by sex, Solomon Islands: 1986, 1999, and 2009
Table 24: Population by religious affiliation, Solomon Islands: 1989, 1999 and 2009 ..... 81
Table 25: Population by ethnic origin, Solomon Islands: 2009 ..... 83
Table 26: Population reporting a disability regardless of the severity of the disability, ..... 85 Solomon Islands: 2009
Table 27: Population reporting a severe disability, Solomon Islands: 2009 ..... 85
Table 28: Population 5 years and older by sex and enrolled in school by school level ..... 90 attending, Solomon Islands: 2009
Table 29: Enrolled population by age and school level enrolled, Solomon Islands: 2009 ..... 96
Table 30: Language ability by type of language, Solomon Islands: 2009 ..... 102
Table 31: Number of households by household type and location, Solomon Islands: 2009 ..... 108
Table 32: Population in private households, number of private households and average ..... 109
household size, by place of residence, Solomon Islands: 1999 and 2009
Table 33: Number of private households by household size and people per household (\%), ..... 110 Solomon Islands: 2009
Table 34: Population by household composition (relationship to head of household), ..... 112
Solomon Islands: 2009
Table 35: Number of households receiving remittances from overseas by country of sender, ..... 116 Solomon Islands: 2009
Table 36: Proportion of private households by place of residence and agricultural activity ..... 119 (\%), Solomon Islands: 2009
Table 37: Total number of livestock, Solomon Islands: 2009 ..... 124
Table 38: Average number of rooms per dwelling by place of residence, Solomon Islands: ..... 135 ..... 2009
Table 39: Number of items of cooking appliances by place of residence, Solomon Islands: ..... 147 2009
Table 40: Number of items of entertainment/communications appliances by place of ..... 149 residence, Solomon Islands: 2009
Table 41: Number of transport items by place of residence, Solomon Islands: 2009 ..... 152
Table 42: Number of private households by place of residence and availability of bed nets, ..... 155 Solomon Islands: 2009
Table 43: Table 42: Comparison of the projected population with the enumerated ..... 158 population, Solomon Islands 2009
Table 44: Base population for projections, Solomon Islands: 1 July 2009 ..... 160
Table 45: Population size according to 4 projection variants, Solomon Islands: 2010-2050 ..... 164
Table 46: Population structure and indicators according to three different projection ..... 167 scenarios, Solomon Islands: 2010, 2030 and 2050
Table 47: Demographic components for provincial projections ..... 175

## LIST OF FIGURES

Page
Fig. 1: Total population size, Solomon Islands: 1931-2009 ..... 7
Fig. 2: Average annual population growth rate (\%), Solomon Islands: 1931-2009 ..... 8
Fig. 3: Population change, average annual increase in numbers, Solomon Islands: 1931- ..... 8 2009
Fig. 4: Population size by province, Solomon Islands: 2009 ..... 9
Fig. 5: Population trend of provinces, Solomon Islands: 1970-2009 ..... 10
Fig. 6: Average annual population growth rate (\%) by province, Solomon Islands: 1999- ..... 10 2009
Fig. 7: Population distribution by province (\%), Solomon Islands: 2009 ..... 11
Fig. 8: Total Population size by urban and rural residence, Solomon Islands: 1976-2009 ..... 14
Fig. 9: Average annual urban and rural population growth rate, Solomon Islands: 1976- ..... 15 2009
Fig. 10: Population distribution (\%) by urban and rural residence, Solomon Islands: 1976- ..... 15 2009
Fig. 11: Urban population distribution, Solomon Islands: 1986, 1999, and 2009 ..... 18
Fig. 12: Population pyramid by single years, urban population: 2009 ..... 19
Fig. 13: Population pyramid by single years, rural populations: 2009 ..... 19
Fig. 14: Sex ratios by province, Solomon Islands: 2009 ..... 23
Fig. 15: Population pyramid by single years, The Solomon Islands: 2009 ..... 25
Fig. 16: Population pyramid by 5-year age groups, Solomon Islands: 1999 and 2009 ..... 25
Fig. 17: Population pyramid by single years, Choiseul: 2009 ..... 26
Fig. 18: Population pyramid by single years, Western: 2009 ..... 26
Fig. 19: Population pyramid by single years, Isabel: 2009 ..... 27
Fig. 20: Population pyramid by single years, Central: 2009 ..... 27
Fig. 21: Population pyramid by single years, Rennell-Bellona: 2009 ..... 28
Fig. 22: Population pyramid by single years, Guadalcanal: 2009 ..... 28
Fig. 23: Population pyramid by single years, Malaita: 2009 ..... 29
Fig. 24: Population pyramid by single years, Makira-Ulawa: 2009 ..... 29
Fig. 25: Population pyramid by single years, Temotu: 2009 ..... 30
Fig. 26: Population pyramid by single years, Honiara: 2009 ..... 30
Fig. 27: Population by broad age groups (in \%) by province, Solomon Islands: 2009 ..... 32
Fig. 28: Population by median age and province, Solomon Islands: 2009 ..... 32

Fig. 29: Population by age dependency ratio and province, Solomon Islands: 2009
Fig. 30: Female population aged $15-49$ by average number of children ever born alive, Solomon Islands: 1989, 1999, and 2009

Fig. 31: Proportion of children ever born by age of mother and whether living in the same household as their mother, Solomon Islands: 2009

Fig. 32: Reported age-specific-fertility-rates (ASFR), Solomon Islands: 1986, 1999, 2009
Fig. 33: Estimates of TFR based on "own-children method", Solomon Islands: 1957-2009 39
Fig. 34: Relative distribution of ASFRs, Solomon Islands: 1999 and 200942
Fig. 35: TFR by place of residence, Solomon Islands: 200943
Fig. 36: Fertility trend by urban-rural residence, Solomon Islands: 1995-2009 44
Fig. 37: Fertility trend by province, Solomon Islands: 1995-2009 45
Fig. 38: Adolescent fertility rate (number of births per 1000 women aged 15-19 years), 45 Solomon Islands: 2009

Fig. 39: Fertility level (TFR) by educational attainment, Solomon Islands: 200946
Fig. 40: Proportion of children ever born and still alive by sex and by age of mother, 54 Solomon Islands: 2009

Fig. 41: Proportion of children ever born and still alive by age of mother, Solomon
Islands: 1986, 1999 and 2009
Fig. 42: Infant mortality rate (IMR), Solomon Islands: 1961-2009 56
Fig. 43: Proportion of respondent's father or mother still alive, Solomon Islands: 200958
Fig. 44: Proportion of population 15 years and older by sex and widowed, Solomon 61 Islands: 2009

Fig. 45: Proportion of children ever born and still alive by sex and place of residence,
Solomon Islands: 2009
Fig. 46: Proportion of population 60 years and older widowed by sex and place of residence, Solomon Islands: 2009

Fig. 47: Proportion of population with father or mother dead (orphaned) by place of residence, Solomon Islands: 2009

Fig. 48: Infant mortality rate (IMR) by sex and place of residence, Solomon Islands: 2009
Fig. 49: Adult mortality rate (45q15) by sex and place of residence, Solomon Islands:
2009
Fig. 50: Life expectancy at age 20 (e20) by sex and place of residence, Solomon Islands: 2009

Fig. 51: Life expectancy at birth (e0) by sex and place of residence, Solomon Islands: 2009

Fig. 52: Population aged 15 and older by marital status, Solomon Islands: 2009
Fig. 53: Singulate mean age at marriage (SMAM) by sex, Solomon Islands: 1986-2009

Fig. 54: Population married at young ages by sex (\%), Solomon Islands: 1986, 1999, and 2009

Fig. 55: Average age at marriage (SMAM) by sex and province, Solomon Islands: 2009
Fig. 56: Population married at age 15-19 years by sex and province (\%), Solomon Islands: 2009

Fig. 57: Population aged 15 and older by sex and proportion married, Solomon Islands: 2009

Fig. 58: Population aged 15 and older by sex and proportion never married (single), Solomon Islands: 2009

Fig. 59: Figure 59: Population aged 15 and older by sex and proportion widowed, Solomon Islands: 2009

Fig. 60: Population by religious affiliation by province, Solomon Islands: 2009
Fig. 61: Population by ethnic origin and province (\%), Solomon Islands: 2009
Fig. 62: Proportion of the population by sex and place of residence reporting a disability regardless of the severity of the disability, Solomon Islands: 2009

Fig. 63: Proportion of the population by age and sex reporting any disability regardless of 87 the severity of the disability, Solomon Islands: 2009

Fig. 64: Proportion of the population by age and sex reporting difficulties seeing, Solomon Islands: 2009

Fig. 65: Proportion of the population by age and sex reporting difficulties hearing, Solomon Islands: 2009

Fig. 66: Proportion of the population by age and sex reporting difficulties walking, Solomon Islands: 2009

Fig. 67: Proportion of the population by age and sex reporting difficulties remembering or concentrating, Solomon Islands: 2009

Fig. 68: Proportion of the population aged 5-24 years by age and sex enrolled in school (\%), Solomon Islands: 2009

Fig. 69: Proportion of the population aged 5-24 years by age and sex who left school (\%), Solomon Islands: 2009

Fig. 70: Proportion of the population aged 5-24 years by age and sex who have never been to school (\%), Solomon Islands: 2009

Fig. 71: Proportion of the population aged 6-12 years by sex and school attendance status (\%), Solomon Islands: 2009

Fig. 72: Proportion of the population aged 6-15 years by sex and school attendance status (\%), Solomon Islands: 2009

Fig. 73: Proportion of the population aged 15-19 years by sex and school attendance status (\%), Solomon Islands: 2009

Fig. 74: School enrollment rates by sex, Solomon Islands: 1999 and 2009

Fig. 75: Number of people 12 years and older by sex and highest level of education completed, Solomon Islands: 2009

Fig. 76: Population 12 years and older by sex and highest level of education completed
(\%), Solomon Islands: 2009
Fig. 77: Population 15 years and older by sex, place of residence and highest level of education completed, Solomon Islands: 2009

Fig. 78: Literacy rate of the population 5 years and older by sex (\%), Solomon Islands: 2009

Fig. 79: Literacy rate of the population aged 15-24 years by sex and place of residence (\%), Solomon Islands: 2009

Fig. 80: Literacy rate of the population aged 15 years and older by sex and place of101 residence (\%), Solomon Islands: 2009

Fig. 81: English language ability of the population 5 years and older by place of residence
(\%), Solomon Islands: 2009
Fig. 82: English language ability of the population 5 years and older by age and sex (\%),103

Solomon Islands: 2009
Fig. 83: Pidgin language ability of the population 5 years and older by place of residence 104 (\%), Solomon Islands: 2009

Fig. 84: Pidgin language ability of the population 5 years and older by age and sex (\%), Solomon Islands: 2009

Fig. 85: Local language ability of the population 5 years and older by place of residence (\%), Solomon Islands: 2009

Fig. 86: Local language ability of the population 5 years and older by age and sex (\%), 105 Solomon Islands: 2009

Fig. 87: Other language ability of the population 5 years and older by place of residence
(\%), Solomon Islands: 2009
Fig. 88: Other language ability of the population 5 years and older by age and sex (\%),
Solomon Islands: 2009
Fig. 89: Average household size (number of people per household) by place of residence, Solomon Islands: 2009

Fig. 90: Distribution of households and people living in private households by household size (\%), Solomon Islands: 2009

Fig. 91: Proportion of private households by main source of household income and by province (\%), Solomon Islands: 2009

Fig. 92: Proportion of households by remittances received (\%), Solomon Islands: 2009
Fig. 93: Proportion of households receiving remittances by province and by location of sender of remittances (\%), Solomon Islands: 2009

Fig. 94: Proportion of households receiving remittances from overseas by province and by country of sender (\%), Solomon Islands: 2009
Fig. 95: Proportion of private households by place of residence and whether involved in ..... 118 growing crops (\%), Solomon Islands: 2009
Fig. 96: Proportion of private households by place of residence and growing ..... 119 vegetables/food crops (\%), Solomon Islands: 2009
Fig. 97: Proportion of private households by place of residence and growing ..... 120 coconut/copra (\%), Solomon Islands: 2009
Fig. 98: Proportion of private households by place of residence and growing betel nut (\%), ..... 120 Solomon Islands: 2009
Fig. 99: Proportion of private households by place of residence and growing cocoa (\%), ..... 121 Solomon Islands: 2009
Fig.100: Proportion of private households by place of residence and growing tobacco (\%), ..... 121 Solomon Islands: 2009
Fig.101: Proportion of private households by place of residence and growing timber (\%), ..... 122 Solomon Islands: 2009
Fig.102: Proportion of private households by place of residence and growing flowers (\%), ..... 122 Solomon Islands: 2009
Fig.103: Proportion of private households by place of residence and growing other crops ..... 123 (\%), Solomon Islands: 2009
Fig:104: Proportion of private households by place of residence and whether raising any ..... 125 livestock (\%), Solomon Islands: 2009
Fig:105: Proportion of private households by place of residence raising pigs (\%), Solomon ..... 125 Islands: 2009
Fig:106: Proportion of private households by place of residence raising poultry (\%), ..... 126 Solomon Islands: 2009
Fig:107: Proportion of private households by place of residence and marine fishing ..... 128 activities (\%), Solomon Islands: 2009
Fig:108: Proportion of private households by place of residence and frequency of catching ..... 128 fish (\%), Solomon Islands: 2009
Fig:109: Proportion of private households by place of residence and frequency of buying ..... 129 fish (\%), Solomon Islands: 2009
Fig:110: Proportion of the type of fish or shellfish consumed (bought or caught) by private ..... 129 households and place of residence (\%), Solomon Islands: 2009
Fig:111: Proportion of private households by place of residence and housing tenure (\%), ..... 132 Solomon Islands: 2009
Fig:112: Proportion of private households by place of residence and land tenure (\%), ..... 133 Solomon Islands: 2009
Fig:113: Proportion of private households by place of residence and living quarters (\%), ..... 134 Solomon Islands: 2009

Fig:114: Proportion of private households by place of residence and number of rooms (\%), Solomon Islands: 2009

Fig:115: Proportion of private households by place of residence and main type of material used for the walls of dwellings (\%), Solomon Islands: 2009
Fig:116: Proportion of private households by place of residence and main type of material used for the roofs of dwellings (\%), Solomon Islands: 2009

Fig:117: Proportion of private households by place of residence and main type of material used for the floors of dwelling (\%), Solomon Islands: 2009

Fig:118: Proportion of private households by place of residence and main source of drinking water (\%), Solomon Islands: 2009
Fig:119: Proportion of private households by place of residence and main source of washing water (\%), Solomon Islands: 2009

Fig:120: Proportion of private households by place of residence and main source of lighting (\%), Solomon Islands: 2009

Fig:121: Proportion of private households by place of residence and main source for cooking (\%), Solomon Islands: 2009
Fig:122: Proportion of private households by place of residence and main type of toilet facility (\%), Solomon Islands: 2009

Fig:123: Proportion of private households by place of residence and main mode of waste disposal (\%), Solomon Islands: 2009
Fig:124: Proportion of private households by place of residence and availability of a telephone (land-line) (\%), Solomon Islands: 2009

Fig:125: Proportion of private households by place of residence and availability of a mobile phone (\%), Solomon Islands: 2009

Fig:126: Proportion of private households by place of residence and availability of an Internet connection (\%), Solomon Islands: 2009

Fig:127: Proportion of private households by place of residence and availability of a fridge/freezer (\%), Solomon Islands: 2009
Fig:128: Proportion of private households by place of residence and availability of a generator (\%), Solomon Islands: 2009

Fig:129: Proportion of private households by place of residence and availability of a radio (\%), Solomon Islands: 2009
Fig:130: Proportion of private households by place of residence and availability of a TV (\%), Solomon Islands: 2009

Fig:131: Proportion of private households by place of residence and availability of a computer (\%), Solomon Islands: 2009

Fig:132: Proportion of private households by place of residence and availability of a mobile phone (\%), Solomon Islands: 2009

Fig:133: Proportion of private households by place of residence and availability of a car/bus (\%), Solomon Islands: 2009

Fig:134: Proportion of private households by place of residence and availability of a boat
(\%), Solomon Islands: 2009
Fig:135: Proportion of private households by place of residence and availability of a canoe (\%), Solomon Islands: 2009

Fig:136: Proportion of private households by place of residence and availability of an outboard motor (\%), Solomon Islands: 2009

Fig:137: Proportion of private households by place of residence and availability of bednets
(\%), Solomon Islands: 2009
Fig:138: Comparison of the projected male population with the enumerated male population, Solomon Islands 2009

Fig:139: Comparison of the projected female population with the enumerated female population, Solomon Islands 2009
Fig:140: Estimated past levels of fertility, and future fertility assumptions for projections, Solomon Islands: 1999-2054
Fig:141: Estimated past levels of mortality, and future mortality assumptions for projections, Solomon Islands: 1986-2054

Fig:142: Past and future population trends according to 4 projection variants, Solomon Islands: 1970-2050

Fig:143: School age population aged 6-15 years according to high, medium, low and constant population projection scenarios, Solomon Islands: 2009-2050
Fig:144: Population projections by broad age groups according to four scenarios, Solomon Islands: 2015

Fig:145: Population projections by broad age groups according to four scenarios, Solomon Islands: 2030

Fig:146: Population projections by broad age groups according to four scenarios, Solomon
Islands: 2050
Fig:147: Population pyramid, Constant fertility projection, Solomon Islands: 2010 and 2050

Fig:148: Population pyramid, High fertility projection, Solomon Islands: 2010 and 2050
Fig:149: Population pyramid, Medium fertility projection, Solomon Islands: 2010 and 2050

Fig:150: Population pyramid, Low fertility projection, Solomon Islands: 2010 and 2050
Fig:151: Fertility trend by province, Solomon Islands: 2009-2054
Fig:152: Population size by province according to the constant migration variant, Solomon Islands: 2009-2050

Fig:153: Population size by province according to the zero migration variant, Solomon Islands: 2009-2050
Fig:154: Population size by urban-rural areas according to the constant migration variant, ..... 178 Solomon Islands: 2009-2050
Fig:155: Population size by urban-rural areas according to the zero migration variant, ..... 178 Solomon Islands: 2009-2050
Fig:156: Past and projected population size by urban-rural residence in numbers and ..... 179 percentages, Solomon Islands: 1976-2050
Fig:157: Population size according to two different migration variants, Urban areas: 2009- ..... 179 2050
Fig:158: Population size according to two different migration variants, Rural areas: 2009- ..... 180 2050
Fig:159: Population size according to two different migration variants, Choiseul: 2009- ..... 180 2050
Fig:160: Population size according to two different migration variants, Western: 2009- ..... 181 2050
Fig:161: Population size according to two different migration variants, Isabel: 2009-2050 ..... 181
Fig:162: Population size according to two different migration variants, Central: 2009-2050 ..... 182
Fig:163: Population size according to two different migration variants, Rennell-Bellona: ..... 182 2009-2050
Fig:164: Population size according to two different migration variants, Guadalcanal: 2009- ..... 183 2050
Fig:165: Population size according to two different migration variants, Malaita: 2009-2050 ..... 183
Fig:166: Population size according to two different migration variants, Makira-Ulawa: ..... 184 2009-2050
Fig:167: Population size according to two different migration variants, Temotu: 2009-2050 ..... 184
Fig:168: Population size according to two different migration variants, Honiara: 2009-2050 ..... 185
Fig:169: Population pyramid, Solomon Islands: 2010, 2030, and 2050 ..... 185
Fig:170: Population pyramid, Urban areas: 2010, 2030, and 2050 ..... 186
Fig:171: Population pyramid, Rural areas: 2010, 2030, and 2050 ..... 186
Fig:172: Population pyramid, Choiseul: 2010, 2030, and 2050 ..... 187
Fig:173: Population pyramid, Western: 2010, 2030, and 2050 ..... 187
Fig:174: Population pyramid, Isabel: 2010, 2030, and 2050 ..... 188
Fig:175: Population pyramid, Central: 2010, 2030, and 2050 ..... 188
Fig:176: Population pyramid, Rennell-Bellona: 2010, 2030, and 2050 ..... 189
Fig:177: Population pyramid, Guadalcanal: 2010, 2030, and 2050 ..... 189
Fig:178: Population pyramid, Malaita: 2010, 2030, and 2050 ..... 190
Fig:179: Population pyramid, Makira-Ulawa: 2010, 2030, and 2050 ..... 190

Fig:180: Population pyramid, Temotu: 2010, 2030, and 2050 191

Fig:181: Population pyramid, Honiara: 2010, 2030, and 2050 191

## LIST OF APPENDICES

Page
App. 1: Accuracy of age reporting - Indexes of age heaping ..... 210
App. 2: Arriaga's approach for estimation of ASFR for one point (1999) in time and the ..... 214age pattern of fertility (Brass)
App. 3: Arriaga's approach for estimation of ASFR for one point (2009) in time and the ..... 215 age pattern of fertility (Brass)
App. 4: Arriaga's approach for estimation of ASFR for two points (1999 and 2009) in ..... 216 time and the age patterns of fertility (Arriaga-Brass)
App. 5: Fertility estimates using the Trussell P/F Ratio Technique, PAS procedure ..... 217 PFRATIO, Solomon Islands: 1999
App. 6: Fertility estimates using the Trussell P/F Ratio Technique, PAS procedure ..... 218 PFRATIO, Solomon Islands: 2009
App. 7: Fertility estimates using the Relational Gompertz method, Vanuatu: 1999 and ..... 219 2009
App. 8: Comparison of empirical mortality rates to those from model life tables for males ..... 220 (MORTPAK procedure COMPAR)
App. 9: Comparison of empirical mortality rates to those from model life tables for ..... 221 females (MORTPAK procedure COMPAR)
App. 10: Indirect estimation of infant and childhood mortality from data on ..... 222 children ever born children surviving - Males
App. 11: Indirect estimation of infant and childhood mortality from data on ..... 223 children ever born children surviving - Females
App. 12: Indirect estimation of male adult mortality from orphanhood data ..... 224
App. 13: Indirect estimation of male adult mortality from orphanhood data ..... 224
App. 14: Abridged life table - Males, Urban: 2009 ..... 225
App. 15: Abridged life table - Females, Urban: 2009 ..... 225
App. 16: Abridged life table - Males, Rural: 2009 ..... 226
App. 17: Abridged life table - Females, Rural: 2009 ..... 226
App. 18: Abridged life table - Males, Choiseul: 2009 ..... 227
App. 19: 2009Abridged life table - Females, Choiseul: 2009 ..... 227
App. 20: Abridged life table - Males, Western: 2009 ..... 228
App. 21: Abridged life table - Females, Western: 2009 ..... 228
App. 22: Abridged life table - Males, Isabel: 2009 ..... 229
App. 23: Abridged life table - Females, Isabel: 2009 ..... 229
App. 24: 2009Abridged life table - Males, Central: 2009 ..... 230
App. 25: Abridged life table - Females, Central: 2009 ..... 230
App. 26: Abridged life table - Males, Rennell-Bellona: 2009 ..... 231
App. 27: Abridged life table - Females, Rennell-Bellona: 2009 ..... 231
App. 28: Abridged life table - Males, Guadalcanal: 2009 ..... 232
App. 29: 2009Abridged life table - Females, Guadalcanal: 2009 ..... 232
App. 30: Abridged life table - Males, Malaita: 2009 ..... 233
App. 31: Abridged life table - Females, Malaita: 2009 ..... 233
App. 32: Abridged life table - Males, Makira-Ulawa: 2009 ..... 234
App. 33: Abridged life table - Females, Makira-Ulawa: 2009 ..... 234
App. 34: Abridged life table - Males, Temotu: 2009 ..... 235
App. 35: Abridged life table - Females, Temotu: 2009 ..... 235
App. 36: Abridged life table - Males, Honiara: 2009 ..... 236
App. 37: Abridged life table - Females, Honiara: 2009 ..... 236
App. 38: Level of TFR of Australia, France, New Zealand, and the USA since 1975 ..... 237
App. 39: Models for mortality improvement. Quinquennial gains in life expectancy at ..... 238 birth according to initial level of life expectancy
App. 40: The demographic transition ..... 239
App. 41: Base population for projections for each province, 1 July 2009 ..... 241
App. 42: UN migration model: Family migration ..... 242
App. 43: Population size by province according to different migration variants, Solomon ..... 243 Islands: 2009-2050
App. 44: National and provincial population trend and age and sex structure: 1999-2009 ..... 244

## LIST OF MAPS

Page
Map 1: Solomon Islands ..... 3
Map 2: Urban centres/settlements, Solomon Islands: 2009 ..... 13

SUMMARY OF MAIN INDICATORS

| Indicator | Solomon Islands | Urban | Rural | Choisuel | Western | Isabel | Central | RenneIl- <br> Bellona | Guadalca nal | Malaita | Makira- <br> Ulawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total population | 515,870 | 102,030 | 413,840 | 26,372 | 76,649 | 26,158 | 26,051 | 3,041 | 93,613 | 137,596 | 40,419 | 21,362 | 64,609 |
| Males | 264,455 | 53,596 | 210,859 | 13,532 | 39,926 | 13,328 | 13,261 | 1,549 | 48,283 | 69,232 | 20,789 | 10,466 | 34,089 |
| Females | 251,415 | 48,434 | 202,981 | 12,840 | 36,723 | 12,830 | 12,790 | 1,492 | 45,330 | 68,364 | 19,630 | 10,896 | 30,520 |
| Average annual population growth rate,1999-2009 (\%) | 2.3 | 4.7 | 1.8 | 2.8 | 2.0 | 2.5 | 1.9 | 2.5 | 4.4 | 1.2 | 2.6 | 1.2 | 2.7 |
| Population density (number of people/Km) | 17 | - | - | 7 | 10 | 6 | 42 | 5 | 18 | 33 | 13 | 25 | 2,953 |
| Urbanisation |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban population | 102,030 | - | - | 810 | 9,755 | 971 | 1,251 | - | 15,473 | 5,105 | 2,074 | 1,982 | 64,609 |
| Per cent urban (\%) | 19.8 | - | - | 3.1 | 12.7 | 3.7 | 4.8 | - | 16.5 | 3.7 | 5.1 | 9.3 | 100.0 |
| Average annual Urban growth rate,1999-2009 (\%) | 4.7 | - | - | 6.1 | 4.1 | 7.7 | -0.6 | - | 16.3 | 11.6 | 7.5 | 17.0 | 2.7 |
| Households |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of private households | 91,251 | 15,382 | 75,869 | 4,712 | 13,762 | 5,143 | 4,905 | 688 | 17,163 | 24,421 | 7,173 | 4,303 | 8,981 |
| Average household size (number of people per househc | 5.5 | 6.5 | 5.3 | 5.5 | 5.3 | 4.9 | 5.3 | 4.4 | 5.4 | 5.6 | 5.5 | 4.9 | 7.0 |
| Number of institutions ${ }^{1}$ | 990 | 261 | 729 | 28 | 236 | 69 | 19 | 21 | 216 | 135 | 138 | 28 | 100 |
| Households characteristics |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wages/Salaries is main household income(\%) | 24 | 72 | 14 | 19 | 27 | 18 | 14 | 21 | 23 | 12 | 14 | 14 | 78 |
| Receiving remittances(\%) | 22 | 17 | 23 | 40 | 30 | 31 | 14 | 44 | 17 | 23 | 19 | 14 | 13 |
| With insecticide treated bednets(\%) | 75 | 65 | 77 | 87 | 84 | 91 | 87 | 25 | 76 | 67 | 77 | 80 | 59 |
| With improved drinking water sources(\%) | 69 | 89 | 65 | 72 | 82 | 87 | 77 | 94 | 52 | 61 | 63 | 75 | 91 |
| With improved sanitation facilities (\%) | 43 | 89 | 33 | 15 | 31 | 42 | 10 | 98 | 44 | 53 | 14 | 9 | 97 |
| Connected to electricity grid (\%) | 12 | 52 | 4 | 4 | 12 | 6 | 4 | 0 | 8 | 3 | 4 | 3 | 64 |
| With radio(\%) | 44 | 57 | 41 | 43 | 40 | 56 | 42 | 38 | 44 | 44 | 34 | 18 | 61 |
| With mobile phone (\%) | 21 | 68 | 11 | 6 | 22 | 17 | 8 | 19 | 19 | 11 | 8 | 14 | 77 |

## SUMMARY OF MAIN INDICATORS (continued)

| Indicator | $\begin{aligned} & \text { Solomon } \\ & \text { Islands } \end{aligned}$ | Urban | Rural | Choisuel | Western | Isabel | Central | RennellBellona | Guadalca nal | Malaita | MakiraUlawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population structure |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of children( $<15$ years) | 209,284 | 34,182 | 175,102 | 11,139 | 30,669 | 10,441 | 10,748 | 1,219 | 38,994 | 59,356 | 17,463 | 8,585 | 20,670 |
| Youth population (15-24 years) | 96,631 | 23,339 | 73,292 | 4,499 | 13,971 | 4,348 | 4,241 | 476 | 17,972 | 25,034 | 6,889 | 3,573 | 15,628 |
| Population aged 25-59 years | 182,894 | 41,478 | 141,416 | 9,261 | 27,791 | 9,584 | 9,526 | 1,044 | 32,608 | 45,037 | 13,962 | 7,555 | 26,526 |
| Older population (60 years and older) | 27,061 | 3,031 | 24,030 | 1,473 | 4,218 | 1,785 | 1,536 | 302 | 4,039 | 8,169 | 2,105 | 1,649 | 1,785 |
| Median age | 19.8 | 22.4 | 19.0 | 19.1 | 19.9 | 20.6 | 19.9 | 21.0 | 19.2 | 18.4 | 18.9 | 20.2 | 22.7 |
| Dependency ratio (15-59) | 84.6 | 57 | 93 | 92 | 84 | 88 | 89 | 100 | 85 | 96 | 94 | 92 | 53 |
| Sex ratio | 105 | 111 | 104 | 105 | 109 | 104 | 104 | 104 | 107 | 101 | 106 | 96 | 112 |
| Marriage |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mean age at first marriage (SMAM) | 25.2 | 26.5 | 24.8 | 24.4 | 25.7 | 24.7 | 24.6 | 26.1 | 24.7 | 24.6 | 24.9 | 25.8 | 26.8 |
| Males | 27.1 | 28.1 | 26.8 | 26.5 | 27.9 | 26.8 | 26.7 | 29.0 | 26.9 | 26.4 | 26.8 | 27.7 | 28.3 |
| Females | 23.3 | 24.7 | 22.9 | 22.1 | 23.6 | 22.8 | 22.6 | 23.2 | 22.6 | 23.0 | 23.0 | 24.1 | 25.3 |
| Labour force |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employee (Gov. and Priv). |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 42,082 | 21,258 | 20,824 | 1,724 | 7,382 | 1,669 | 1,091 | 232 | 7,401 | 6,261 | 1,857 | 978 | 13,487 |
| Male | 30,189 | 14,313 | 15,876 | 1,311 | 5,433 | 1,335 | 782 | 183 | 5,360 | 4,633 | 1,417 | 705 | 9,030 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 1,510 | 677 | 833 | 27 | 292 | 77 | 12 | 5 | 207 | 228 | 130 | 10 | 522 |
| Male | 1,184 | 489 | 695 | 23 | 233 | 60 | 12 | 5 | 165 | 194 | 106 | 8 | 378 |
| Female | 326 | 188 | 138 | 4 | 59 | 17 | o | o | 42 | 34 | 24 | 2 | 144 |
| Self employed |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 11,909 | 3,475 | 8,434 | 681 | 2,597 | 650 | 924 | 35 | 2,016 | 2,058 | 624 | 152 | 2,172 |
| Male | 8,777 | 2,408 | 6,369 | 576 | 1,946 | 451 | 694 | 22 | 1,448 | 1,474 | 504 | 127 | 1,535 |
| Female | 3,132 | 1,067 | 2,065 | 105 | 651 | 199 | 230 | 13 | 568 | 584 | 120 | 25 | 637 |
| Voluntary work |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 5,550 | 1,162 | 4,388 | 413 | 1,039 | 478 | 178 | 23 | 1,122 | 875 | 610 | 297 | 515 |
| Male | 3,684 | 557 | 3,127 | 339 | 747 | 319 | 131 | 14 | 691 | 619 | 412 | 179 | 233 |
| Female | 1,866 | 605 | 1,261 | 74 | 292 | 159 | 47 | 9 | 431 | 256 | 198 | 118 | 282 |
| Unpaid family work |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 35,654 | 5,508 | 30,146 | 733 | 4,639 | 1,055 | 1,490 | 186 | 6,642 | 9,742 | 4,662 | 4,005 | 2,500 |
| Male | 14,182 | 1,287 | 12,895 | 482 | 1,742 | 593 | 619 | 25 | 2,673 | 4,178 | 2,190 | 1,209 | 471 |
| Female | 21,472 | 4,221 | 17,251 | 251 | 2,897 | 462 | 871 | 161 | 3,969 | 5,564 | 2,472 | 2,796 | 2,029 |
| Producing goods for sale |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 25,739 | 2,366 | 23,373 | 971 | 6,760 | 838 | 2,093 | 144 | 6,055 | 5,574 | 1,070 | 961 | 1,273 |
| Male | 14,421 | 768 | 13,653 | 672 | 3,584 | 533 | 1,257 | 40 | 3,339 | 3,374 | 665 | 591 | 366 |
| Female | 11,318 | 1,598 | 9,720 | 299 | 3,176 | 305 | 836 | 104 | 2,716 | 2,200 | 405 | 370 | 907 |
| Producing goods for own consumption |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 87,941 | 1,719 | 86,222 | 6,080 | 10,597 | 7,203 | 5,041 | 660 | 14,647 | 33,781 | 6,373 | 3,222 | 337 |
| Male | 35,255 | 597 | 34,658 | 2,159 | 4,325 | 2,808 | 1,952 | 385 | 5,936 | 13,439 | 2,613 | 1,531 | 107 |
| Female | 52,686 | 1,122 | 51,564 | 3,921 | 6,272 | 4,395 | 3,089 | 275 | 8,711 | 20,342 | 3,760 | 1,691 | 230 |
| Unemployed |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 4,884 | 2,812 | 2,072 | 152 | 505 | 203 | 108 | 13 | 696 | 545 | 444 | 62 | 2,156 |
| Male | 2,786 | 1,601 | 1,185 | 92 | 327 | 92 | 55 | 7 | 425 | 338 | 212 | 40 | 1,198 |
| Female | 2,098 | 1,211 | 887 | 60 | 178 | 111 | 53 | 6 | 271 | 207 | 232 | 22 | 958 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 215,269 | 38,977 | 176,292 | 10,781 | 33,811 | 12,173 | 10,937 | 1,298 | 38,786 | 59,064 | 15,770 | 9,687 | 22,962 |
| Male | 110,478 | 22,020 | 88,458 | 5,654 | 18,337 | 6,191 | 5,502 | 681 | 20,037 | 28,249 | 8,119 | 4,390 | 13,318 |
| Female | 104,791 | 16,957 | 87,834 | 5,127 | 15,474 | 5,982 | 5,435 | 617 | 18,749 | 30,815 | 7,651 | 5,297 | 9,644 |
| Inactive |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 127,155 | 34,910 | 92,245 | 6,363 | 17,590 | 5,345 | 6,217 | 768 | 22,347 | 29,379 | 9,887 | 4,573 | 24,686 |
| Male | 63,553 | 16,907 | 46,646 | 3,027 | 8,399 | 2,656 | 3,100 | 372 | 11,311 | 15,458 | 4,922 | 2,350 | 11,958 |
| Female | 63,602 | 18,003 | 45,599 | 3,336 | 9,191 | 2,689 | 3,117 | 396 | 11,036 | 13,921 | 4,965 | 2,223 | 12,728 |

SUMMARY OF MAIN INDICATORS (continued)

| Indicator | Solomon Islands | Urban | Rural | Choisuel | Western | Isabel | Central | RenneIl- <br> Bellona | Guadalca nal | Malaita | MakiraUlawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Labor force participation rate |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 62.9 | 52.8 | 65.6 | 62.9 | 65.8 | 69.5 | 63.8 | 62.8 | 63.4 | 66.8 | 61.5 | 67.9 | 48.2 |
| Male | 63.5 | 56.6 | 65.5 | 65.1 | 68.6 | 70.0 | 64.0 | 64.7 | 63.9 | 64.6 | 62.3 | 65.1 | 52.7 |
| Female | 62.2 | 48.5 | 65.8 | 60.6 | 62.7 | 69.0 | 63.6 | 60.9 | 62.9 | 68.9 | 60.6 | 70.4 | 43.1 |
| Unemployment rate |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 2.3 | 7.2 | 1.2 | 1.4 | 1.5 | 1.7 | 1.0 | 1.0 | 1.8 | 0.9 | 2.8 | 0.6 | 9.4 |
| Male | 2.5 | 7.3 | 1.3 | 1.6 | 1.8 | 1.5 | 1.0 | 1.0 | 2.1 | 1.2 | 2.6 | 0.9 | 9.0 |
| Female | 2.0 | 7.1 | 1.0 | 1.2 | 1.2 | 1.9 | 1.0 | 1.0 | 1.4 | 0.7 | 3.0 | 0.4 | 9.9 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| School enrolment rates,6-12 years olds(\%) | 83.3 | 86.9 | 82.6 | 92.0 | 90.6 | 88.5 | 86.5 | 97.3 | 80.5 | 75.3 | 87.2 | 87.8 | 86.4 |
| Males | 82.8 | 86.4 | 82.0 | 90.9 | 89.5 | 87.2 | 85.9 | 95.9 | 80.5 | 74.9 | 86.2 | 87.5 | 86.1 |
| Females | 83.9 | 87.5 | 83.3 | 93.1 | 91.7 | 89.9 | 87.2 | 98.9 | 80.5 | 75.8 | 88.4 | 88.2 | 86.7 |
| School enrolment rates,6-15 years olds(\%) | 83.5 | 86.6 | 82.9 | 91.3 | 90.2 | 87.0 | 86.2 | 96.3 | 80.6 | 76.8 | 86.6 | 88.0 | 86.3 |
| Males | 83.2 | 86.6 | 82.6 | 90.0 | 88.7 | 85.9 | 86.6 | 93.9 | 80.6 | 77.1 | 85.7 | 88.1 | 86.6 |
| Females | 83.9 | 86.5 | 83.3 | 92.7 | 91.9 | 88.3 | 85.7 | 98.9 | 80.5 | 76.4 | 87.6 | 88.0 | 86.0 |
| School enrolment rates,15-19 years olds(\%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Males | 62.6 | 65.6 | 61.7 | 63.6 | 62.0 | 52.6 | 66.8 | 83.1 | 60.6 | 61.4 | 59.4 | 69.3 | 68.5 |
| Females | 65.2 | 69.6 | 64.0 | 62.1 | 60.5 | 53.2 | 72.7 | 78.7 | 63.6 | 65.7 | 61.8 | 74.8 | 72.6 |
| Percentage of pop aged 12 and older with no school completed | 59.8 | 61.6 | 59.4 | 65.2 | 63.6 | 52.0 | 60.8 | 88.2 | 57.5 | 56.9 | 56.8 | 64.1 | 64.3 |
| primary education | 56.7 | 44.6 | 60.1 | 73.4 | 69.9 | 50.8 | 60.3 | 68.2 | 55.1 | 55.0 | 60.2 | 56.2 | 40.4 |
| secondary education | 18.9 | 32.4 | 15.2 | 16.6 | 18.8 | 25.0 | 16.3 | 16.6 | 17.9 | 12.2 | 17.3 | 14.3 | 34.7 |
| tertiary education | 4.4 | 10.8 | 2.6 | 2.9 | 4.2 | 3.0 | 2.3 | 7.6 | 3.6 | 2.2 | 3.1 | 2.7 | 12.8 |
| vocational/professional qualification | 0.9 | 1.1 | 0.9 | 1.3 | 1.6 | 0.7 | 0.5 | 1.7 | 0.8 | 0.5 | 1.6 | 0.6 | 1.1 |

## SUMMARY OF MAIN INDICATORS (continued)

| Indicator | Solomon Islands | Urban | Rural | Choisuel | Western | Isabel | Central | RenneIlBellona | Guadalca nal | Malaita | MakiraUlawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Literacy rate, $15+(\%)^{3}$ | 84.1 | 93.7 | 81.4 | 95.9 | 96.3 | 84.0 | 80.6 | 99.1 | 82.9 | 70.4 | 90.1 | 71.3 | 94.5 |
| Males | 88.9 | 96.3 | 86.7 | 95.7 | 96.3 | 88.9 | 87.5 | 99.1 | 87.4 | 78.8 | 93.1 | 82.8 | 96.9 |
| Females | 79.2 | 90.7 | 76.2 | 96.2 | 96.4 | 79.1 | 73.7 | 99.0 | 78.1 | 62.4 | 87.1 | 61.1 | 91.8 |
| Literacy rate, 15-24 (\%) ${ }^{4}$ | 89.5 | 95.6 | 87.6 | 95.8 | 96.2 | 89.3 | 87.7 | 98.3 | 88.8 | 79.9 | 93.9 | 89.8 | 96.2 |
| Males | 90.6 | 96.3 | 88.7 | 94.1 | 95.3 | 89.3 | 89.9 | 98.0 | 90.5 | 82.3 | 93.6 | 91.4 | 96.9 |
| Females | 88.4 | 94.8 | 86.4 | 97.5 | 97.2 | 89.2 | 85.6 | 98.7 | 87.2 | 77.5 | 94.1 | 88.4 | 95.4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| English | 69.0 | 84.2 | 65.1 | 74.7 | 79.5 | 68.8 | 58.7 | 81.7 | 66.7 | 56.0 | 74.7 | 66.2 | 85.6 |
| Males | 72.9 | 86.8 | 69.2 | 75.1 | 80.0 | 73.1 | 65.7 | 82.5 | 70.6 | 61.7 | 77.4 | 73.5 | 88.3 |
| Females | 64.9 | 81.3 | 60.9 | 74.3 | 78.9 | 64.4 | 51.5 | 80.8 | 62.5 | 50.3 | 71.8 | 59.3 | 82.5 |
| Pidgin | 66.6 | 81.1 | 62.9 | 73.8 | 78.5 | 66.5 | 60.7 | 77.4 | 66.0 | 51.8 | 72.0 | 53.8 | 83.9 |
| Males | 70.0 | 83.5 | 66.5 | 73.7 | 78.8 | 70.2 | 66.3 | 76.4 | 69.4 | 56.9 | 74.4 | 60.2 | 86.4 |
| Females | 63.0 | 78.4 | 59.2 | 73.8 | 78.1 | 62.8 | 54.8 | 78.5 | 62.3 | 46.7 | 69.5 | 47.8 | 81.2 |
| Local language | 66.1 | 75.3 | 63.7 | 80.0 | 80.0 | 67.0 | 61.6 | 91.9 | 66.2 | 52.4 | 73.8 | 36.0 | 78.0 |
| Males | 68.8 | 77.5 | 66.5 | 78.3 | 79.4 | 69.4 | 65.7 | 91.5 | 69.1 | 57.1 | 75.1 | 41.2 | 80.2 |
| Females | 63.3 | 73.0 | 60.9 | 81.7 | 80.7 | 64.5 | 57.4 | 92.4 | 63.2 | 47.7 | 72.4 | 31.1 | 75.6 |
| Other language | 26.7 | 32.4 | 25.3 | 21.3 | 26.8 | 37.7 | 16.1 | 43.5 | 33.7 | 14.9 | 50.9 | 12.7 | 32.6 |
| Males | 28.1 | 33.5 | 26.7 | 21.2 | 26.9 | 41.3 | 17.2 | 43.5 | 35.1 | 16.5 | 52.7 | 14.4 | 33.7 |
| Females | 25.2 | 31.2 | 23.8 | 21.5 | 26.7 | 34.0 | 14.8 | 43.4 | 32.2 | 13.2 | 49.1 | 11.2 | 31.3 |
| Number of people with a disability |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blindness | 907 | 63 | 844 | 57 | 159 | 75 | 62 | 5 | 139 | 248 | 60 | 71 | 31 |
| Males | 411 | 39 | 372 | 22 | 77 | 36 | 27 | 4 | 52 | 110 | 26 | 36 | 21 |
| Females | 496 | 24 | 472 | 35 | 82 | 39 | 35 | 1 | 87 | 138 | 34 | 35 | 10 |
| Deafness | 1,398 | 131 | 1,267 | 94 | 220 | 105 | 111 | 11 | 226 | 397 | 84 | 79 | 71 |
| Males | 729 | 72 | 657 | 54 | 115 | 53 | 55 | 9 | 102 | 217 | 48 | 39 | 37 |
| Females | 669 | 59 | 610 | 40 | 105 | 52 | 56 | 2 | 124 | 180 | 36 | 40 | 34 |
| Lameness | 2,975 | 353 | 2,622 | 204 | 509 | 174 | 208 | 22 | 460 | 826 | 206 | 160 | 206 |
| Males | 1,491 | 200 | 1,291 | 97 | 254 | 83 | 128 | 11 | 223 | 406 | 103 | 76 | 110 |
| Females | 1,484 | 153 | 1,331 | 107 | 255 | 91 | 80 | 11 | 237 | 420 | 103 | 84 | 96 |
| Senile and /or amnesic | 3,293 | 425 | 2,868 | 228 | 586 | 217 | 160 | 13 | 571 | 872 | 242 | 151 | 253 |
| Males | 1,635 | 241 | 1,394 | 108 | 293 | 97 | 67 | 7 | 286 | 439 | 129 | 71 | 138 |
| Females | 1,658 | 184 | 1,474 | 120 | 293 | 120 | 93 | 6 | 285 | 433 | 113 | 80 | 115 |

SUMMARY OF MAIN INDICATORS (continued)

| Indicator | $\begin{aligned} & \text { Solomon } \\ & \text { Islands } \end{aligned}$ | Urban | Rural | Choisuel | Western | Isabel | Central | RennellBellona | Guadalca nal | Malaita | MakiraUlawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fertility |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Fertility Rate (TFR) | 4.7 | 3.3 | 5.2 | 4.6 | 4.7 | 4.8 | 5.4 | 4.5 | 4.8 | 5.6 | 5.1 | 4.2 | 3.3 |
| Teenage Fertility Rate (ASFR, 15-19) | 62 | 44 | 68 | 60 | 61 | 62 | 71 | 59 | 63 | 73 | 67 | 56 | 51 |
| Children ever born, CEB (45-49) ${ }^{6}$ | 5.1 | 4.4 | 5.3 | 5.2 | 4.9 | 5.6 | 4.9 | 4.1 | 5.3 | 5.5 | 5.5 | 4.7 | 4.2 |
| General Fertilty Rate (GFR) | 149 | 111 | 162 | 139 | 142 | 150 | 171 | 132 | 155 | 175 | 167 | 130 | 131 |
| Child-Woman Ratio (CWR) | 605 | 435 | 656 | 662 | 610 | 607 | 619 | 624 | 642 | 651 | 723 | 551 | 407 |
| Mean age at childbearing of mothers (in years) | 24.9 | 29.9 | 29.2 | 28.5 | 28.8 | 28.7 | 29.4 | 28.5 | 29.6 | 29.6 | 29.0 | 29.3 | 30.2 |
| Mean age at childbearing of fathers (in years) | 33.2 | 33.2 | 33.2 | 32.9 | 33.1 | 32.7 | 33.5 | 34.2 | 33.9 | 33.0 | 32.8 | 32.8 | 33.3 |
| Annual number of births,2009 | 18,802 | 3,191 | 15,706 | 849 | 2,577 | 928 | 1080 | 81 | 3,549 | 5,680 | 1,581 | 689 | 2,434 |
| Crude Birth Rate | 36.4 | 31.3 | 38.0 | 32.2 | 33.6 | 35.5 | 41.4 | 26.7 | 37.9 | 41.1 | 39.1 | 32.1 | 37.7 |
| Mortality |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Infant mortality rate (IMR) (per 1,000) | 22 | 20 | 24 | 33 | 23 | 23 | 32 | 26 | 22 | 26 | 20 | 22 | 19 |
| Males | 24 | 21 | 25 | 37 | 22 | 22 | 40 | 31 | 23 | 26 | 22 | 18 | 22 |
| Females | 20 | 19 | 22 | 28 | 24 | 24 | 23 | 20 | 20 | 25 | 18 | 27 | 16 |
| Child Mortality (per 1,000) | 6 | 5 | 7 | 9 | 6 | 6 | 12 | 8 | 5 | 8 | 5 | 6 | 4 |
| Males | 7 | 5 | 8 | 16 | 6 | 6 | 18 | 12 | 6 | 8 | 6 | 3 | 5 |
| Females | 4 | 4 | 5 | 1 | 7 | 7 | 6 | 4 | 4 | 7 | 3 | 9 | 3 |
| Under-five mortality (per 1,000) | 28 | 25 | 30 | 46 | 29 | 16 | 43 | 34 | 27 | 33 | 25 | 28 | 23 |
| Males | 31 | 26 | 33 | 53 | 28 | 28 | 57 | 43 | 29 | 34 | 28 | 21 | 27 |
| Females | 25 | 24 | 27 | 38 | 31 | 3 | 28 | 25 | 24 | 32 | 21 | 36 | 19 |
| Maternal mortality ${ }^{7}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maternal mortality ratio | 143 |  |  |  |  |  |  |  |  |  |  |  |  |
| Maternal mortality rate | 0.21 |  |  |  |  |  |  |  |  |  |  |  |  |
| LTP, lifetime risk of a maternal death | 7.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Life expectancy at age 20(e20) | 53.3 | 54.1 | 52 | 50.8 | 52.3 | 52.3 | 49.7 | 49.8 | 52.8 | 51.1 | 53.6 | 52.8 | 54.1 |
| Males | 50.2 | 51.4 | 49.5 | 48.4 | 49.8 | 49.8 | 47.4 | 46.8 | 50.2 | 48.7 | 51.0 | 50.2 | 51.4 |
| Females | 56.5 | 56.9 | 54.6 | 53.3 | 55.0 | 55.0 | 52.1 | 52.9 | 55.5 | 53.7 | 56.4 | 55.5 | 56.9 |
| Life expectancy at birth | 69.6 | 71.3 | 68.4 | 66.7 | 69 | 69 | 65.2 | 65.2 | 69.6 | 67.3 | 70.7 | 69.6 | 71.3 |
| Males | 66.2 | 67.9 | 65.1 | 63.5 | 65.7 | 65.7 | 62.0 | 61.0 | 66.2 | 64.0 | 67.3 | 66.2 | 67.9 |
| Females | 73.1 | 74.9 | 71.9 | 70.1 | 72.5 | 72.5 | 68.5 | 69.6 | 73.1 | 70.7 | 74.3 | 73.1 | 74.9 |
| Estimated annual number of deaths,2009 | 2,832 | 375 | 2,572 | 173 | 441 | 172 | 181 | 32 | 472 | 903 | 208 | 160 | 225 |
| Crude death rate | 5.5 | 3.7 | 6.2 | 6.6 | 5.8 | 6.6 | 6.9 | 10.5 | 5.0 | 6.6 | 5.1 | 7.5 | 3.5 |

## Notes:

${ }^{1}$ Institution include boarding
schools,prison,hospitals,hotels/hostels/guesthouses, some boats:
${ }^{2}$ Number of children under age 5 per 1000 women aged 15-49:
${ }^{3}$ Proportion of population 15 years and older who are able to read and write a simple sentences in any language
${ }^{4}$ Proportion of population aged 15 to 24 years who are able to read and write a simple sentence in any language
${ }^{5}$ Proportion of population 5 years and older who are able to read and write a simple sentence in any one language
${ }^{6}$ Average number of children per woman aged 45-49
${ }^{7}$ Adjusted for underreporting

## EXECUTIVE SUMMARY

The aim of this section is to provide an overview of the main findings of the 2009 Solomon Islands census data.

The 2009 census determined that the total population was $\mathbf{5 1 5 , 8 7 0}$. This compares with 409,042 people in 1999 , and represents an increase of $26.3 \%$ or 106,828 people. This population increase represents an average annual growth rate of $2.3 \%$, or an increase of 10,661 people per year.

However, as is shown in the report, the census enumeration suffered approximately from a $8.3 \%$ undercount, and the population size stood more likely at 552 thousand at the time of the census. Therefore the intercensal population growth rate of the period 19992009 was $\mathbf{3 . 0 \%}$ instead of $2.3 \%$.

Nevertheless, all statistical indicators presented in this report are based on the interviewed population of 515,870 people.

The 2009 census enumerated 264,455 males and 251,415 females, representing a sex ratio of 105 males per 100 females.

The urban population was $\mathbf{1 0 2 , 0 3 0}$ people ( $\mathbf{1 9 . 8 \%}$ of the total population), and includes the entire population of the Honiara town council $(64,609)$ as well as the Guadalcanal wards of Tandai and Malango as well as the settlements/towns of Gizo, Noro, Munda, Nusa Roviana, Auki, Batava/Taro, Buala, Tulagi, Kirakira/Bauro Central, and Lata/Luva Station.

The national average annual urban growth between 1999 and 2009 was $4.7 \%$, though the data show very different urban growth rates of the different urban areas: while the growth rate of Honiara urban area was with only $2.7 \%$ less than the national urban growth rate, the growth of the other provincial urban areas was higher. Of particular interest is the high growth rate of the Honiara urban surrounding, namely the two wards in Guadalcanal of Tandai and Malango with $16.4 \%$ annually. Other high urban growth areas are Auki in Malaita with $11.6 \%$, and Lata/Luva Station in Temotu with $17 \%$ per annum.

This means that the process of urbanisation is increasing and at the same time is tending towards a balance across the country. The emergence of new urban areas like

Munda, Nusa Roviana, and Malango, and the expanding urbanised areas around Honiara in Guadalcanal account for this development.

The average population density for Solomon Islands was 17 people/km². Although the population density was low across all provinces, it was with 2,953 people/km ${ }^{2}$ considerable higher in Honiara.

The census counted 91,251 private households with 504,985 household members, which means that there were 5.5 people per household on average.

Solomon Islands has a young population with a median age of 19.8 years. About $41 \%$ of the population was younger than 15 years of age, and only $5 \%$ were 60 years and older.

The age dependency ratio was calculated using the $15-59$ year-old age group as the "working age population". For every 100 people of working age, 85 were in the age dependent category.

The number of births was estimated at $\mathbf{1 8 , 8 5 8}$ in 2009. This accounts for a crude birth rate (CBR) of $\mathbf{3 6 . 4}$ per 1000 .

The total fertility rate (TFR) - the average number of births per woman - declined from about 5.0 in 1999 to about 4.7 in 2009.

Based on census data for the number of children ever born and still alive, the infant mortality rate (IMR) was estimated at 22; 24 for males and 20 for females. This estimate is lower than the 1999 levels when the IMR was 29 and 26 for males and females - and is thus an improvement in infant mortality rates.

Based on the 2009 census data, life expectancies at birth were estimated to be 66.2 and 73.1 years for males and females, respectively, compared to 1999 when it was 67.0 and 70.2 years for males and females, which unfortunately represents a slight decrease of male life expectancy.

Based on the derived life tables, a crude death rate (CDR) of 5.5 per 1,000 was calculated, which were approximately 2,800 deaths in 2009.

The maternal mortality ratio was estimated at 143.

The estimated mortality indicators show more positive mortality indicators for females than for males, with females expected to live, on average, about 6.9 years longer than males.

Net international migration is estimated be negligible during the intercensal period 1999-2009.

Women marry at a younger age than men. The average age at marriage was 27.1 and $\mathbf{2 3 . 3}$ years for males and females, respectively.

The Church of Melanesia is with $32 \%$ of the total population, the most dominant in Solomon Islands. The Roman Catholic Church is the second largest, with 20\%, followed by the South Sea Evangelical Church (17\%), the Seventh Day Adventists with a share of $12 \%$, and the United Church (10\%).

Data on disabilities indicate that about $14 \%$ of the total population reported a disability. The proportion of the population with a disability increases with age, and there is very little difference in the proportion of males and females with a disability. While about $10 \%$ of children younger than 5 years of age had a disability, it was more than half of the population at aged 55-59 years.

Of those who reported disabilities, almost 3,000 people could not walk at all, 3,300 people could not remember or concentrate, another 1,400 were deaf, and 900 people were blind.

School enrolment data show that $\mathbf{8 4 \%}$ of children in the age group 6-15 years were enrolled in schools with female school enrollment rates slightly higher (83.9\%) than male $(83.2 \%)$ enrollment rates. However, school enrollment rates declined rapidly after the age of 13 , and about $20 \%$ of 15 year-olds were not attending school. From the age of 14 , male school enrollment rates were higher than female enrollment rates. In general, enrollment rates were higher in the urban than the rural areas.

Since 1986 school enrolment rates have increased very significantly in the Solomon Islands. Primary school enrollment rates of the population 5-14 years increased from just below $60 \%$ in 1999 to about $80 \%$ in 2009 , and secondary school enrollment rates of the population 15-19 years increased from about $50 \%$ to over $60 \%$. Enrollment rates were below $40 \%$ in 1986.

Furthermore, the gap between male and female school enrollment rates that existed in favor of males in previous censuses has decreased, and for primary education it is now even slightly higher for females than males.

Data on educational level completed indicate that in 2009, about $56 \%$ of the population 15 years and older had only a primary level education, and $21 \%$ of males and $16 \%$ of females had secondary education. Only $6 \%$ of males and $3 \%$ of females had aged 15 and older had a tertiary level education. Eleven per cent of males and $21 \%$ of females had never been to school or only attended preschool. Educational levels were significantly higher of the population in the urban area than in rural areas, and educational levels of males were higher than females.

Language proficiency in English was with 69\% of the population 5 years and older the highest followed by Pidgin (67\%), and Local languages (66\%). Literacy was measured by a respondent's ability to read and write a simple sentence in any language.

In terms of literacy almost everyone ( $94 \%$ ) older than 15 years of age living in the urban areas was literate. This compares to only $81 \%$ in the rural areas. Literacy rates were considerably higher for males ( $89 \%$ ) than females ( $79 \%$ ) for the population 15 years and older. However, this gap in literacy was much smaller for the young population aged 1524 years, where literacy rates were $91 \%$ and $88 \%$ for males and females respectively.

Ninety percent for the population aged 10-34 were literate. From the age of 35 literacy rates gradually decline with increasing age of the population. While only $80 \%$ of the population aged 45-49 were literate, it was less than $60 \%$ of the population 70 years and older.

Although a high percentage ( $63 \%$ ) of Solomon Islands population aged 12 and older was economically active (in the labor force), only a relatively small proportion (20\%) received a regular paid income; this was $30 \%$ of males and $10 \%$ of females 12 years and older.

Subsistence work - such as growing or gathering produce or fishing to feed families/household members - was the main activity of $20 \%$ of males and $\mathbf{3 1 \%}$ females aged 12 and older. About $32 \%$ of the population 12 years and older in rural areas was subsistence workers compared with $2 \%$ in the urban centre.

Only about 4,884 people were categorised as being unemployed, resulting in an unemployment rate of $2.3 \% ; 2.5 \%$ for males and $2.0 \%$ for females. The unemployment rates are $7.2 \%$ and $1.2 \%$ in the urban and rural areas respectively. Poor weather
conditions or being unable to afford the transportation costs to work, were reasons that 157 people don't work/look for work. In addition, 1,880 people did not work and did not look for work, because they believed that no work was available. Using the international definition of unemployment, these people were not classified as unemployed because they did not look for work and did not indicate that they were available for work. However, if all of these people were included in the unemployed category, the unemployment rate would increase to $2.9 \%$.

The main source of household income was with $44 \%$ of all households the sale of fish, crops, or handicrafts. However, this was $52 \%$ of all rural households compared to only $9 \%$ of urban households, where $72 \%$ of all households' main income was wages and/or salary. Only $14 \%$ of rural household's main source of income came from wages and/or salary.

One quarter of all households received remittances at least once during the year before the census, and most received less than SI\$500. While a sizeable proportion of remittances came from within the same province of a household's residence, a large proportion of the remittances were sent from Honiara to households elsewhere in the country. About $8 \%$ of remittances came from overseas, mainly originating from Australia.

Sixty-one percent of all household were involved in fishing activities; this was $22 \%$ of urban and $69 \%$ of rural households. Three-quarter of the fish consumed was reef fish, $40 \%$ was tuna, $11 \%$ shellfish, and $9 \%$ freshwater fish.

While $96 \%$ of all rural households were involved in growing crops, only $57 \%$ of urban households grow crops. The most popular crop was vegetables and food crops (71\%), followed by betel nut (44\%), and coconut/copra (32\%).

Overall $56 \%$ of all Solomon Islands households raised livestock; $16 \%$ of urban households, and $64 \%$ of rural households. Thirty-eight percent and $37 \%$ of households raised pigs ( 121 thousand) and poultry ( 350 thousand). A very small proportion of households raised cows ( 30 thousand), goats (20 thousand), or horses (2.4 thousand).

Regarding the availability of household items, a higher proportion of households in urban areas (compared to rural households) used items such as motor vehicles, fridge or freezer, TV, mobile phones and landline telephones, computers, and internet. However, there are some items more commonly used in rural than in urban areas such as generators, canoes, boats and outboard motors. While $68 \%$ of urban households had at least one
mobile phone, it was only $11 \%$ in rural areas. The availability of a radio was $57 \%$ and $41 \%$ in urban and rural areas.

Information on tenure reveals that $74 \%$ of all households owned their dwelling outright, while $6 \%$ rented their dwelling, and another $11 \%$ resided in their dwelling rentfree. More than $90 \%$ of households in the rural areas owned their dwelling; this was only $38 \%$ in urban areas.

Sixty-nine per cent of all households obtained their drinking water from improved drinking water sources such as a household connection, public standpipe, protected dug well or rainwater. However, this percentage was with $89 \%$ much higher in the urban than the rural areas (65\%).

Forty-three per cent of all households used improved sanitation facilities as toilet such as a public sewer connection, a flush or pour-flush toilet; a water sealed toilet, or pit latrine. However, this percentage was with $89 \%$ much higher in the urban than the rural areas $(33 \%)$. One in three households reported to have no toilet facility available.

The main source of lighting in Solomon Islands was a kerosene lamp, used by an average of $\mathbf{7 5 \%}$ of all households, although this percentage was much lower in the urban than the rural areas. Only $\mathbf{1 2 \%}$ of all households were connected to the electricity main grid; $52 \%$ of urban and $4 \%$ of rural households.

The main energy source for cooking for $93 \%$ of all households was wood and/or coconut shells. It was almost universally used by the rural households and by $53 \%$ of the urban households, where $37 \%$ use gas as the main energy source for cooking.

Sixty percent of all households dispose of their waste in their backyard, and an additional $19 \%$ dispose of it into the sea. In Honiara, the waste of $36 \%$ of households is collected by the Government waste collection.

With respect to the use of insecticide treated bednets, $75 \%$ of all households had at least one bednet available; this was $77 \%$ of rural households compared to only $65 \%$ of urban households.

According to population projections prepared for this report, Solomon Islands' population in 2030 will increase to about 930 thousand people, and to 1.3 million 2050. The population will age, with a decreasing proportion of young people aged 15 and younger, and an increase in people aged 60 and older. The working age population (aged 15-59) will be about $83 \%$ higher in 2030 compared to 2009 , and will further
increase to about 896 thousand people in 2050. The school age population aged 6-15 years will increase from its current level of about 135 thousand to 216 thousand in 2030, will decline to 213 thousand in 2050.

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 about 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-making. As 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 programmes in areas as diverse as health, education, environment, poverty reduction, social progress, and economic growth.

## 1. INTRODUCTION

### 1.1 Report: purpose and structure

This report is based on data collected during the population census enumeration, with 22 November 2009 being census day. The main purposes of this report are to:

- provide a general overview of the vast amount of detailed information that is available from the 2009 census enumerations;
- generate interest, curiosity, and a desire for more detailed information, especially for Solomon Islands' decision-makers and the general public; and
- enhance the decision-making process of policy-makers.

This volume concentrates on making the enormous wealth of information incorporated in the Basic Tables accessible to users of the census data. This is done by providing summaries of complicated Basic Tables presenting them in relative figures or in the form of commonly used statistical indicators (see Summary of main Indicators), and by pointing out trends that emerge when comparing the 2009 data with that of previous censuses.

A number of sections providing definitions, descriptions, and classifications have been extracted from the 1999 census report. This initial analysis provides the basis for the final chapters on population projections, and policy implications.

This report will give data users an introduction to census information that will enable them to produce monographs according to their own specifications. Further help can be obtained from the Solomon Islands Statistics Office.

### 1.2 Country profile

The Solomon Islands lie in the southwest Pacific, to the east and south of Papua New Guinea. The Main Group Archipelago (MGA) is orientated northwest to southeast, stretching about 1,700 km between Bougainville, at the eastern tip of Papua New Guinea (PNG) to the northern-most islands of Vanuatu. The central archipelago of islands lies between latitudes $5^{\circ} \mathrm{S}$ and $12^{\circ} \mathrm{S}$ and longitudes $152^{\circ} \mathrm{E}$ and $163^{\circ} \mathrm{E}$ (Map 1). It comprises a double chain of six large islands (Choiseul, Santa Isabel, New Georgia, Guadalcanal, Malaita and Makira) as well as many smaller ones making a total of 997 islands. The country has a total land area of $30,407 \mathrm{~km}^{2}$.. In addition there is an exclusive economic zone (EEZ) which covers $1,340,000 \mathrm{~km}^{2}$.

The Solomon Islands is the third largest archipelago in the South Pacific. The main islands vary in length from 140 to 200 km , in width from 30 to 50 km , and in types from high islands to raised atolls and low lying islands, sand cays and rock outcrops. Guadalcanal is the largest island $\left(5,336 \mathrm{~km}^{2}\right)$, while the others scale down from that to a size of less than 1 ha (www.fao.org/countryprofiles).

Two climate systems affect the country. These are the southeasterly trade winds that blow from May to October and the northeasterly trade monsoon winds that blow from December until March. Between April and November, the country experiences fine, sunny, calm weather. Being close to the equator, air temperature does not vary much. Mean daily temperatures throughout the year range from a minimum of 23 degrees Celsius to a maximum of 30 degrees Celsius. Rainfall ranges between $3000-5000 \mathrm{~mm}$ per year. There is generally a higher rainfall in the wet (monsoon) season (SICFCS 2002, Turner 2008).

The Solomon Islands attained self-government in 1976 and independence on the $7^{\text {th }}$ July 1978. With independence, a parliamentary democracy system of government was adopted. The country has a constitutional monarchy represented by a Governor-General who is the Head of State. Legislative power is vested in the National Parliament elected every 4 years. Parliamentary democracy is based on the multi party system. Executive authority is held by the Cabinet, led by the Prime Minister. Emphasis is laid on the devolution of power to provincial governments, and traditional chiefs and leaders have a special role within this arrangement (Cox and Morison 2004, Turner 2008).

For local government, the country is divided into 10 administrative areas, of which nine are provinces administered by elected provincial assemblies, and the 10th is the town of Honiara, administered by the Honiara Town Council. The provinces are Central, Choiseul, Guadalcanal, Honiara Town, Isabel, Makira-Ulawa, Malaita, Rennell and Bellona, Temotu, and Western (www.wikipedia.org).

The bulk of the population depends on agriculture, fishing, and forestry for part of its livelihood. Most manufactured goods and petroleum products must be imported. Natural resources include fish, forests, gold, bauxite, phosphates, lead, zinc, and nickel. Agriculture products include cocoa beans, coconuts, palm kernels, rice, potatoes, vegetables, fruit; timber; cattle, pigs; and fish. The main industries are fish (tuna), mining, timber, palm oil, and tourism.

The Solomon Islands is part of the Melanesian cultural area, with close ties to countries like Vanuatu, Papua New Guinea and Fiji. However, there are also other influences
through people from Micronesia (mainly Kiribati) and Polynesia, and small European and Chinese populations.

Land ownership and land use are largely organised along tribal lines, and people maintain strong attachment with their islands of origin.

Christianity has a large influence on Solomon Islands society and is represented by a large variety of denominations.

The country is also characterised by a rich linguistic diversity. English is the official language of the country, but Pidgin is widely used as the lingua franca.

The majority of the people live along the coast, but there are substantial population pockets in the inland areas of Guadalcanal and Malaita.

Map 1: Solomon Islands


## 2. POPULATION PROFILE AND CHANGE

### 2.1 Introduction

This chapter discusses the basic demographic characteristics of the Solomon Islands population as reported in the 2009 census, and, in addition, addresses its change over time. In doing so, it focuses on the situation in November 2009 and on the 1986-1999 and 1999-2009 intercensal period, but extends its time frame when possible.

The present chapter starts with a brief description of the historical demographic development of the Solomon Islands as a general background to the present situation. In addition, the chapter focuses on the series of population counts and censuses that recorded population change over time, and describes the general population distribution across the country, including the distribution over provinces and urban and rural areas, as well as population density by province.

Apart from absolute numbers of people and their geographic distribution, information on age and sex is the most important result of a census. Such information constitutes a basic input element for successful development planning, which often targets specific groups as needs vary with sex or age. Planning in the areas of education, health services, housing, employment or food supply, all depend on reliable details on the age and sex composition of the population. For fertility and mortality analysis, programme impact assessment and population projections, such information is also essential. Therefore, an account and scrutiny of the age and sex structure reported in the 2009 census is important as a basis for development planning, but also as input for subsequent chapters in this report. Appendix 1 assesses the quality of the census information.

### 2.2 Historical background

## General development

Settlement in the area that now constitutes the independent state of the Solomon Islands can be traced back to as early as $10,000 \mathrm{BC}$. Initial waves of immigrants came from New Guinea, while around 4000 BC Melanesian settlers arrived, following the development of agriculture in Southeast Asia. Around 1500 AD groups of Polynesian islanders began to arrive in the Solomon Islands, occupying the smaller outer islands that were relatively uninhabited. European exploration of the country started in the late 1560s, but until 1890 European presence was restricted to a few missionaries and traders. In 1893 the area was declared a British protectorate, which it remained until the transition period to independence in 1978. The intervening period was characterised by the capture of most
of the country by Japan in World War II and by the arrival of small numbers of Chinese traders and -in the 1950s and 1960s- a sizeable group of Gilbertese who were resettled from what is now Kiribati. In the 1990s Bougainville refugees entered the country, most of whom, however, were repatriated before the census in 1999. It is likely that the population of the Solomon Islands increased steadily from its earliest history, although this growth may have been reversed temporarily when epidemics introduced by European traders swept the country in the $19^{\text {th }}$ century. In addition, head-hunting practices prevailed into the first half of the next century, suppressing further population growth. Historical estimates and a first census-type operation in 1931 suggest that the population fell from well above 100 thousand at the beginning of the twentieth century to 94 thousand in 1931. Data collection for the 1931 and 1959 censuses differed markedly from the subsequent ones and direct comparison of their results must be carried out with great caution. Nevertheless, the various population counts seem to indicate that the population recovered after 1931 at a rate of about 1 percent per year until 1959, probably because of a combination of declining mortality and increasing fertility. From then on, population growth further accelerated and probably peaked during the period -1976-1986 at around 3.4 percent annually. Figure 1 presents population sizes as reported in the censuses since 1931.

## Internal population dynamics

The settlement of the various ethnic groups was not evenly spread across the country. While most areas are inhabited by Melanesians, population groups of Polynesian origin dominate some outlying islands, like Rennell and Bellona, Ontong Java (Malaita) and Tikopia, Anuta and the Reef and Duff islands in Temotu. The Gilbertese settled mostly in Southeast Choiseul, Gizo and Honiara, whereas European and Chinese communities originally concentrated in Tulagi, the capital until World War II. After the war, the country's administrative and commercial hub was transferred to Honiara, which in time triggered a large-scale influx into that part of Guadalcanal island, mainly from Malaita. The development of other commercial and administrative centres -in particular the Guadalcanal production areas and, more recently, Noro- led to smaller-scale internal migration flows. The displacement caused by the ethnic conflict prior to the 1999 census forced large numbers of people to move from Guadalcanal and Honiara, mainly to Malaita. A second wave of displacement occurred directly after the coup in June 2000. This mostly affected the population of Honiara and again saw Malaita as the main recipient province.

In April 2003, the then Prime Minister of Solomon Islands, Sir Allan Kemakeza, made an urgent request for assistance. After five years of ethnic tensions, and a coup in 2000, the problems facing his troubled nation were many and serious. Law and order had broken down, officials and private citizens were subject to intimidation and violence, and
corruption was unfettered. The Government and its institutions had ceased to function effectively. Corruption was widespread. Public finances were in ruin and many of the most basic services such as health and education were not being delivered to the people.

In response to Sir Allan's request, the countries of the Pacific region, through the Pacific Islands Forum, agreed to support the formation of a regional assistance mission (RAMSI) to be led and funded by Australia and New Zealand with membership from all Forum countries. In June 2003, Sir Allan flew to Canberra, Australia to formally receive this offer of assistance. Together with the Solomon Islands Government, the Forum countries then agreed on a mandate to address civil unrest and lawlessness, economic decline, corruption and a dramatic drop in service delivery and government administrative standards.

On 22 July 2003, the Solomon Islands National Parliament unanimously passed the Facilitation of International Assistance Act 2003, which provides authority under Solomon Islands domestic law for RAMSI's activities. The RAMSI programme has transited in June 2013. However some programmes continue to operate on a limited basis whilst others are part of the bilateral arrangement

### 2.3 Population size and trend

In 2009, the total enumerated population of the Solomon Islands stood at 515,870. This is an increase of 106,828 persons compared to the 1999 population census. Figure 1 shows the population trend from 1931-2009.

It can be seen that the population has continuously increased and it is now more than five times the size it was in 1931.

Between the inter-censual periods 1986-1999 the population growth rate was 2.8 percent. This declined to 2.3 percent for the period 1999-2009 (Table 1 and Fig.2).

However, as is shown in the report, the census enumeration suffered approximately from an $8.3 \%$ undercount, and the population size stood more likely at $\mathbf{5 5 8}$ thousand at the time of the census. Therefore the intercensal population growth rate of the period 1999 2009 was $3.0 \%$ instead of $2.3 \%$. Nevertheless, all statistical indicators presented in this report are based on the interviewed population of 515,870 people.

Despite a declining growth rate, the population size continues to increase faster (Figs. 2 and 3). While the average annual population increase during the period 1986-1999 was

9,532 people with a $2.8 \%$ growth rate, it increased to 10,665 people annually during the period 1999-2009 with a lower growth rate of only $2.3 \%$.

Figure 1: Total population size, Solomon Islands: 1931-2009


Table 1: Population size and growth rate by place of residence, Solomon Islands: 1986, 1999 and 2009

| Region | Total population size |  |  | Population change |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | (in numbers) |  | (in \%) |  | Annual growth rate |  |
|  | 1986 | 1999 | 2009 | 1986-1999 | 1999-2009 | 1986-1999 | 1999-2009 | 1986-1999 | 1999-2009 |
| Solomon Islands | 285,176 | 409,042 | 515,870 | 123,866 | 106,828 | 43.4 | 26.1 | 2.8 | 2.3 |
| Urban | 36,919 | 63,732 | 102,030 | 26,813 | 38,298 | 72.6 | 60.1 | 4.2 | 4.7 |
| Rural | 248,257 | 345,310 | 413,840 | 97,053 | 68,530 | 39.1 | 19.8 | 2.5 | 1.8 |
| Choiseul | 13,569 | 20,008 | 26,372 | 6,439 | 6,364 | 47.5 | 31.8 | 3.0 | 2.8 |
| Western | 41,681 | 62,739 | 76,649 | 21,058 | 13,910 | 50.5 | 22.2 | 3.1 | 2.0 |
| Isabel | 14,616 | 20,421 | 26,158 | 5,805 | 5,737 | 39.7 | 28.1 | 2.6 | 2.5 |
| Central | 16,655 | 21,577 | 26,051 | 4,922 | 4,474 | 29.6 | 20.7 | 2.0 | 1.9 |
| Rennell-Bellona | 1,802 | 2,377 | 3,041 | 575 | 664 | 31.9 | 27.9 | 2.1 | 2.5 |
| Guadalcanal | 49,831 | 60,275 | 93,613 | 10,444 | 33,338 | 21.0 | 55.3 | 1.5 | 4.4 |
| Malaita | 80,032 | 122,620 | 137,596 | 42,588 | 14,976 | 53.2 | 12.2 | 3.3 | 1.2 |
| Makira-Ulawa | 21,796 | 31,006 | 40,419 | 9,210 | 9,413 | 42.3 | 30.4 | 2.7 | 2.6 |
| Temotu | 14,781 | 18,912 | 21,362 | 4,131 | 2,450 | 27.9 | 13.0 | 1.9 | 1.2 |
| Honiara | 30,413 | 49,107 | 64,609 | 18,694 | 15,502 | 61.5 | 31.6 | 3.7 | 2.7 |

Figure 2: Average annual population growth rate (\%), Solomon Islands: 1931-2009


Figure 3: Population change, average annual increase in numbers, Solomon Islands: 1931-2009


### 2.4 Population distribution

### 2.4.1 Population by province

The population size of the different provinces ranked by population size is displayed in Figure 4.

Malaita had the largest population size of 137,596 people, followed by Guadalcanal 93,613, and Rennell-Bellona with the smallest population size of just 3,041 people. Interestingly the three provinces of Choiseul, Isabel and Central had virtually equal population sizes of about 26,000 people.

Population change for the 10 provinces of the Solomon Islands all show an increase in population size since 1970 (Fig.5). In all provinces the population continues to grow although with various growth rates (Fig.6). Guadalcanal province had the fastest population increase with $4.4 \%$ annually, followed by Choiseul (2.8\%), Honiara (2.7\%), and Makira-Ulawa ( $2.6 \%$ ). The lowest growth rates were recorded in Malaita and Temotu with only $1.2 \%$ annually.

There were lower growth rates in all provinces during the period 1999-2009 compared to the period 1986-1999, except for Rennell-Bellona and Guadalcanal (Table 1).

Figure 4: Population size by province, Solomon Islands: 2009


Figure 5: Population trend of provinces, Solomon Islands: 1970-2009


Figure 6: Average annual population growth rate (\%) by province, Solomon Islands: 1999-2009


Figure 7: Population distribution by province (\%), Solomon Islands: 2009


Information obtained on the place of enumeration was used to describe the distribution of population. Figure 7 displays the proportion of the Solomon Islands population by province.

In 2009 Malaita had the biggest share of the Solomon Islands population, comprising $27 \%$ of the total population. This was followed by Guadalcanal province with $18 \%$, and the Western province with $15 \%$. The provinces of Choiseul, Isabel and Central all comprised each of $5 \%$ of the total Solomon Islands population. Only $1 \%$ of the population lived in Rennell-Bellona.

### 2.4.2 Population by urban-rural residence and urbanization

The speed and scale of urban population growth generates important challenges for planners and Governments. This is especially true in countries where urbanization has not been associated with sustained industrialization and development, as increasing urban poverty and the growth of slums are two of the most critical challenges in urban areas.

Despite this, the urban poor in the less developed regions often fare better than the average rural resident with respect to access to basic services, such as drinking water, sanitation, electricity or educational facilities.

Thus, it is simplistic to view urbanization in developing countries as a phenomenon with mainly negative consequences. In fact, the concentration of people in cities is generally a response to the concentration of the most dynamic economic activities in urban centers. Such a concentration often produces economies of scale and leads to social and economic benefits of various kinds, including the technological development that is crucial to maintain the development momentum. The health advantages of cities are another example of such benefits, with urban dwellers often enjoying higher quality and more accessible health services than rural dwellers. Cities are also at the forefront of political and cultural change. Given their concentrated political power, trade and cultural activity, cities are places where new ideas and products emerge and from which they spread. Often, the development of rural areas is inextricably tied to the dynamism of the urban centers to which they are linked. Cities are therefore engines of economic, social, political and cultural change. Urbanization can thus be viewed as an indicator of development, with higher urban levels generally associated with more industrialized and technologically advanced economies.

The challenge faced by developing countries today is to take advantage of the rapid urbanization that has resulted from unprecedented levels of natural increase in their urban populations coupled with the redistribution of population from rural to urban centers and the transformation of rural settlements into cities. This challenge is often related to issues of governance, as when cities expand beyond their administrative boundaries and thus lack the financial or jurisdictional capacity to provide the necessary services to all the city's inhabitants. Collaboration among local, regional and national authorities can go a long way in addressing these management problems. Since continued urbanization is expected in every country, a focus on improving the lives of city dwellers needs to be maintained. At the same time, one has to recognize that many countries still have large and growing rural populations whose well-being often depends on the viability and success of cities. Given that the world's future will be urban, development initiatives must address the challenges and make the best of the opportunities that growing urban centers bring ${ }^{1}$.

## Urban-rural distinction

Due to the very small size of the provincial Solomon Islands' urban centres/settlements, it is perhaps dubious to describe some of these centres as 'urban'. However, for analytical purposes a distinction is made between urban and rural settlements. Urban areas include Honiara town council and all provincial administrative centres except Rennell-Bellona (Map 2 and Table 2).

[^0]In addition, a number of enumeration areas surrounding Honiara were classified as urban on the basis of their proximity and access to the town, population density, permanency of settlements and variety of economic activities. All other areas in the country were considered to be rural.

Map 2: Urban centres/settlements, Solomon Islands: 2009


## Urban-rural distribution

By international standards, the urban population in the Solomon Islands is small. Less than 20 percent of the population live in areas that were defined as urban. This urban sector of 102 thousand people is dominated by Honiara town council $(64,609)$. The capital accommodates almost two-thirds of all urban residents, and if the adjoining urban areas of Guadalcanal are included, 'the Honiara urban area' or 'Greater Honiara' represents three-quarters of all urban population.

The other provincial centres are much smaller and deserve urban status on the basis of their administrative function only, rather than in terms of population size, economic differentiation or population density.

Solomon Islands urban population increased from less than 20,000 people in 1976 to more than 102,000 in 2009 (Fig.8). With an average annual growth rate of $4.7 \%$ the urban population grew more than twice as fast as the rural population (Fig.9). Accordingly the proportion of the population living in urban areas has continuously increased from 9\% in 1976 to almost $20 \%$ in 2009 (Fig.10).

Figure 8: Total Population size by urban and rural residence, Solomon Islands: 1976-2009


Figure 9: Average annual urban and rural population growth rate, Solomon Islands: 1976-2009


Figure 10: Population distribution (\%) by urban and rural residence, Solomon
Islands: 1976-2009


The urban localities (wards) that are classified as urban are listed in Table 2.

The largest urban area in the Solomon Islands is the Honiara urban area $(80,082)$ which includes the entire population of the Honiara town council $(64,609)$ as well as the Guadalcanal wards of Tandai $(10,837)$ and Malango $(4,636)$ that are bordering the Honiara town council area to the east. These two wards are the only areas classified as urban in the Guadalcanal province.

The Western province's urban population includes the four wards of Gizo $(3,547)$, Noro $(3,365)$, Munda $(1,315)$, and Nusa Roviana $(1,528)$. The latter two wards were not classified as urban in the 1999 census, and Noro was not defined as urban during the 1986 census.

All other provinces except Rennell-Bellona (that is classified entirely rural), have one urban center. After Honiara and Tandai, Auki (5,105 people) in Malaita is the third largest urban area in the Solomon Islands. The other urban areas are Batava/Taro (810) in Choiseul, Buala (971) in Isabel, Tulagi (1,251) in the Central province, Kirakira/Bauro Central $(2,074)$ in Makira-Ulawa, and Lata/Luva Station $(1,982)$ in Temotu.

While the overall urban growth was $4.7 \%$ annually, the growth rate of Honiara urban area was with only $3.7 \%$ less than the national urban growth rate, and the growth of the other provincial urban areas was higher. Of particular interest is the high growth rate of the Honiara urban surrounding, namely the two wards in Guadalcanal of Tandai and Malango with $16.4 \%$ annually.

Other high urban growth areas are Auki in Malaita with $11.6 \%$ and Lata/Luva Station in Temotu with $17 \%$ per annum. This means that the process of urbanisation is increasing and at the same time is tending towards a balance across the country. The emergence of new urban areas like Munda, Nusa Roviana, and Malango, and the expanding urbanised areas around Honiara in Guadalcanal account for this development (Fig.11).

Table 2: Population size by urban localities and province, Solomon Islands:
1986-2009

| Urban localities (Province/Ward) | Total population |  |  | Annual growth rate |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1986 | 1999 | 2009 | 1986-1999 | 1999-2009 |
| Choiseul |  | 440 | 810 |  | 6.1 |
| Batava/Taro |  | 440 | 810 |  |  |
| Western | 2,331 | 6,442 | 9,755 | 7.8 | 4.1 |
| Gizo | 2,331 | 2,960 | 3,547 | 1.8 | 1.4 |
| Noro |  | 3,482 | 3,365 |  | -0.3 |
| Munda |  |  | 1,315 |  |  |
| Nusa Roviana |  |  | 1,528 |  |  |
| Isabel | 618 | 451 | 971 | -2.4 | 7.7 |
| Buala | 618 | 451 | 971 |  |  |
| Central | 1,281 | 1,333 | 1,251 | 0.3 | -0.6 |
| Tulagi | 1,281 | 1,333 | 1,251 |  |  |
| Rennell-Bellona | 0 | 0 | 0 |  |  |
| Guadalcanal |  | 3,013 | 15,473 |  | 16.4 |
| Tandai |  | 3,013 | 10,837 |  |  |
| Malango |  |  | 4,636 |  |  |
| Malaita | 948 | 1,606 | 5,105 | 4.1 | 11.6 |
| Auki | 948 | 1,606 | 5,105 |  |  |
| Makira-Ulawa | 905 | 979 | 2,074 | 0.6 | 7.5 |
| Kirakira/Bauro Central | 905 | 979 | 2,074 |  |  |
| Temotu | 423 | 361 | 1,982 | -1.2 | 17.0 |
| Lata/Luva Station | 423 | 361 | 1,982 |  |  |
| Honiara town council | 30,413 | 49,107 | 64,609 | 3.7 | 2.7 |
| Honiara urban area ${ }^{1}$ | 30,413 | 52,120 | 80,082 | 4.1 | 4.3 |
| TOTAL | 36,919 | 63,732 | 102,030 | 4.2 | 4.7 |

*Honiara urban area incl. Honiara town council, and the Guadalcanal wards of Tandai and Malango that are classified as Honiara urban surroundings

## Urban and rural population structure

The very different shape of the urban and rural population pyramids (Figs. 12 and 13) clearly illustrate the rural to urban migration of the young Solomon Islands population. People aged 15-30 years cause the 'bulge' of the urban population pyramid, and the 'dent' of the rural population pyramid of these age groups. These pyramids therefore demonstrate that it is mainly these age groups who move from the rural areas to the urban centers in search of employment and/or education opportunities. A move may also be seen as a sign of progress and a means of bettering oneself in ways that vary from person to person.

Figure 11: Urban population distribution, Solomon Islands: 1986, 1999, and 2009


Figure 12: Population pyramid by single years, urban population: 2009


Figure 13: Population pyramid by single years, rural populations: 2009


As mentioned in the introduction to this section, urban dwellers often fare better than their rural counterparts, which (partly) explains the rural-urban population drift. The urban and rural socio-economic and demographic indicators displayed in the Summary of main indicators and Table 3, show more favourable outcomes for the urban than the rural population.

Table 3: Selected demographic and socio-economic indicators by urban-rural residence, Solomon Islands: 2009

| Indicator | URB AN | RURAL |
| :--- | :---: | :---: |
| Households with improved drinking water sources (\%) | 89 | 65 |
| Households with improved sanitation facilities (\%) | 89 | 33 |
| Households connected to electricity grid (\%) | 52 | 4 |
| Households with mobile phone (\%) | 68 | 11 |
| Employment-population ratio (\%) | 38 | 20 |
| School enrolment rates of 6-15 year olds (\%) | 87 | 83 |
| Proportion of population aged 12 and older with no school completed | 7 | 19 |
| Literacy rate of population aged 15+ (\%) | 94 | 81 |
| Total Fertility Rate (TFR) | 3.3 | 5.2 |
| Teenage Fertility Rate (ASFR, 15-19) | 40 | 69 |
| Proportion of children ever born still alive (\%) | 97 | 95 |
| Infant mortality rate (IMR) | 19 | 24 |

### 2.5 Population density

The Solomon Islands has a total land area of $30,407 \mathrm{~km}^{2}$. According to the 2009 census, the average population density for the Solomon Islands was 17 people $/ \mathrm{km}^{2}$ - an increase from 13 people $/ \mathrm{km}^{2}$ in 1999 (Table 4). This is a very low population density compared to most other countries in the Pacific region or even worldwide.

Population density varied widely throughout the provinces in the Solomon Islands. Honiara province is the most densely populated due to its urban characteristics. With almost 3,000 people $/ \mathrm{km}^{2}$ the density represents an increase from 1999 when it had 2,244 people per square km . The second most densely populated province was Central with 42 people per $\mathrm{km}^{2}$. Rennell-Bellona, Isabel and Choiseul had the lowest densities with less than 10 people per $\mathrm{km}^{2}$.

Table 4: Population density (number of people/km²) by province, Solomon Islands: 1986, 1999 and 2009

| Province | Land area <br> $\left(\mathbf{k m}^{2}\right)$ |  |  | Total population |  |  | Population density |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :---: | :---: |
|  | $\mathbf{1 9 8 6}$ | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 9}$ | $\mathbf{1 9 8 6}$ | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 9}$ |  |  |  |
| Solomon Islands | $\mathbf{3 0 , 4 0 7}$ | $\mathbf{2 8 5 , 1 7 6}$ | $\mathbf{4 0 9 , 0 4 2}$ | $\mathbf{5 1 5 , 8 7 0}$ | $\mathbf{9}$ | $\mathbf{1 3}$ | $\mathbf{1 7}$ |  |  |
| Choiseul | $3,837.3$ | 13,569 | 20,008 | 26,379 | 4 | 5 | 7 |  |  |
| Western | $7,509.0$ | 41,681 | 62,739 | 76,649 | 6 | 8 | 10 |  |  |
| Isabel | $4,136.2$ | 14,616 | 20,421 | 26,158 | 4 | 5 | 6 |  |  |
| Central | 615.3 | 16,655 | 21,577 | 26,051 | 27 | 35 | 42 |  |  |
| Rennell-Bellona | 670.7 | 1,802 | 2,377 | 3,041 | 3 | 4 | 5 |  |  |
| Guadalcanal | $5,336.3$ | 49,831 | 60,275 | 93,613 | 9 | 11 | 18 |  |  |
| Malaita | $4,224.7$ | 80,032 | 122,620 | 137,596 | 19 | 29 | 33 |  |  |
| Makira-Ulawa | $3,187.7$ | 21,796 | 31,006 | 40,419 | 7 | 10 | 13 |  |  |
| Temotu | 868.4 | 14,781 | 18,912 | 21,362 | 17 | 22 | 25 |  |  |
| Honiara | 21.9 | 30,413 | 49,107 | 64,602 | 1,390 | 2,244 | 2,953 |  |  |

### 2.6 Population structure

The enumerated 2009 resident population consisted of 264,452 males and 251,418 females. Males out-numbered females by 13,034 resulting in a sex ratio of 105, which means that there were 105 males per 100 females. However, sex ratios varied by province as can be seen in Figure 14 and Table 5.

Table 5: Population distribution by broad age group, dependency ratio, median age, and sex ratio, Solomon Islands: 1999 and 2009

| Province | Year | Proportion of population by broad age group (in \%) |  |  |  | Age dependency ratio (15-59) | Median age (years) | Sex ratio (males per 100 females) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0-14 | 15-24 | 25-59 | 60+ |  |  |  |
| Solomon Islands | 1999 | 42 | 21 | 32 | 5 | 87 | 18.8 | 107 |
|  | 2009 | 41 | 19 | 35 | 5 | 85 | 19.8 | 105 |
| Urban | 1999 | 32 | 28 | 39 | 2 | 51 | 21.8 | 127 |
|  | 2009 | 34 | 23 | 41 | 3 | 57 | 22.4 | 111 |
| Rural | 1999 | 43 | 20 | 31 | 6 | 96 | 18.1 | 104 |
|  | 2009 | 42 | 18 | 34 | 6 | 93 | 19.0 | 104 |
| Choiseul | 1999 | 44 | 19 | 32 | 6 | 98 | 17.9 | 105 |
|  | 2009 | 42 | 17 | 35 | 6 | 92 | 19.1 | 105 |
| Western | 1999 | 41 | 20 | 34 | 5 | 86 | 19.2 | 112 |
|  | 2009 | 40 | 18 | 36 | 6 | 84 | 19.9 | 109 |
| Isabel | 1999 | 42 | 19 | 32 | 6 | 94 | 18.9 | 104 |
|  | 2009 | 40 | 17 | 37 | 7 | 88 | 20.6 | 104 |
| Central | 1999 | 41 | 20 | 33 | 6 | 88 | 18.9 | 108 |
|  | 2009 | 41 | 16 | 37 | 6 | 89 | 19.9 | 104 |
| Rennell-Bellona | 1999 | 41 | 17 | 31 | 11 | 108 | 19.8 | 107 |
|  | 2009 | 40 | 16 | 34 | 10 | 100 | 21.0 | 104 |
| Guadalcanal | 1999 | 42 | 21 | 32 | 5 | 88 | 18.7 | 109 |
|  | 2009 | 42 | 19 | 35 | 4 | 85 | 19.2 | 107 |
| Malaita | 1999 | 45 | 20 | 29 | 6 | 102 | 17.3 | 100 |
|  | 2009 | 43 | 18 | 33 | 6 | 96 | 18.4 | 101 |
| Makira-Ulawa | 1999 | 42 | 21 | 31 | 5 | 92 | 18.2 | 106 |
|  | 2009 | 43 | 17 | 35 | 5 | 94 | 18.9 | 106 |
| Temotu | 1999 | 41 | 20 | 32 | 7 | 93 | 18.8 | 94 |
|  | 2009 | 40 | 17 | 35 | 8 | 92 | 20.2 | 96 |
| Honiara | 1999 | 31 | 28 | 39 | 2 | 50 | 22.0 | 126 |
|  | 2009 | 32 | 24 | 41 | 3 | 53 | 22.7 | 112 |

A sex ratio of 100 means that there are equal numbers of males and females while a sex ratio lower than 100 means there are more females than males and a sex ratio higher than 100 meaning more males than females. Figure 14 shows there were significantly more males than females in Honiara, probably due to predominantly male migration towards

Honiara. Temotu on the other hand had more females than males with a sex ratio of only 96 males per 100 females.

Nevertheless, sex ratios in the Solomon Islands appear as abnormally high. It is true that the Honiara high ratio and Temotu low ratio can be explained by migration, but in all the other provinces the sex ratio is well over 100. Possible explanations of this issue are discussed in Appendix 1 and the conclusion is that the main cause is an under-count of women. Some possible reasons of this problem are also explained in Appendix 1. An attempt is done to correct this inaccuracy when population projections are carried out, but the indicators presented in this report are based on the counted population.

Figure 14: Sex ratios by province, Solomon Islands: 2009


A population's age structure may be considered as a map of its demographic history. Persons of the same age constitute a cohort of people who were born during the same year (or period); they have been exposed to similar historical events and conditions. The age structure of the whole population at a given moment may be viewed as an aggregation of cohorts born in different years. A graphic representation of the age structure of the population such as an "age pyramid" shows the different surviving cohorts of people of each sex in the Solomon Islands.

A population pyramid shows the number of males and females in single years (Fig.15) or five-year age groups (Figs.16) 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 of the pyramid's center.

The shaded area in Figure 16 shows the population count of the 1999 census, while the thickly outlined area shows the population count of the 2009 census.

The Solomon Island's population pyramid (Fig.15) has the distinct features of a classical pyramid: it has a wide base, meaning that a large percentage of people are in the younger age groups, with increasingly narrow bars towards the top of the pyramid, representing decreasing age groups at older ages ${ }^{2}$.

The population pyramids of the different provinces are shown in Figures 17-26.

It is important to note that in the single age pyramids, in spite of a general triangular pattern, there are some very long or short bars that form some sort of spikes. They are caused by the so call digit preference or age heaping. This problem takes place in most countries. Enumerators or respondents tend to report certain ages at the expenses of others. The preference refers to various ages having the same terminal digit (for example, if 5 is a favored digit, we may have a preference for ages $15,25,35,45$, etc.). The single age pyramids presented as following show some bars are noticeably longer than others. Those are precisely the results of digit preferences. It is important to note that when the age data are grouped in age intervals possible distortions caused by age heaping tend to disappear. Digit preferences will be examined again in Appendix 1.

The pyramids of Choiseul, Western, Isabel, Central, Rennell-Bellona, Malaita, MakiraUlawa and Temotu all have one distinct characteristic in common, which is the narrow bars at roughly ages 20-34. It is evident that these provinces are losing people aged 20-30 years as they migrate into the urban centers in search for employment, education and/or for other reasons.

Honiara's population pyramid presents a very different picture compared to all other provinces (Fig.26). It shows a high number of people aged 15-30 years due to internal migration flows directed towards Honiara where the young people expect to find opportunities that are lacking in their home villages.

[^1]Figure 15: Population pyramid by single years, The Solomon Islands: 2009


Figure 16: Population pyramid by 5-year age groups, Solomon Islands: 1999 and 2009


Figure 17: Population pyramid by single years, Choiseul: 2009


Figure 18: Population pyramid by single years, Western: 2009


Figure 19: Population pyramid by single years, Isabel: 2009


Figure 20: Population pyramid by single years, Central: 2009


Figure 21: Population pyramid by single years, Rennell-Bellona: 2009


Figure 22: Population pyramid by single years, Guadalcanal: 2009


Figure 23: Population pyramid by single years, Malaita: 2009


Figure 24: Population pyramid by single years, Makira-Ulawa: 2009


Figure 25: Population pyramid by single years, Temotu: 2009


Figure 26: Population pyramid by single years, Honiara: 2009


In accordance with the overall population structure, as illustrated by the population pyramids, several indicators can be calculated such as the median age and the age dependency ratio. (a comparison of the 1999 1nd 2009 age structures by province and rural-urban residence is shown in App.44)

The Solomon Islands population has a relatively young age structure, with $41 \%$ of the population younger than 15 years of age; $54 \%$ are in the so called working age groups 1559, and $5 \%$ were older than 60 years (Table 5 and Fig.27).

The age structure is also illustrated by the median age of 19.8 years (Table 5 and Fig.28), meaning that half of the Solomon Islands' population was younger and the other half older than 19.8 years. The median age in 1999 was only 18.8 years, indicating that the population structure was older in 2009 compared to 1999.

Honiara had $65 \%$ of its population in the age group 15-59 (Fig.27), caused by the influx of migrants from the other provinces. With a median age of 22.7 years, Honiara had the 'oldest' population in the country. However, Honiara had the lowest proportion of people aged over 60 years (3\%).

Figure 28 shows a comparison of the median age by province. While Honiara had the oldest population, the provinces of Malaita and Makira-Ulawa had the youngest populations with a median age of younger than 19 years.

A common way to describe a population's age structure is via the age dependency ratio, which compares the dependent component of a country's population with its economically productive component. This is conventionally expressed as the ratio of young people ( $0-14$ years) plus the old ( $60^{+}$years), to the working age population (15-59 years) as shown in Table 5 and Figure 29.

In 2009, Solomon Islands had a dependency ratio of 85 , meaning that for every 100 people of working age, 85 people were in the age dependent category. The higher the dependency ratio, the higher the number of people that needs to be cared for by the working age population. The dependency ratio has slightly decreased since the 1999 census when it was 87 . Based on the population structure of the different provincial populations, the age dependency ratios of the different provinces vary accordingly.

The most favorable dependency ratio can be found in Honiara with only 53 dependent people per 100 people of working age. Dependency ratios were significantly higher in Rennell-Bellona and Malaita where there were almost as many people in the 'dependent' age groups as there were people in the working age groups (15-59 years).

Figure 27: Population by broad age groups (in \%) by province, Solomon Islands: 2009


Figure 28: Population by median age and province, Solomon Islands: 2009


Figure 29: Population by age dependency ratio and province, Solomon Islands: 2009


## 3. DEMOGRAPHIC COMPONENTS

### 3.1 Fertility

### 3.1.1 National estimates

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

- Whether woman has ever given birth?
- How many children they had born alive?
- When was the last child born?

Based on the question whether a woman has eer given birth, it was found approximately $7 \%$ of woman remained childless at the end of their reproductive years. Childlessness was higher in the urban ( $9 \%$ ) than the rural areas ( $6 \%$ ).

The total number of children born alive to 151,395 women aged 15 and older was 432,103; 225,028 males and 207,075 females (Table 6). The average number of children born alive to all women (average parity) was 2.9 children per woman.

Table 6: Female population aged 15 and older by number of children ever born alive, Solomon Islands: 2009

| Age of <br> women | Number of <br> women | Number of <br> children ever born |  |  | Average number of <br> children ever born |  |  |
| :--- | :---: | ---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Males | Females | Total | Males | Females | Total |
| $15-19$ | 25,023 | 1,307 | 1,236 | 2,543 | 0.1 | 0.0 | 0.1 |
| $20-24$ | 23,020 | 10,165 | 9,199 | 19,364 | 0.4 | 0.4 | 0.8 |
| $25-29$ | 21,880 | 21,271 | 19,551 | 40,822 | 1.0 | 0.9 | 1.9 |
| $30-34$ | 18,785 | 29,918 | 27,850 | 57,768 | 1.6 | 1.5 | 3.1 |
| $35-39$ | 16,141 | 33,396 | 30,505 | 63,901 | 2.1 | 1.9 | 4.0 |
| $40-44$ | 11,568 | 28,141 | 25,956 | 54,097 | 2.4 | 2.2 | 4.7 |
| $45-49$ | 9,524 | 25,384 | 23,360 | 48,744 | 2.7 | 2.5 | 5.1 |
| $50-54$ | 6,841 | 19,048 | 17,412 | 36,460 | 2.8 | 2.5 | 5.3 |
| $55-59$ | 5,676 | 16,672 | 14,924 | 31,596 | 2.9 | 2.6 | 5.6 |
| $60-64$ | 4,381 | 13,162 | 12,042 | 25,204 | 3.0 | 2.7 | 5.8 |
| $65-69$ | 3,328 | 10,340 | 9,632 | 19,972 | 3.1 | 2.9 | 6.0 |
| $70+$ | 5,228 | 16,224 | 15,408 | 31,632 | 3.1 | 2.9 | 6.1 |
| Total | $\mathbf{1 5 1 , 3 9 5}$ | $\mathbf{2 2 5 , 0 2 8}$ | $\mathbf{2 0 7 , 0 7 5}$ | $\mathbf{4 3 2 , 1 0 3}$ | 1.5 | 1.4 | $\mathbf{2 . 9}$ |

Average parity increases with the age of women. While women aged 15-19 had only very few children, women aged 45-49 had 5.1 children, and women older than 70 had on average 6 children. The average parities of women over 49 years of age is also called the completed fertility rate, a cohort measure demonstrating how many children a certain cohort of women who have completed their childbearing actually produced during those years.

Figure 30 shows a comparison of the reported average number of children ever born of the last three censuses. A fertility decline is apparent as the average number of children per woman at every age declined from one census to the next. While the average number of children of women aged 45-49 years was 6.3 in 1986, it declined to 5.8 and 5.1 in 1999 and 2009.

Figure 30: Female population aged 15-49 by average number of children ever born alive, Solomon Islands: 1989, 1999, and 2009


The census also included questions on whether mother's children lived in her household or elsewhere, or whether they have died (Fig.31). The proportion of children living in their mother's household decreased with the age of the mother, because as children grow older they leave their parents' home and form their own household.

Figure 31: Proportion of children ever born by age of mother and whether living in the same household as their mother, Solomon Islands: 2009


From the question on date of birth of the last born child, the number of births per year or period can be calculated (Table 7). Responses from women during the 2009 census indicated that 15,715 children were born during the one-year period prior to the census, between November 2008 and November 2009.

Table 7: Reported number of births during the one-year period before the census (23 November 2008-22 November 2009) by age group of women, Solomon Islands: 2009

| $\begin{array}{c}\text { Age Group of } \\ \text { women }\end{array}$ | $\begin{array}{c}\text { Number of } \\ \text { women }\end{array}$ | $\begin{array}{c}\text { Number of children } \\ \text { Females }\end{array}$ |  |  | Total |
| :---: | ---: | ---: | ---: | ---: | :---: |$)$ *ASFR

[^2]Unfortunately, a reliable number of registered births (from Solomon Islands' vital registration system) is not available, and a comparison of census data is not possible.(Section 7.2.1).

Figure 32 shows a comparison of the above data of the last 3 censuses. Again it can be seen that the fertility level of women of all ages declined since 1986. Fertility levels have especially decreased of women aged 20-24 years. Comparing fertility levels of 1999 with 2009 shows a decline for women aged 20-34 years.

Figure 32: Reported age-specific-fertility-rates (ASFR), Solomon Islands: 1986, 1999, 2009


In order to estimate the Solomon Islands' fertility level, this analysis relies on indirect estimation techniques.

The first indirect method to estimate fertility applied here was the own-children method, which is a procedure deriving ASFRs for a 10- or 15-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).

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 (from ages 15-49 years). It is calculated from the number of live births by age of women in a given year - the age-specific fertility rates (ASFRs).

Fertility estimates derived using the own-children method based on the last five censuses (1970, 1976, 1986, 1999, and 2009) show that fertility levels have more or less steadily declined since 1975 when the TFR peaked at 7.7 children per woman; the TFR was exactly 6 in 1985, 5 in 1991, and is estimated at 4.1 for the 3-year period 2007-2009 (Fig.33).

This historical fertility pattern is very similar to many countries in the Pacific with high to very high fertility levels until the 1970s, when levels started to decrease.

Reasons are better availability and access to contraceptives, a better educated population, women's increased participation in the labor force, improved (reproductive) health care, and in general an increased westernization of people's lifestyles when access to Western metropolitan countries became easier after the opening of many international airports in Pacific Islands countries in the 1970s.

The own-children method has two major weaknesses. First, since the method estimates birth rates by single years, it uses children classified by single years of age. Therefore the results are very much affected by differential completeness of enumeration, age misreporting and age heaping. Averaging the results that refer to contiguous age groups is a way of reducing the effect of age heaping. However, considering the well-known deficiencies of census enumerations, especially among very young children, a drop in fertility during the two or three years immediately preceding the census is not necessarily an indication of fertility decline, but the result of under-counting of young children. Second, the basis of this method is the tabulation of children by single year of age and single year of age of mother. Hence, this can only be done if children are linked in some way to their mothers in their households. In the 2009 Census this was done by asking whether the biological mother of persons were living in the same households. However, as elsewhere, it is possible to suspect that not always the person reported as the biological mother is such. Sometimes the mother has died or is absent and the child has been informally adopted by a grandmother, an aunt or an older sister. This is known as the adoption or grandmother effect and tends to affect particularly age-specific fertility rates.

For these reasons, other indirect methods were also used to estimate fertility. The most frequently used indirect methods are the Brass-type methods. This approach was
pioneered by William Brass and improved by others. The sources of data for the Brasstype method are the number of children women ever had, and whether they had a birth in the year preceding the census. This information is available in most censuses. Several variants of the original Brass method were used here. The results of the applications of these methods are presented in Table 8.

Figure 33: Estimates of TFR based on 'own-children method'", Solomon Islands: 1957-2009


Table 8: Comparison of TFR estimates derived by various methods, Solomon Islands: 1999 and 2009

| Year | Own-children <br> method $^{\mathbf{1}}$ | Arriaga <br> method, using <br> $\mathbf{1}_{\text {point in time }}^{\mathbf{2}^{2}}$ | method, using <br> $\mathbf{2}$ points in <br> time $\mathbf{1 9 9 9}$ and <br> $\mathbf{2 0 0 9}^{\mathbf{3}}$ | Trussell P/F <br> ratio technique <br> $\mathbf{2}^{2}$ | Relational <br> Gompertz <br> method $^{\mathbf{4}}$ | $\mathbf{2 0 0 7}$ <br> $\mathbf{D H S}^{\mathbf{5}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 | $\mathbf{4 . 8}$ | 4.8 | 4.7 | 5.0 | 5.1 | 5.1 |
| 2009 | $\mathbf{4 . 1}$ | 4.4 | 4.3 | 4.7 | 4.6 | 4.6 |

1999 estimates refer to 3-year period 1998-2000 and estimate for 2009 refers to period 2007-9
${ }^{2}$ using adjustment factors of women aged 20-24
${ }^{3}$ using adjustment factors of women aged 25-29
${ }^{4}$ using average of age group 20-39 based on ASFR and CEB
${ }^{5}$ value 4.6 refers to 3-year period before 2007 survey; 5.1 refers to 1996

The variants of the original Brass method are usually known by the name of their authors (Eduardo Arriaga, and T. James Trussell; the relational Gompertz method is based on the Gompertz distribution and it was developed by G. Feeney and also by W. Brass). These methods have several advantages and weaknesses but all of them are based on similar principles. In general, they seek 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 under 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. These methods are explained and discussed in two main publications: MANUAL X.
INDIRECT TECHNIQUES FOR DEMOGRAPHIC ESTIMATION published by the United Nations (New York, 1973) and POPULATION ANALYSIS WITH MICROCOMPUTERS (PAS) by E. Arriaga and associates (U. S. Bureau of the Census, USAID, UNFPA, Washington, D. C., 1994).
A major limitation of these methods is the assumption of constant fertility. Although the original Brass method was quite sensitive to fertility changes, the other recent versions are more flexible regarding this assumption, unless fertility is declining very rapidly. In order to avoid even further the assumption of fertility decline, the utilization of two censuses has been proposed. In this case, the Arriaga method for two points in time was used. The main problem of this approach is that it is assumed that both censuses have the same level of under-enumeration, both by age and sex, a situation which hardly take place in the real world. The most frequently utilized method is the Trussell variant of the original Brass method and the Gompertz Relational Method. They are considered as the most reliable and robust to estimate recent level of fertility. The calculations for the Arriaga methods were done with the United Nations software MORTPAK 4.1 and the Trussell and Gompertz methods with PAS, from the US Bureau of the Census.

The results of the application of the different methods to estimate fertility are not very different. TFR varies from 4.6 to 5.1 in 1999 and in 2009 from 4.1 to 4.7. Even the results of the Demographic and Health Survey (DHS) are within this range. The result obtained from the Trussell variation and the Gompertz Relational Method are probably the nearest to the real fertility level observed at the end of the past decade in the Solomon Islands, considering the characteristics of the methods themself and their proximity of the result to the DHS. In other words, the fertility level estimated by the DHS validates the result obtained with the Trussell technique and Gompertz Relational Method. The Trussell method will be used for further fertility analyses. The problem with the Gompertz method is that it does not provide ASFRs. However, it is important to point out that regardless of the differences among the various methods, it is important to note that all of them indicate a decline in fertility, which is consistent with the long term decline suggested by the own-children method.

The relative distribution of the ASFR (adjusted by the Trussell technique) is presented in Figure 34. The percentages indicate the contribution of each age group of women to the overall fertility (TFR) and the complete curve represents the shape of the current fertility distribution, that is, the schedule by which women are currently having their children. According to Figure 34, the shape of the fertility distribution has changed very little from 1999 to 2009. The contribution to overall fertility has declined a little among teenagers (15-19) and among women 25-29 years old; it has remained almost constant among women 20-24, 30-34 and 45-49 years old and it has increased slightly in ages 35-39 and $40-44$ years old. This increase to the overall fertility contribution of these two ages is odd. It suggests that fertility has increased in these two age groups of women during the decade. In fact, they have raised a little, from 52 to 57 births per 1,000 women in the case of the age group 40-45 years. This increase can also be observed in Figure 32. The reason for this unusual trend appears to be a problem of births over-imputation rather than an actual increase. However, it is important to point out that changes are quite small and it is possible to say that the age pattern of current fertility has remained constant during the decade.

Figure 34: Relative distribution of ASFRs, Solomon Islands: 1999 and 2009


The number of births by age of women and, therefore, the total number of births during the oneyear period prior to 2009 can be calculated by multiplying the ASFR (adjusted by the Trussell technique) times the enumerated number of women by age group in the census, and summing the number of birth by the age group of women. This exercise is presented in Table 9.

Table 9: Estimated age-specific fertility rate (ASFR), annual number of births, total fertility rate (TFR), and mean age at childbearing (MAC), Solomon Islands: 2009

| Age group of <br> women | Number of <br> women | Estimated ASFR ${ }^{1}$ | Estimated number of <br> births $^{2}$ |
| :---: | ---: | :---: | :---: |
| $15-19$ | 25,023 | 0.062 | 1,555 |
| $20-24$ | 23,020 | 0.223 | 5,137 |
| $25-29$ | 21,880 | 0.243 | 5,316 |
| $30-34$ | 18,785 | 0.205 | 3,848 |
| $35-39$ | 16,141 | 0.135 | 2,175 |
| $40-44$ | 11,568 | 0.057 | 657 |
| $45-49$ | 9,524 | 0.018 | 170 |
| Total | $\mathbf{1 2 5 , 9 4 1}$ |  | $\mathbf{1 8 , 8 5 8}$ |
| TFR |  | $\mathbf{4 . 7}$ |  |
| MAC ${ }^{\mathbf{3}}$ |  |  | $\mathbf{2 9 . 5}$ |

${ }^{1}$ Estimated with the Trussel technique
${ }^{2}$ ASFR x number of women
${ }^{3}$ Mean age at childbearing

The estimated number of birth of 18,858 in 2009 suggest that part of the population aged younger than one year was under-enumerated. The 2009 Census enumerated 15,730 under one year children. The difference of 3,128 children can be explained by infant mortality but also by an under-count of young children. This issue is discussed in a further chapter.

Finally, the national crude birth rate (CBR) can be calculated by dividing the estimated number of births $(18,858)$ by the total census population $(515,870)$. The result is 36.6 births per 1,000 population.

$$
\mathbf{C B R}=18,858 / 515,870 \times 1,000=\mathbf{3 6 . 6} \text { (there were } 36 \text { births/ } 1,000 \text { population) }
$$

### 3.1.2 Sub national estimates

This section contains fertility estimates by urban-rural localities and by province. The estimates on fertility levels are based on the Trussell variation of the Brass method while the trends were estimated with the own-children method. As mentioned above, this latter method is likely to have under-estimated fertility; however it provides a reasonable trend.

Figure 35 shows that the fertility level in urban areas (3.3) is much lower than in rural areas (5.2). The provinces of Choiseul, Temotu and Honiara have lower than national TFR. Rennell-Bellona, Malaita and Central exhibit rates well over the average.

Figure 35: TFR by place of residence, Solomon Islands: 2009


Figures 36-37 show the fertility trend throughout the period 1995-2009 by urban-rural residence and by province. It shows a fairly similar trend for all areas with a more or less constant decrease in fertility levels, although there seem to have been a slight acceleration of decrease during the period 1998-2003.

Moreover during the periods 1995-2000 and 2001-2006 there seem to have been stagnation in the otherwise overall declining fertility level in the rural areas (Fig. 36).

Figure 38 presents adolescent or teenage fertility rate, which is the number of births per 1,000 women $15-19$ years old. Compared to the national average of 62 , the rate is 40 in urban areas and 69 in rural areas and it is the highest in Makira-Ulawa (87) and RennellBellona (82). The lowest rates are in Honiara (35) and Temotu (45). The contribution of teenage fertility to overall fertility (TFR) is low, only $6.6 \%$ at the national level. The province where adolescent fertility contributes less to overall fertility is in Central (4.4\%) and where it contributes more is in Makira-Ulawa and Choiseul (8.4\%).

Figure 36: Fertility trend by urban-rural residence, Solomon Islands: 1995-2009


Source: Michael Levin, Harvard University Center for Population and Development Studies

Figure 37: Fertility trend by province, Solomon Islands: 1995-2009


Source: Michael Levin, Harvard University Center for Population and Development Studies
Figure 38: Adolescent fertility rate (number of births per 1000 women aged 15-19 years), Solomon Islands: 2009


Figure 39: Fertility level (TFR) by educational attainment, Solomon Islands: 2009


Finally, comparing the fertility levels of women by level of educational attainment shows a very straightforward and clear pattern: the higher the level of women's education, the lower the number of children per woman (Fig. 39). Women with no schooling or some primary education have over the national average TFR, while women with secondary and tertiary education have a TFR well above the average.

### 3.2 Mortality

The questions relating to mortality in the 2009 census were:

- How many live births a woman has ever had, and how many of those born were still alive and/or had died;
- Whether a respondent's mother and father was still alive (orphanhood);
- Whether a respondent's marital status was "widowed" (widowhood);
- Whether any residents of the household died during the last 12 months prior to the census.


### 3.2.1 National level estimates

### 3.2.1.1 Household deaths

Based on the reported number of deaths by age and sex derived from the household question on number of deaths of household residents who died during the last 12 months before the census, 1,721 deaths were recorded; 993 males, and 728 females (Table 10).

Both the Brass Growth Balance Equation Method ${ }^{3}$ and the Preston-Coale Method ${ }^{4}$ were applied to the collected data, and it appears that the reported number of household deaths is significantly underreported. If these data were directly used to calculate a life table (by for example using the PAS procedure LTPOPDTH) life expectancy at birth for males and females would calculate at 86 and 88 years, which is obviously much too high.

Interestingly the reported number of infant deaths (population younger than 1 year) seems considerably overstated, probably due to age misreporting, or coding errors. On the other hand, male and female IMRs would calculate at about 25 and 21 per 1000 for males and females, which is higher when comparing it to results using indirect methods (section 3.2.1.3).

The life tables calculated in section 3.2.1.5 that are based on a composite of estimated child and adult mortality rates suggest that there were 1,808 male and 1,072 female deaths in 2009 (Table 20). Comparing these estimates with the reported numbers of male (993) and female (728) household deaths result in a completeness of death reporting of only $58 \%$ for males and $72 \%$ for females.

[^3]Table 10: Number of deaths of household residents by age and sex during the 12 months preceding the census and whether death was pregnancy related, Solomon Islands: 2009

| Age group | Total number of deaths |  |  | Pregnancy <br> related deaths |
| :---: | :---: | :---: | :---: | :---: |
|  | Both | Male | Female |  |
| 0 | 432 | 242 | 190 |  |
| $5-4$ | 120 | 66 | 54 |  |
| $10-14$ | 68 | 34 | 34 |  |
| $15-19$ | 48 | 26 | 22 | 4 |
| $20-24$ | 40 | 20 | 20 | 2 |
| $25-29$ | 56 | 33 | 23 | 8 |
| $30-34$ | 74 | 43 | 31 | 5 |
| $35-39$ | 76 | 37 | 39 | 4 |
| $40-44$ | 57 | 30 | 27 |  |
| $45-49$ | 59 | 32 | 27 |  |
| $50-54$ | 74 | 38 | 36 |  |
| $55-59$ | 100 | 61 | 39 |  |
| $60-64$ | 83 | 48 | 35 |  |
| $65-69$ | 71 | 58 | 13 |  |
| $70-74$ | 96 | 56 | 40 |  |
| $75-79$ | 87 | 58 | 29 |  |
| $80-84$ | 75 | 52 | 23 |  |
| $85+$ | 45 | 29 | 16 |  |
| Total | 60 | $\mathbf{1 , 7 2 1}$ | $\mathbf{9 9 3}$ | $\mathbf{7 2 8}$ |

## Model life table

However, the data on reported household deaths by age and sex was used to determine which of the different Coale-Demeny and United Nations model life tables compares best to the empirical Solomon Islands mortality pattern using MORTPAK's procedure COMPAR. The assumption was made that possible under-registration of deaths is not age specific and therefore does not affect the overall pattern of mortality.

It was found that the North pattern of the Coale-Demeny model life tables resembles most closely the empirical mortality pattern of the Solomon Islands population (Appendix 8 and 9).

### 3.2.1.2 Maternal mortality

Based on the collected information as presented in section 3.2.1.1 and Table 10, 24 pregnancy related deaths of women aged 15-44 years were recorded during the 12-month period before the census ( 23 November 2008 - 22 November 2009).

Once it was established that there were one or more deaths in the household during the reference period, an additional question was asked to identify pregnancy related deaths: "If person who died was female, was the death pregnancy related?".

The definition of a pregnancy related death is as follows:
A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental causes. (World Health Organization, 1993)

Please note that this definition was not available to census enumerators or respondents.
Table 11 summarizes several maternal mortality indicators, such as

- MMRatio, maternal mortality ratio: number of maternal deaths per 100,000 live births;
- MMRate, maternal mortality rate: number of maternal deaths per 1,000 women;
- PMFD, proportion of deaths due to maternal causes: ratio between numbers of reported female deaths and maternal deaths.
- LTR, lifetime risk of maternal death: reflects the chances of a woman dying from maternal causes over the course of her 35 -year reproductive life span $=35 \mathrm{x}$ MMRate

Table 11: National data on maternal mortality by women's age group, Solomon Islands: 2009

| Age group | Number of women | Number of women's deaths in the last 12 months | Number of deths due to maternal causes | Number of live births in the last 12 months by maternal age group ${ }^{1}$ | MMratio (per <br> 1,000 women) | MMrate (per <br> 1,000 women) | Proportions of <br> deaths due to <br> maternal <br> causes <br> (PMFD)$\|$ | Lifetime risk of maternal deaths, LTR (per 1,0000 women) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15-19 | 25,023 | 27 | 1 | 1,555 | 64 | 0.04 | 0.04 | 0.2 |
| 20-24 | 23,020 | 36 | 4 | 5,137 | 78 | 0.17 | 0.11 | 0.9 |
| 25-29 | 21,880 | 35 | 2 | 5,316 | 38 | 0.09 | 0.06 | 0.5 |
| 30-34 | 18,785 | 33 | 8 | 3,848 | 208 | 0.43 | 0.24 | 2.1 |
| 35-39 | 16,141 | 33 | 5 | 2,175 | 230 | 0.31 | 0.15 | 1.5 |
| 40-44 | 11,568 | 30 | 4 | 657 | 609 | 0.35 | 0.13 | 1.7 |
| 45-49 | 9,524 | 34 | 0 | 170 | 0 | 0.00 | 0.00 | 0 |
| Total | 125,941 | 228 | 24 | 18,858 | 127 | 0.19 | 0.11 | 6.7 |
| Adjusted |  |  | 27 |  | 143 | 0.21 |  | 7.5 |

${ }^{1}$ adjusted number of births based on Trussell technique
According to the recorded number of maternal (pregnancy related) deaths a MMRatio (maternal mortality ratio) of 127 is calculated; the MMRate (maternal mortality rate) is 0.19 , and LTR (the lifetime risk of a maternal death) is 6.7.

However, as mentioned in section 3.2.1.1, the recorded number of household deaths was substantially underreported, and one can assume that the same is true for pregnancy related deaths. The estimated true number of female deaths was more likely in the range of 1,037 (section 3.2.1.5, Table 20) instead of the recorded number of only 728 deaths, representing an undercount of about $42 \%$. With respect to the age group 15-49 years, 203 total female deaths were reported (Table 10) compared to an estimated number of 200 (Table 20), representing an undercount of $13 \%$ for female deaths for this age group.

Assuming that the reported number of maternal deaths is affected by the same factor of underreporting of total female deaths aged 15-49 years, and adjusting the pregnancy related deaths by a factor of 1.13 (accounting for the estimated $13 \%$ undercount) would bring the number of maternal deaths to 27, which in turn would raise the MMRatio to $\mathbf{1 4 3}$, the MMRate to $\mathbf{0 . 2 1}$, and the LTR to 7.5.

It seems doubtful that the enumerators and/or respondents were aware of the exact definition of what exactly constitutes a 'pregnancy related death' as it is not further described in the Enumerator Manual. Therefore the reported number of maternal deaths could be either over or under reported.

### 3.2.1.3 Child mortality

Infant and child survivorship can be estimated indirectly by examining answers of women aged between 15 and 50 years regarding numbers of children ever born and numbers of deceased children. When classified by the women's age, these numbers facilitate the computation of mean numbers of children ever born, mean numbers of children surviving and mean proportions of dead children. ${ }^{6}$

[^4]From all children that were ever born to women aged 15 years and older (432,103), 95\% $(410,359)$ were still alive and 21,744 children had died (Table 12).

The proportion of surviving females was higher than that of males (Table 13). While $95.3 \%$ of all female children ever born were still alive, only $94.7 \%$ of all male children had survived.

The proportion of surviving children decreases with the age of mothers (Table 13 and Fig.40). While $97.6 \%$ of all children that were ever born to women now aged 20-24 were still alive, only $95.3 \%$ of children born to women now aged 45-49 were still alive, and $87 \%$ of children born to women now aged 70 years and older remained alive.

This general trend is explained by the fact that as the age of mothers increases, so does the age of her children; the proportion of birth cohorts that have died rises with an increase in the age of mothers.

Table 12: Female population aged 15 and older by number of children ever born, number of children dead, and number of children still alive, Solomon Islands: 2009

| Age of women | $\begin{array}{r} \text { Total } \\ \text { number of } \\ \text { women } \\ \hline \end{array}$ | Total number of children ever born alive |  |  | Total number of children dead |  |  | Total number of children still alive |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | Males | Females | Total | Males |  | Total | Males | Females |
| 15-19 | 25,023 | 2,543 | 1,307 | 1,236 | 64 | 34 | 30 | 2,479 | 1,273 | 1,206 |
| 20-24 | 23,020 | 19,364 | 10,165 | 9,199 | 473 | 269 | 204 | 18,891 | 9,896 | 8,995 |
| 25-29 | 21,880 | 40,822 | 21,271 | 19,551 | 1,198 | 672 | 526 | 39,624 | 20,599 | 19,025 |
| 30-34 | 18,785 | 57,768 | 29,918 | 27,850 | 1,799 | 966 | 833 | 55,969 | 28,952 | 27,017 |
| 35-39 | 16,141 | 63,901 | 33,396 | 30,505 | 2,176 | 1,201 | 975 | 61,725 | 32,195 | 29,530 |
| 40-44 | 11,568 | 54,097 | 28,141 | 25,956 | 2,223 | 1,195 | 1,028 | 51,874 | 26,946 | 24,928 |
| 45-49 | 9,524 | 48,744 | 25,384 | 23,360 | 2,293 | 1,269 | 1,024 | 46,451 | 24,115 | 22,336 |
| 50-54 | 6,841 | 36,460 | 19,048 | 17,412 | 1,899 | 1,077 | 822 | 34,561 | 17,971 | 16,590 |
| 55-59 | 5,676 | 31,596 | 16,672 | 14,924 | 2,036 | 1,156 | 880 | 29,560 | 15,516 | 14,044 |
| 60-64 | 4,381 | 25,204 | 13,162 | 12,042 | 1,820 | 1,028 | 792 | 23,384 | 12,134 | 11,250 |
| 65-69 | 3,328 | 19,972 | 10,340 | 9,632 | 1,697 | 931 | 766 | 18,275 | 9,409 | 8,866 |
| 70-74 | 2,296 | 13,992 | 7,174 | 6,818 | 1,579 | 848 | 731 | 12,413 | 6,326 | 6,087 |
| 75-79 | 1,590 | 9,541 | 4,879 | 4,662 | 1,244 | 692 | 552 | 8,297 | 4,187 | 4,110 |
| 80-84 | 725 | 4,317 | 2,190 | 2,127 | 607 | 307 | 300 | 3,710 | 1,883 | 1,827 |
| 85+ | 617 | 3,782 | 1,981 | 1,801 | 636 | 351 | 285 | 3,146 | 1,630 | 1,516 |
| Total | 151,395 | 432,103 | 225,028 | 207,075 | 21,744 | 11,996 | 9,748 | 410,359 | 213,032 | 197,327 |

Table 13: Female population aged 15 and older by proportion of children ever born and still alive, and proportion now dead, Solomon Islands: 2009

| Age of women | Total number of women | Proportion of children ever born still alive (\%) |  |  | Proportion of children ever born now dead (\%) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total | Males | Females | Total | Males | Females |
| 15-19 | 25,023 | 97.5 | 97.4 | 97.6 | 2.5 | 2.6 | 2.4 |
| 20-24 | 23,020 | 97.6 | 97.4 | 97.8 | 2.4 | 2.6 | 2.2 |
| 25-29 | 21,880 | 97.1 | 96.8 | 97.3 | 2.9 | 3.2 | 2.7 |
| 30-34 | 18,785 | 96.9 | 96.8 | 97.0 | 3.1 | 3.2 | 3.0 |
| 35-39 | 16,141 | 96.6 | 96.4 | 96.8 | 3.4 | 3.6 | 3.2 |
| 40-44 | 11,568 | 95.9 | 95.8 | 96.0 | 4.1 | 4.2 | 4.0 |
| 45-49 | 9,524 | 95.3 | 95.0 | 95.6 | 4.7 | 5.0 | 4.4 |
| 50-54 | 6,841 | 94.8 | 94.3 | 95.3 | 5.2 | 5.7 | 4.7 |
| 55-59 | 5,676 | 93.6 | 93.1 | 94.1 | 6.4 | 6.9 | 5.9 |
| 60-64 | 4,381 | 92.8 | 92.2 | 93.4 | 7.2 | 7.8 | 6.6 |
| 65-69 | 3,328 | 91.5 | 91.0 | 92.0 | 8.5 | 9.0 | 8.0 |
| 70-74 | 2,296 | 88.7 | 88.2 | 89.3 | 11.3 | 11.8 | 10.7 |
| 75-79 | 1,590 | 87.0 | 85.8 | 88.2 | 13.0 | 14.2 | 11.8 |
| 80-84 | 725 | 85.9 | 86.0 | 85.9 | 14.1 | 14.0 | 14.1 |
| 85+ | 617 | 83.2 | 82.3 | 84.2 | 16.8 | 17.7 | 15.8 |
| Total | 151,395 | 95.0 | 94.7 | 95.3 | 5.0 | 5.3 | 4.7 |

A comparison of data on children ever born and still alive from the 1986, 1999 and 2009 census data show continues improvements in the survival of children of women of all age groups. Especially the proportion of children of older women, have significantly increased, which points to a general improvement in the (child) mortality levels (Fig.41) in the Solomon Islands during the last 23 years.

Figure 40: Proportion of children ever born and still alive by sex and by age of mother, Solomon Islands: 2009


Figure 41: Proportion of children ever born and still alive by age of mother, Solomon Islands: 1986, 1999 and 2009


Using the above census data on children ever born and children still living (by age group of mother), the following mortality indices have been obtained using the United Nations software package MORTPAK4.1, procedures CEBCS, and the assumption that the Coale-Demeny North model life tables resembles most closely the empirical mortality pattern of the Solomon Islands population (section 3.2.1.1)(Apps. 10 and 11).

Table 14: Child mortality indicators, Solomon Islands: 2009

| Indicator | Total | 1999 <br> Males | Females | Total | Males <br> Man | Females |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Infant mortality rate $(\mathrm{IMR})^{1}$ | 28 | 29 | 26 | 22 | 24 | 20 |
| Child mortality rate $(4 \mathrm{q} 1)^{2}$ | 7 | 7 | 6 | 6 | 7 | 4 |
| Under-5 mortality rate $(\mathrm{q} 5)^{3}$ | 34 | 36 | 32 | 28 | 31 | 25 |

${ }^{1}=$ the number of deaths of children under one year of age per 1,000 live births
${ }^{2}=$ the probability of dying between age 1 and age 5 (per 1,000 )
${ }^{3}=$ the probability of dying between birth and age $5($ per 1,000$)$
The Infant Mortality Rate (IMR) in 2009 was estimated at 24 and 20 for males and females, respectively, which is an improvement compared to $1999^{7}$ when the IMR was estimated at 29 and 26 for males and females (Table 14). These 1999 estimates were derived when applying the same indirect method to the 1999 data as presented above. Please note that the final estimates of the IMR for 1999 were 67 and 65 for males and females, based on an alternative method (further described in the 1999 census report). In retrospect, these estimates seem out of line compared to results of censuses taken before 1999 and 2009. The 2009 estimates are furthermore consistent with estimates derived from the 2007 Solomon Islands Demographic and Health Survey (Fig.42).

In general, the Solomon Islands have come a long way in improving child mortality rates when considering that the IMR in the 1960s was estimated at over 120 infant deaths per 1000 live births!

Child mortality, the probability of dying between age 1 and age 5 , was estimated at 7 male deaths and 4 female deaths per 1,000 people of that age in 2009, a slight improvement compared to 1999.

Under 5 mortality, the probability of dying between birth and age 5, was estimated at 31 for males and 25 for females per 1,000 in 2009.

[^5]Figure 42: Infant mortality rate (IMR), Solomon Islands: 1961-2009


Source: of 1976, 1986 and 1999 census data and graph: CME Info $^{8}$ (www.childmortality.org).

[^6]
### 3.2.1.4 Adult mortality

Adult mortality levels can be estimated from responses to the question

- whether a respondent's mother or father was still alive (orphanhood), and
- Whether a respondent's marital status was "widowed" (widowhood).


## Orphanhood

The census questionnaire included questions on whether respondents' mothers and fathers were still alive. The answers of persons in the age range $15-54$ years to these questions can yield indirect estimates of adult mortality. ${ }^{9}$.

From the total population of $515,870,73.1 \%$ responded that their father was still alive ( 377,320 people). This compares to 419,207 people or $81.3 \%$ who responded that their mother was still alive.

From Table 15 and Figure 43 it can be seen that the number and proportion of respondent's mother still alive is higher than that of fathers at any age of respondent. There are 2 explanations for it:

1. Females (mothers) usually live longer lives than males (fathers), and
2. Fathers are usually older than mothers, because of their age difference at marriage. In section 4.1, it was calculated that the average age at marriage (SMAM) is about 27.1 and 23.3 years for males and females respectively; an age difference of almost 4 years between spouses.
[^7]Table 15: Population by 5 year age group and whether biological father or mother is still alive, Solomon Islands: 2009

| Age group | Number of <br> respondents | Father still alive <br> Yes |  | No | Mother still alive <br> Yes |  | No |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: | :---: |
| $\mathbf{0 - 4}$ | 76,227 | 73,398 | 2,829 | 75,604 | 623 |  |  |
| $5-9$ | 71,126 | 67,945 | 3,181 | 69,939 | 1,187 |  |  |
| $10-14$ | 61,931 | 57,839 | 4,092 | 60,301 | 1,630 |  |  |
| $15-19$ | 51,212 | 46,194 | 5,018 | 48,961 | 2,251 |  |  |
| $20-24$ | 45,419 | 38,098 | 7,321 | 41,877 | 3,542 |  |  |
| $25-29$ | 42,674 | 32,389 | 10,285 | 37,531 | 5,143 |  |  |
| $30-34$ | 37,592 | 24,649 | 12,943 | 30,430 | 7,162 |  |  |
| $35-39$ | 33,151 | 17,888 | 15,263 | 24,004 | 9,147 |  |  |
| $40-44$ | 23,638 | 9,177 | 14,461 | 13,739 | 9,899 |  |  |
| $45-49$ | 19,713 | 5,421 | 14,292 | 8,848 | 10,865 |  |  |
| $50-54$ | 14,339 | 2,238 | 12,101 | 4,183 | 10,156 |  |  |
| $55-59$ | 11,787 | 1,154 | 10,633 | 2,301 | 9,486 |  |  |
| $60-64$ | 8,916 | 448 | 8,468 | 862 | 8,054 |  |  |
| $65-69$ | 7,021 | 285 | 6,736 | 413 | 6,608 |  |  |
| $70+$ | 11,124 | 197 | 10,927 | 214 | 10,910 |  |  |
| Total | $\mathbf{5 1 5 , 8 7 0}$ | $\mathbf{3 7 7 , 3 2 0}$ | $\mathbf{1 3 8 , 5 5 0}$ | $\mathbf{4 1 9 , 2 0 7}$ | $\mathbf{9 6 , 6 6 3}$ |  |  |

Figure 43: Proportion of respondent's father or mother still alive, Solomon Islands: 2009


The data on orphanhood were used to calculate adult mortality rates, specifically the life expectancy at age 20 (Table 16). The software package MORTPAK, procedure ORPHAN, was used to calculate the adult mortality rates. Please note that the mean age at childbearing (MAC), a required data input for this method, was calculated from the adjusted ASFR produced by the Trussell indirect technique for fertility estimation (Table 9). The MAC-value for males was adjusted by the age difference of the calculated SMAMs.

Life expectancy at age 20 - the number of years a 20 -year old person can on average expect to live - was 50.2 years for males and 55.5 years for females. The calculated higher female life expectancy corresponds to the higher proportion of respondents mothers (females) still alive than their fathers (males).

Table 16: Life expectancy at age 20 (in years), based on the orphanhood method, MORTPAK's procedure ORPHAN, Solomon Islands: 1999 and 2009

| Census year | Males | Females | Total |
| :--- | ---: | ---: | :---: |
| 2009 | 50.2 | 55.5 | 52.8 |
| 1999 | 50.7 | 53.2 | 52.2 |

## Widowhood

From Table 17 and Figure 44 it can be seen that the number and proportion of females widowed is higher than that of males. There are 2 explanations for it:

1. Females usually live longer lives than males (her spouse), and
2. Males are usually older than females, because of their age difference at marriage, as described above (orphanhood).

An attempt was made to use the data on widowhood to calculate adult mortality rates, specifically the life expectancy at age 20, by applying the software package MORTPAK, procedure WIDOW. Unfortunately, the data do not allow the calculation of female values, because the proportion of male widowers is too small to calculate any reasonable indicators.

There are 2 explanations for this:

1. Males did incorrectly state their marital status
2. A high proportion of males who lost their spouse remarried, and although widowed once, is tabulated as 'married'.

Table 17: Population 15 years and older by sex and widowed, Solomon Islands: 2009

| Age group | Total | Total <br> Males | Females | Total | Males | Females |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $15-19$ | 51,212 | 26,189 | 25,023 | 51 | 5 | 46 |
| $20-24$ | 45,419 | 22,399 | 23,020 | 162 | 13 | 149 |
| $25-29$ | 42,674 | 20,794 | 21,880 | 234 | 17 | 217 |
| $30-34$ | 37,592 | 18,807 | 18,785 | 302 | 41 | 261 |
| $35-39$ | 33,151 | 17,010 | 16,141 | 430 | 64 | 366 |
| $40-44$ | 23,638 | 12,070 | 11,568 | 649 | 92 | 557 |
| $45-49$ | 19,713 | 10,189 | 9,524 | 877 | 121 | 756 |
| $50-54$ | 14,339 | 7,498 | 6,841 | 1,143 | 167 | 976 |
| $55-59$ | 11,787 | 6,111 | 5,676 | 1,279 | 223 | 1,056 |
| $60-64$ | 8,916 | 4,535 | 4,381 | 1,499 | 276 | 1,223 |
| $65-69$ | 7,021 | 3,693 | 3,328 | 1,561 | 332 | 1,229 |
| $70+$ | 11,124 | 5,896 | 5,228 | 3,923 | 1,129 | 2,794 |
| Total | $\mathbf{3 0 6 , 5 8 6}$ | $\mathbf{1 5 5 , 1 9 1}$ | $\mathbf{1 5 1 , 3 9 5}$ | $\mathbf{1 2 , 1 1 0}$ | $\mathbf{2 , 4 8 0}$ | $\mathbf{9 , 6 3 0}$ |

Figure 44: Proportion of population 15 years and older by sex and widowed, Solomon Islands: 2009


Nevertheless, the data on marital status (widowhood) provides interesting and valuable insights into mortality differentials between males and females, as the large difference in widowed males and females points to lower mortality rates (higher life expectancies) for females than males.

However, since the widowhood method cannot be applied to both males and females, it was decided to rely on the orphanhood method to calculate consistent data for males and females, i.e. using the same method for both sexes.

### 3.2.1.5 Complete life table

Apart from being valuable in their own right, estimates of childhood and adult mortality are also necessary inputs for constructing life tables for the Solomon Islands population. Life tables are essential to make population projections based on cohort component methodology ${ }^{10}$.

Once again, the UN software package MORTPAK, procedure COMBIN, was used to calculate a complete life table for males and females. The following inputs were used (Table 18):

[^8]Construction of Composite life table
The method to generate a composite life table essentially boils down to the following (Table 18):

1. Derive estimates of $1(1)$ and $1(5)$ based on estimates of 1 q 0 (=IMR) and 4 q 1 (=probability of dying before exact age 5 after survival to exact age 1) implied by the reported proportions dead for respondents in the age-group 20-24. The values used were:

$$
\begin{aligned}
& 1 \mathrm{q} 0(\text { males })=.025 \text { and } \\
& 1 \mathrm{q} 0(\text { females })=.021, \text { and } \\
& 4 \mathrm{q} 1(\text { males })=.007 \text { and } \\
& 4 \mathrm{q} 1(\text { females })=.005(\text { Table 17 }) . \text { Therefore, } \\
& \\
& 1(1)_{\text {males }}=1(0)-(1 \mathrm{q} 0 \times 1(0))=100,000-(.025 \times 100,000)=97,500 \\
& 1(1)_{\text {females }}=1(0)-(1 \mathrm{q} 0 \times 1(0))=100,000-(.021 \times 100,000)=97,900 \\
& 1(5)_{\text {males }}=1(1)-(4 \mathrm{q} 0 \times 1(1))=97,100-(.007 \times 97,100)=96,818 \\
& 1(5)_{\text {females }}=1(1)-(4 \mathrm{q} 0 \times 1(1))=97,400-(.005 \times 97,400)=97,411
\end{aligned}
$$

2. Accept the calculated $\mathrm{e}(20)$, that is: $\mathrm{e}(20)_{\text {male }}=50.2$ years and $\mathrm{e}(20)_{\text {female }}=55.5$ years.
3. Create a composite life table for men and women by fitting a model age pattern of mortality that uses the estimates in (1) and (2) as reference points. The assumption was made that the ultimate shape of the fitted model age pattern of mortality resembles age patterns found in region North model life tables of the Coale and Demeny model life table system (United Nations 1983 and United Nations 1988).

Table 18: Child and adult mortality indicators used to calculate complete life table, Solomon Islands: 2009

| Indicators | Males | Females |
| :--- | ---: | ---: |
| Infant mortality rate (q0) | 24 | 20 |
| Child mortality (1q4) | 7 | 4 |
| l(1) | 97,600 | 98,000 |
| l(5) | 96,917 | 97,608 |
| E(20) | 50.2 | 55.5 |

$1(1)=$ The probability of surviving to age 1 (times 100,000$)$ in the population under study $=$ 100000 * [ $1-\mathrm{q}(0)$ ]
$1(5)=$ The probability of surviving to age $5($ times 100,000$)$ in the population under study $=$ $100000 *[1-q(0)] *[1-1 q 4)]$

Tables 19 and 20 show the complete life tables for males and females. The life expectancies at birth of 66.2 and 73.1 years for males and females which compares to 67.0 and 70.2 years for males and females based on the 1999 census ${ }^{11}$.

Life tables for males and females for each province and the urban and rural populations are presented in Appendices 14-37.

The life tables for urban-rural and provincial distinctions were calculated according to the following approach: Infant mortality rates for both sexes by urban-rural areas and provinces were computed using the same indirect method used for the total population. To disaggregate the infant mortality by sex in the urban-rural and provincial distinction, the total differential magnitude was applied to each sub-division. The assumption is that the magnitude of sex differential is the same in urban-rural areas and provinces as in the total population (which is a reasonable assumption). Having obtained the infant mortality by sex for urban-rural and provinces, the Mortpak program MATCH was utilized (previously mentioned). This program calculates life tables using a given level of mortality and a model life table. In this case, the level of mortality was given by the infant mortality of the urban-rural areas or provinces (by sex) and the model life table by the national life table (also by sex). By using this approach, it is assumed that the pattern of mortality in urban-rural areas and provinces is the same as the national pattern (by sex) and differ only by the level of mortality, which is given by urban-rural and provincial infant mortality (this is also a reasonable assumption).

[^9]Table 19: Abridged life table for Solomon Islands males: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0245 | 0.0240 | 100,000 | 2,400 | 97,868 | 0.9728 | $6,619,717$ | $\mathbf{6 6 . 2}$ |
| 1 | 0.0020 | 0.0080 | 97,600 | 782 | 388,508 | 0.9898 | $6,521,849$ | 66.8 |
| 5 | 0.0022 | 0.0110 | 96,818 | 1,064 | 481,431 | 0.9907 | $6,133,341$ | 63.3 |
| 10 | 0.0015 | 0.0075 | 95,754 | 720 | 476,973 | 0.9896 | $5,651,910$ | 59.0 |
| 15 | 0.0029 | 0.0142 | 95,035 | 1,350 | 472,022 | 0.9841 | $5,174,938$ | 54.5 |
| 20 | 0.0034 | 0.0170 | 93,685 | 1,594 | 464,499 | 0.9827 | $4,702,916$ | 50.2 |
| 25 | 0.0035 | 0.0175 | 92,091 | 1,615 | 456,441 | 0.9819 | $4,238,417$ | 46.0 |
| 30 | 0.0038 | 0.0189 | 90,476 | 1,709 | 448,161 | 0.9801 | $3,781,975$ | 41.8 |
| 35 | 0.0043 | 0.0212 | 88,767 | 1,879 | 439,246 | 0.9767 | $3,333,815$ | 37.6 |
| 40 | 0.0053 | 0.0259 | 86,888 | 2,255 | 428,990 | 0.9709 | $2,894,569$ | 33.3 |
| 45 | 0.0067 | 0.0330 | 84,633 | 2,789 | 416,519 | 0.9600 | $2,465,579$ | 29.1 |
| 50 | 0.0098 | 0.0480 | 81,844 | 3,930 | 399,869 | 0.9447 | $2,049,060$ | 25.0 |
| 55 | 0.0131 | 0.0637 | 77,915 | 4,963 | 377,776 | 0.9216 | $1,649,191$ | 21.2 |
| 60 | 0.0202 | 0.0965 | 72,952 | 7,037 | 348,149 | 0.8808 | $1,271,415$ | 17.4 |
| 65 | 0.0314 | 0.1463 | 65,915 | 9,642 | 306,644 | 0.8195 | 923,266 | 14.0 |
| 70 | 0.0497 | 0.2218 | 56,273 | 12,481 | 251,300 | 0.7274 | 616,622 | 11.0 |
| 75 | 0.0800 | 0.3340 | 43,792 | 14,627 | 182,801 | 0.4996 | 365,321 | 8.3 |
| 80 | 0.1598 | $\ldots$ | 29,165 | 29,165 | 182,520 | $\ldots$ | 182,520 | 6.3 |

Note: Highlighted are the input values as displayed in Table 18, as well as the life expectancy at birth (e0)
Table 20: Abridged life table for Solomon Islands females: 2009

| Age | m(x,n) | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | l(x) | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | T(x) | e(x) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0204 | 0.0200 | 100,000 | 2,000 | 98,200 | 0.9785 | 7,305,722 | 73.1 |
| 1 | 0.0010 | 0.0040 | 98,000 | 392 | 391,056 | 0.9960 | 7,207,522 | 73.5 |
| 5 | 0.0006 | 0.0030 | 97,608 | 289 | 487,318 | 0.9973 | 6,816,465 | 69.8 |
| 10 | 0.0005 | 0.0024 | 97,319 | 234 | 486,011 | 0.9963 | 6,329,147 | 65.0 |
| 15 | 0.0011 | 0.0054 | 97,085 | 528 | 484,233 | 0.9932 | 5,843,136 | 60.2 |
| 20 | 0.0016 | 0.0078 | 96,557 | 750 | 480,964 | 0.9921 | 5,358,903 | 55.5 |
| 25 | 0.0016 | 0.0079 | 95,806 | 756 | 477,159 | 0.9917 | 4,877,938 | 50.9 |
| 30 | 0.0018 | 0.0088 | 95,050 | 838 | 473,196 | 0.9906 | 4,400,779 | 46.3 |
| 35 | 0.0020 | 0.0101 | 94,212 | 948 | 468,764 | 0.9886 | 3,927,583 | 41.7 |
| 40 | 0.0026 | 0.0130 | 93,264 | 1,208 | 463,441 | 0.9849 | 3,458,819 | 37.1 |
| 45 | 0.0036 | 0.0180 | 92,056 | 1,653 | 456,426 | 0.9765 | 2,995,379 | 32.5 |
| 50 | 0.0061 | 0.0299 | 90,403 | 2,700 | 445,701 | 0.9650 | 2,538,953 | 28.1 |
| 55 | 0.0083 | 0.0409 | 87,703 | 3,589 | 430,098 | 0.9475 | 2,093,252 | 23.9 |
| 60 | 0.0138 | 0.0669 | 84,115 | 5,625 | 407,517 | 0.9146 | 1,663,154 | 19.8 |
| 65 | 0.0226 | 0.1073 | 78,490 | 8,420 | 372,712 | 0.8651 | 1,255,637 | 16.0 |
| 70 | 0.0366 | 0.1683 | 70,070 | 11,794 | 322,436 | 0.7862 | 882,924 | 12.6 |
| 75 | 0.0618 | 0.2687 | 58,276 | 15,658 | 253,500 | 0.5477 | 560,488 | 9.6 |
| 80 | 0.1388 | ... | 42,618 | 42,618 | 306,989 | ... | 306,989 | 7.2 |

Note: Highlighted are the input values as displayed in Table 18, as well as the life expectancy at birth (e0)

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 " $\mathrm{m}(\mathrm{x}, \mathrm{n})$ " 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 " $1(x)$ " shows the number of people alive at the beginning of each age interval, starting with 100,000 at birth. Column " $\mathrm{d}(\mathrm{x}, \mathrm{n})$ " shows the number who would die within each age interval. Column " $\mathrm{L}(\mathrm{x}, \mathrm{n})$ " shows the total number of person-years that would be lived within each age interval. Column " $\mathrm{T}(\mathrm{x})$ " 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 personyears 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 " $q(x, n)$ " is an approximation of the infant mortality rate (IMR). The second value in column " $\mathbf{q}(\mathbf{x}, \mathbf{n})$ " is an approximation of the child mortality rate.
$\mathrm{m}(\mathrm{x}, \mathrm{n})=$ age-specific death rate
$q(x, n)=$ the probability of dying between two exact ages
$l(x) \quad=$ 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 $\mathrm{x}+\mathrm{n}$ ) by the cohort of 100,000 births assumed.
$S(x, n)=$ probability of surviving between two exact ages, $x$ and $x+n$
$T(x) \quad=$ 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.
$e(x) \quad=$ expectation of life from age $x$

Finally the annual number of deaths by age and sex can be calculated by multiplying the age-specific-death rates - the $m(x)$ values in column 2 of tables 19 and 20 - by the male and female population size of each respective age group. The results are displayed in Table 21.

Table 21: Estimated number of deaths, and crude death rates (CDR) based on life table's age-specific-death rates $[m(x)]$ and enumerated population size, Solomon

Islands: 2009

| Age group | Population size |  |  | m(x,n) |  | Estimated number of deaths |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Total | Male | Female | Male | Female | Total |
| 0 | 8,239 | 7,491 | 15,730 | 0.0245 | 0.0204 | 202 | 153 | 355 |
| $0-4$ | 31,489 | 29,008 | 60,497 | 0.0020 | 0.0010 | 63 | 29 | 92 |
| $5-9$ | 36,974 | 34,152 | 71,126 | 0.0022 | 0.0006 | 82 | 20 | 102 |
| $10-14$ | 32,562 | 29,369 | 61,931 | 0.0015 | 0.0005 | 49 | 14 | 63 |
| $15-19$ | 26,189 | 25,023 | 51,212 | 0.0029 | 0.0011 | 75 | 27 | 102 |
| $20-24$ | 22,399 | 23,020 | 45,419 | 0.0034 | 0.0016 | 77 | 36 | 113 |
| $25-29$ | 20,794 | 21,880 | 42,674 | 0.0035 | 0.0016 | 74 | 35 | 108 |
| $30-34$ | 18,807 | 18,785 | 37,592 | 0.0038 | 0.0018 | 72 | 33 | 105 |
| $35-39$ | 17,010 | 16,141 | 33,151 | 0.0043 | 0.0020 | 73 | 33 | 105 |
| $40-44$ | 12,070 | 11,568 | 23,638 | 0.0053 | 0.0026 | 63 | 30 | 94 |
| $45-49$ | 10,189 | 9,524 | 19,713 | 0.0067 | 0.0036 | 68 | 34 | 103 |
| $50-54$ | 7,498 | 6,841 | 14,339 | 0.0098 | 0.0061 | 74 | 41 | 115 |
| $55-59$ | 6,111 | 5,676 | 11,787 | 0.0131 | 0.0083 | 80 | 47 | 128 |
| $60-64$ | 4,535 | 4,381 | 8,916 | 0.0202 | 0.0138 | 92 | 60 | 152 |
| $65-69$ | 3,693 | 3,328 | 7,021 | 0.0314 | 0.0226 | 116 | 75 | 191 |
| $70-74$ | 2,402 | 2,296 | 4,698 | 0.0497 | 0.0366 | 119 | 84 | 203 |
| $75-79$ | 1,784 | 1,590 | 3,374 | 0.0800 | 0.0618 | 143 | 98 | 241 |
| $80+$ | 1,710 | 1,342 | 3,052 | 0.1598 | 0.1388 | 273 | 186 | 460 |
| Total | $\mathbf{2 6 4 , 4 5 5}$ | $\mathbf{2 5 1 , 4 1 5}$ | $\mathbf{5 1 5 , 8 7 0}$ |  |  | $\mathbf{1 , 7 9 5}$ | $\mathbf{1 , 0 3 7}$ | $\mathbf{2 , 8 3 2}$ |
| CDR |  |  |  |  |  | $\mathbf{6 . 8}$ | $\mathbf{4 . 1}$ | $\mathbf{5 . 5}$ |

CDR: crude death rate

The crude death rate (CDR) for the Solomon Islands is calculated as follows:
$\mathbf{C D R}=2,832 / 515,870 \times 1,000=\mathbf{5 . 5} \quad$ (5.5 deaths per 1,000 population in 2009)

Table 22: Life expectancy at birth in years (e0), Solomon Islands: 1999 and 2009

| Census year | Males | Females | Total |
| :---: | :---: | :---: | :---: |
| 2009 | 66.2 | 73.1 | 69.3 |
| 1999 | 67.0 | 70.2 | 68.6 |

The above mortality indicators clearly show more positive mortality indicators for females than for males, with females living longer, on average about six years longer, than males (Table 22). The findings are supported by the following data:

- the proportion of surviving female children was higher than males (Fig.40)
- more mothers than fathers survive to older ages (Fig.43)
- the proportion of widowed females was considerably higher than that of widowed males (Fig.44), indicating earlier death of male spouses.

While the overall level of mortality (life expectancy at birth) increased for females during the intercensal period 1999-2009, it unfortunately seems not to have improved for the Solomon Island's men; life expectancy at birth slightly decreased from 67.0 years to 66.2 years, despite an improvement of the infant mortality rate - also for boys. It therefore has to be concluded that a slight worsening of male adult mortality is the reason of the overall stagnation in male mortality, which is confirmed by the decrease in male life expectancy at age 20 from 50.7 years in 1999 to 50.2 years in 2009. A possible cause for the stagnating male adult mortality rates could be an increase in life style diseases such as unhealthy eating habits, smoking and excessive alcohol consumption, and/or a lack of regular physical exercise etc. Then again, it is very well possible that the violent ethnic unrest of the recent past may have taken its toll, particularly on the male population.

### 3.2.2 Sub national estimates

This section contains several mortality indicators by urban-rural distinction and by province. All life table estimates are based on the approach previously described.

A general observation is that all mortality indicators show better indicators in the urban than the rural areas, and that females are in general better off than males, although there are some exceptions to the general trend which is shown below.

The summary of main indicators in front of the report summarizes various mortality indicators by sex and place of residence, and figures show the results visually.

Children of mothers living in urban areas and/or Honiara have a much higher probability of survival than children of women living in rural areas (Fig.45). Compared to the national average, children of mothers living in Rennell-Bellona, Isabel, Malaita, Choiseul, and Central had the lowest probability of survival. In all provinces a higher proportion of female children ever born have survived than male children.

Of the population aged 60 years and older, more than 3 times as many females ( $40.6 \%$ ) were widowed than males ( $12.3 \%$ ). The proportion of females 60 years and older who are widowed was the highest in the province of Choiseul followed by Rennell-Bellona (Fig. 46). The proportions widowed were considerably higher in the rural than the urban areas. However, when interpreting the results it needs to be mentioned that males are usually older than their spouses, in Solomon Islands by about 4 years.

Figure 47 shows the proportions of the population orphaned, meaning that either their biological father or mother had died. On average more than a quarter $(26.9 \%)$ of the population responded that their father had died, compared to $18.7 \%$ that their mother is not alive. Clearly more mothers survive to older ages than fathers. However, as mentioned before, fathers are usually older than mothers, because of their age difference at marriage. In general, the proportion of the population orphaned was higher in the rural than urban areas, and it was particularly high in Rennell-Bellona, Temotu, and Malaita.

Fortunately one of the most important mortality indicators, the infant mortality rate (IMR) has decreased since the last census in 1999, and stands at 24 and 20 infant deaths per 1000 live births for males and females respectively (Fig.48). In general the IMR of males is higher than that of females. Infant mortality rates are significantly lower in the urban than the rural areas. In some provinces it is extremely high as compared to the national average. They are the cases of Central and Rennell-Bellona. One likely important factor is the better availability and accessibility of (reproductive) health services.

The calculated adult mortality rates (45q15), the probability of death between the ages of 15 years and 60 years (number of deaths per 1,000), is presented in Figure 49. Again it shows higher probabilities of death for males than females, and for people living in the rural areas. The adult mortality rates were particularly high in Central and RennellBellona.

Figures 50 and 51 show the life expectancies at age 20 (e20) and life expectancy at birth (e0). The pattern of both indicators is very similar. In general females live on average 6.9 years longer than males. Then again at age 20, the expected average life span of females is only about 5.3 years longer than males. Again, life expectancy is higher in urban than
in rural areas. The provinces with the highest values are Honiara, Makira-Ulawa and Guadalcanal and those with the lowest are Central and Rennell-Bellona.

It is important to point out that the previous results, especially those based on life table functions, should be interpreted with caution. It is relevant to remember that they are based on small populations and on assumptions that may be invalid in some cases.

Life tables for males and females for the urban and rural areas, as well as each province are presented in Apps.14-37..

Figure 45: Proportion of children ever born and still alive by sex and place of residence, Solomon Islands: 2009


Figure 46: Proportion of population 60 years and older widowed by sex and place of residence, Solomon Islands: 2009


Figure 47: Proportion of population with father or mother dead (orphaned) by place of residence, Solomon Islands: 2009


Figure 48: Infant mortality rate (IMR) by sex and place of residence, Solomon Islands: 2009


Figure 49: Adult mortality rate (45q15) by sex and place of residence, Solomon Islands: 2009


Figure 50: Life expectancy at age 20 (e20) by sex and place of residence, Solomon Islands: 2009


Figure 51: Life expectancy at birth (e0) by sex and place of residence, Solomon Islands: 2009


### 3.3 International migration

International migration refers to people who cross national boundaries to move to another country. In addition to this spatial consideration, time also plays a major role in the analysis of migration. People 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 a migrant is half a year in-country, and sometimes even a full year. Someone coming for a short visit is not considered to be a migrant - he or she is considered to be 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, usually at least six months, in order to determine whether the arriving and departing person qualifies as a visitor or migrant.

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 time period.

Net migration $=$ Arrivals (immigrants) minus Departures (emigrants)

Therefore, if net migration was 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.

The 2009 census included three questions that provide an indication of the level of immigration.

Questions were asked about a respondent's:

- usual place of residence,
- residence five years prior to the census, and
- place of birth.

Regarding respondent's usual place of residence, only 1,124 answered that they usually live overseas $-0.2 \%$ of the total population.

Regarding residential address five years prior to the census, 1,750 people ( $0.3 \%$ ) of the population five years and older answered that they lived overseas.

Regarding place of birth, 2,797 people (less than $1 \%$ of the population) answered that they were born overseas.

However, these questions only give an indication on the level of immigration
The only indirect method for deriving at a crude indication of Solomon Islands' net migration level would be to apply the balancing equation to the intercensal 1999-2009 population growth rate.

## Balancing equation

## Population growth $=$ Births minus Deaths plus Net migration

Net migration can be estimated as
Net migration $=$ Population growth minus Births plus Deaths
or

Net migration rate $=$ Population growth rate minus CBR plus CDR

CBR $=$ Crude birth rate; $\mathrm{CDR}=$ Crude death rate
The intercensal population growth rate was $2.3 \%$, and the estimated CBR and CDR are 36.6 per 1000 and 5.5 per 1000 .

The derived net migration rate would be:

$$
2.3-3.66+0.55=\mathbf{- 0 . 8 1 \%}
$$

However, there are strong indications that the 2009 census suffered from a possible $8.3 \%$ under count as described in more detail in chapter 6 , which would adjust the intercensal growth rate to about $3.1 \%$. In this case, the calculated net migration rate would be zero, and no significant international migration had occurred during the intercensal period 1999-2009,

$$
3.1-3.6+0.55=\mathbf{- 0 . 0 1 \%}
$$

Which means that the population growth of the Solomon Islands is entirely determined by its natural growth: births and deaths.

## 4. SOCIAL CHARACTERISTICS

### 4.1 Marital status

During the 2009 census, $54 \%$ of males $(83,304)$ and $56 \%$ of females $(85,491)$ aged 15 and older were legally married and another $5 \%$ of males and females were living in a de facto relationship (Fig.52). The proportion never married (single), were $39 \%$ of males $(60,483)$ and $30 \%$ of females $(45,013)$.

A higher proportion of females (6\%) were widowed than males (2\%).

Figure 52: Population aged 15 and older by marital status, Solomon Islands: 2009


The age at marriage is an important proximate determinant of fertility. Women who marry at an early age often have more children than those marrying later.

The higher proportion of young married women compared with men of the same age indicates that women generally marry at younger ages than men (Table 23 and Fig.53). The average age at marriage (Singulate mean age at marriage, SMAM) was 27.1 and 23.3 years for males and females, respectively, and was calculated based on the proportion of those never married/single by age. There were notable differences in the age at marriage between the rural and urban areas (Fig.55). Urban dwellers tend to marry at an older age than their rural counterparts.

While only $2 \%$ of males were married at ages $15-19$, it was about $10 \%$ of females. At age 20-24 half of all women were already married compared with $21 \%$ of males. Compared to earlier censuses, the percentage of males and females married at young ages has declined, and the average age at marriage increased for both males and females (Table 23 and Figs.53-54).

Table 23: Singulate mean age at marriage (SMAM ${ }^{12}$ ) and percentage married at young ages by sex, Solomon Islands: 1986, 1999, and 2009

| Average age at first marriage |  |  |  | Percentage ever married by age group (\%) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | SMAM $^{*}$ |  | Difference | 15-19 |  | 20-24 |  |
|  | Males | Females | (Men - Women) | Males | Females | Males | Females |
| 1986 | 25.0 | 21.2 | 3.8 | 3.1 | 19.1 | 31.3 | 65.1 |
| 1999 | 26.1 | 22.6 | 3.4 | 2.6 | 13.0 | 24.0 | 55.1 |
| 2009 | 27.1 | 23.3 | 3.8 | 1.8 | 10.2 | 21.1 | 50.1 |

Figure 53: Singulate mean age at marriage (SMAM) by sex, Solomon Islands: 19862009


[^10]Figure 54: Population married at young ages by sex (\%), Solomon Islands: 1986, 1999, and 2009


Figures 57 and 58 display the proportion of males and females married/never married by age. Clearly these two figures complement each other. When the proportion of the population married at a certain age is low, it is high for the proportion of the population never married at the same age, and vice versa.

Furthermore, the proportion of females of married status is higher than that of males until age 34. At that age, the proportion of married females steadily declines because an increasing number of females become widows (Fig.59). The discrepancy between the proportion of widowed males and widowed females, at ages 40 and older, increased continuously. At ages 40-45, only $1 \%$ of males were widowed, compared with $5 \%$ of females. At age 60 and older, only $6 \%$ of males were widowed, compared with $28 \%$ of females.

The higher proportion of widowed females is explained by:

- lower female mortality rates, and therefore longer life expectancies of female spouses,
- older age at marriage of males compared with their female partners as expressed in the average age at marriage (SMAM) above.

Therefore, male spouses usually die before their female partners.

Figure 55: Average age at marriage (SMAM) by sex and province, Solomon Islands: 2009


Figure 56: Population married at age 15-19 years by sex and province (\%), Solomon Islands: 2009


Figure 57: Population aged 15 and older by sex and proportion married, Solomon Islands: 2009


Note: 'married' include legally married and de facto relationships

Figure 58: Population aged 15 and older by sex and proportion never married (single), Solomon Islands: 2009


Figure 59: Population aged 15 and older by sex and proportion widowed, Solomon Islands: 2009


### 4.2 Religion

The Church of Melanesia continues to be the dominant religious denomination in the Solomon Islands, although its share has slightly decreased from $33 \%$ in 1999 to $32 \%$ or 164,639 persons in 2009 (Table 24 and Fig.60).

Table 24: Population by religious affiliation, Solomon Islands: 1999 and 2009

| Religious denomination | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 9}$ | \% change |
| :--- | ---: | ---: | ---: |
| Church of Melanesia | 134,288 | 164,639 | 22.6 |
| Roman Catholic | 77,728 | 100,999 | 29.9 |
| South Sea Evangelical Church | 69,651 | 88,395 | 26.9 |
| Seventh Day Adventist | 45,846 | 60,506 | 32.0 |
| United Church | 42,236 | 51,919 | 22.9 |
| Christian Fellowship Church | 9,693 | 13,153 | 35.7 |
| Jehovah's Witness | 7,485 | 9,444 | 26.2 |
| Christian OutReach Church | 3,841 | 5,303 | 38.1 |
| Bahai | 2,300 | 2,427 | 5.5 |
| Custom Beliefs | 2,633 | 4,191 | 59.2 |
| No Religion/Faith | 790 | 681 | -13.8 |
| Refuse to Answer | - | 137 | -2 |
| NS | 1,413 | - | - |
| Other | 11,138 | 14,076 | 26.4 |
| Total | $\mathbf{4 0 9 , 0 4 2}$ | $\mathbf{5 1 5 , 8 7 0}$ | $\mathbf{2 6 . 1}$ |

The next largest group was the Roman Catholic Church with 100,999 members, and a share of $20 \%$ of all denominations, followed by the South Sea Evangelical Church (17\%), the Seventh Day Adventists with a share of $12 \%$, and the United Church (10\%).

All other denominations had less than $7 \%$ of the population as members, and persons with no religion comprised of less than $1 \%$ of the Solomon Islands population.

The compositions of the different religious denominations were markedly different between the provinces. While Isabel, Temotu and Central were dominated by the Church of Melanesia, the United Church was particularly strongly represented in Choiseul and the Western province. Half of the populations in Rennell-Bellona were members of the Seventh Day Adventist Church, and the South Sea Evangelical Church had many followers in the provinces of Rennell-Bellona, Malaita, Makira-Ulawa, Honiara, and Guadalcanal.

Figure 60: Population by religious affiliation by province, Solomon Islands: 2009


### 4.3 Ethnic origin

Based on information on the number of people by ethnic origin, the Solomon Islands has a very homogenous population composition, with $95 \%$ or 491,466 persons being Melanesians, $3 \%$ or 15,911 persons were Polynesians and $1 \%$ or 6,446 persons were Micronesians. In addition there were 654 Chinese and 721 people of European descent (Table 25 and Figure 61).

Table 25: Population by ethnic origin, Solomon Islands: 2009

| Ethnicity | Number of people | Percent |
| :--- | ---: | ---: |
| Melanesian | 491,466 | 95.3 |
| Polynesian | 15,911 | 3.1 |
| Micronesian | 6,446 | 1.2 |
| Chinese | 654 | 0.1 |
| European | 721 | 0.1 |
| Other | 672 | 0.1 |
| Total | $\mathbf{5 1 5 , 8 7 0}$ | $\mathbf{1 0 0 . 0}$ |

Figure 61: Population by ethnic origin and province (\%), Solomon Islands: 2009


This overall pattern has remained essentially unchanged since 1959, although it needs mentioning that there was a noticeable increase in the number of Micronesians (I-

Kiribati) in the 1960s under the official resettlement schemes commissioned by the British Protectorate Government.

Furthermore, the number of Europeans had decreased somewhat since 1999 as a result of the civil unrest in 1999 causing many expatriate to be evacuated out of the country.

With the exception of Rennell-Bellona which is predominantly Polynesian, the people in all other provinces are mainly of Melanesians descent.

However, there is a noticeable minority of Micronesians in Choiseul, and the Western province, as well as Polynesians in Temotu, Central and Honiara.

The vast majority of Chinese and Europeans can be found in the urban areas, particularly in Honiara.

### 4.4 Disability

The Solomon Islands is a signatory to a United Nations convention to uphold the rights of people with disabilities; and is therefore obliged to:
"Promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities and to promote respect for their inherent dignity."

For the 2009 Census the SINSO was requested by the Government and stakeholders to collect information on disabilities in the Solomon Islands.

The question on disabilities included in the 2009 Census concerned whether a person had any difficulties or health problems in seeing, hearing, walking, and/or remember or concentrating regardless of the severity of the difficulties experienced (Table 26). It also asked whether a person cannot see, hear, walk or remember or concentrate at all - in other words, whether a person is blind, deaf, lame or senile and/or amnesic (Table 27).

Overall, about $14 \%$ of the total population reported a disability, and the proportion of females with a disability was slightly higher than that of males.

The disability that was most commonly mentioned were difficulties with remembering and/or concentration $(42,225)$, followed by difficulties with vision $(40,478$ people), walking $(35,157)$, and hearing $(24,558)$.

Almost 5,300 people reported to have a severe disability, and of those about 3,300 people were recorded as senile and/or amnesic, and another 3,000 people could not walk at all (lameness). Almost 1,400 people were deaf, and about 900 people were blind (please note that a person can have more than one disability).

Table 26: Population reporting a disability regardless of the severity of the disability, Solomon Islands: 2009

| Disability | Total | Males | Females |
| :--- | ---: | ---: | ---: |
| Vision | 40,478 | 20,484 | 19,994 |
| Hearing | 24,558 | 12,319 | 12,239 |
| Walking | 35,157 | 16,769 | 18,388 |
| Remembering or concentrating | 42,225 | 20,460 | 21,765 |

Table 27: Population reporting a severe disability, Solomon Islands: 2009

| Disability | Total | Males | Females |
| :--- | ---: | ---: | ---: |
| Blindness | 907 | 411 | 496 |
| Deafness | 1,398 | 729 | 669 |
| Lameness | 2,975 | 1,491 | 1,484 |
| Senile and/or amnesic | 3,293 | 1,635 | 1,658 |

The proportions of the population with a disability were notably higher in Isabel, MakiraUlawa, and Central compared to the national average, and it was lowest in RennellBellona, Honiara, and Malaita (Fig.62).

Figure 62: Proportion of the population by sex and place of residence reporting a disability regardless of the severity of the disability, Solomon Islands: 2009


As can be expected, the proportion of the population with a disability increased with age (Figs.63-67).

While $10 \%$ of children younger than 5 years of age had a disability, it was below $5 \%$ for young people aged 5-19 years. From age 35 and onwards, the proportion of the population with a disability increased continuously. About half of the population aged 55-59 years reported a disability (Fig.63). The difficulty that was most commonly mentioned by the older population was vision (Fig.64) and walking (Fig.66).

Figure 63: Proportion of the population by age and sex reporting any disability regardless of the severity of the disability, Solomon Islands: 2009


Figure 64: Proportion of the population by age and sex reporting difficulties seeing, Solomon Islands: 2009


Figure 65: Proportion of the population by age and sex reporting difficulties hearing, Solomon Islands: 2009


Figure 66: Proportion of the population by age and sex reporting difficulties walking, Solomon Islands: 2009


Figure 67: Proportion of the population by age and sex reporting difficulties remembering or concentrating, Solomon Islands: 2009


### 4.5 Educational characteristics

The Ministry of Education and Human Resource Development main policy objective ${ }^{13}$ is to provide full enrollment opportunity to all children aged 6 to 15 years, and to achieve a $100 \%$ enrollment rate for primary education by 2015 . Furthermore the policies aim at reducing the dropout rates and improves completion rates for children from Year 1 to Year 9.The education system consists of preschool (aged 3 to 5 years), primary (Standard 1 to 6 ) and secondary school (Form 1 to 7).

### 4.5.1 School enrollment

At the time of the census, 147,717 people of the total enumerated population 5 years and older were enrolled in schools; 78,013 males and 69,704 females. Of these, 142,900 people were enrolled full time and 4,817 were part time enrolled in an educational institution. The distribution of those attending a school by school level is shown in Table 28.

Table 28: Population 5 years and older by sex and enrolled in school by school level attending, Solomon Islands: 2009

| Educational level | Total | Males | Females |
| :--- | ---: | ---: | ---: |
| Preschool | $\mathbf{2 9 , 7 4 6}$ | $\mathbf{1 5 , 2 9 5}$ | $\mathbf{1 4 , 4 5 1}$ |
| Primary | $\mathbf{7 9 , 5 9 8}$ | $\mathbf{4 2 , 1 6 6}$ | $\mathbf{3 7 , 4 3 2}$ |
| Standard 1 | 16,685 | 8,855 | 7,830 |
| Standard 2 | 15,453 | 8,229 | 7,224 |
| Standard 3 | 14,673 | 7,763 | 6,910 |
| Standard 4 | 12,594 | 6,773 | 5,821 |
| Standard 5 | 11,003 | 5,771 | 5,232 |
| Standard 6 | 9,190 | 4,775 | 4,415 |
| Secondary | $\mathbf{2 4 , 4 6 6}$ | $\mathbf{1 2 , 8 5 2}$ | $\mathbf{1 1 , 6 1 4}$ |
| Form 1 | 7,194 | 3,639 | 3,555 |
| Form 2 | 6,293 | 3,282 | 3,011 |
| Form 3 | 4,290 | 2,247 | 2,043 |
| Form 4 | 3,013 | 1,601 | 1,412 |
| Form 5 | 1,732 | 873 | 859 |
| Form 6/7 | 1,944 | 1,210 | 734 |
| Tertiary | $\mathbf{1 , 8 8 1}$ | $\mathbf{1 , 1 4 6}$ | $\mathbf{7 3 5}$ |
| Vocational | $\mathbf{1 , 5 3 3}$ | $\mathbf{9 5 0}$ | 583 |
| Other | $\mathbf{1 0 , 4 9 3}$ | $\mathbf{5 , 6 0 4}$ | $\mathbf{4 , 8 8 9}$ |
| Total | $\mathbf{1 4 7 , 7 1 7}$ | $\mathbf{7 8 , 0 1 3}$ | $\mathbf{6 9 , 7 0 4}$ |

[^11]Just over half of all students $(79,598)$ were enrolled in primary schools, $17 \%$ in secondary schools $(24,466)$ and $20 \%$ in Preschools $(29,746)$. Only $1 \%(1,881)$ of all students attended a tertiary institution, and another 1,533 students ( $1 \%$ ) attended a vocational institution. 'Other' institutions include apprenticeships, specialized trades schools, etc.

Not at any age were more than $90 \%$ of children enrolled in schools. The highest school enrollment rates were for the 9-13 year olds when almost $90 \%$ of children were in school. From the age of 14 , school enrollment rates rapidly decrease, and at age 18 years only half of all children were still in school (Fig 68).

There were insignificant differences between male and female enrollment rates for students aged 6-15. From the age of 14 school enrollment rates for males were higher than females'.

Apart from the relatively large proportion of young people that had never been to school of about $7 \%$ of all teenagers aged 10-19 years (Fig.70), it is a worry that even at young ages of 8-12 years children had left school, and at age 15 almost $14 \%$ of children had already left school (Fig. 69).

With respect to the population aged 6-15 years, $84 \%$ were enrolled in school, $5 \%$ had already left school, and $11 \%$ had never been in school (Fig72). The percentage distribution is about the same for males and females. However, there were marked differences in school enrollment rates by place of residence. School attendance was higher in the urban ( $87 \%$ ) than the rural areas ( $83 \%$ ), and Malaita had by far the lowest enrollment rates of the 6-15 year olds. Only three-quarter were enrolled in school, and $18 \%$ had never been to school. On the other hand, Rennell-Bellona had with $96 \%$ the highest enrollment rates of 6-15 year olds, and only $2 \%$ had never been to school.

With respect to the secondary gross enrollment rates of the population aged 15-19 years, $63 \%$ were enrolled in school, $30 \%$ had left school, and $7 \%$ had never been to school (Fig.73). Not surprisingly, urban enrollment rates were higher than rural. Again RennellBellona shows the highest enrollment rates in secondary education (83\%), and Isabel the lowest (53\%).

Figure 68: Proportion of the population aged 5-24 years by age and sex enrolled in school (\%), Solomon Islands: 2009


Figure 69: Proportion of the population aged 5-24 years by age and sex who left school (\%), Solomon Islands: 2009


Figure 70: Proportion of the population aged 5-24 years by age and sex who have never been to school (\%), Solomon Islands: 2009


Figure 71: Proportion of the population aged 6-12 years by sex and school attendance status (\%), Solomon Islands: 2009


Figure 72: Proportion of the population aged 6-15 years by sex and school attendance status (\%), Solomon Islands: 2009


Figure 73: Proportion of the population aged 15-19 years by sex and school attendance status (\%), Solomon Islands: 2009


Since 1999 school enrolment rates have increased very significantly in the Solomon Islands (Fig.74). Primary school enrollment rates of the population 5-14 years ${ }^{14}$ increased from just below $60 \%$ in 1999 to about $80 \%$ in 2009, and secondary school enrollment rates of the population 15-19 years increased from about $50 \%$ to over $60 \%$. Enrollment rates were below $40 \%$ in 1986.

Furthermore, the gap between male and female school enrollment rates that existed in favor of males in previous censuses has decreased, and for primary education it is now even slightly higher for females than males.

Table 29 shows the enrolled population by age and school level enrolled. It can be seen that each school level is attended by a group of students that varies in an age range of sometimes 10 years or more. For example, Standard 5 was attended by students aged 819 years.

On the other hand, one and the same age group of students is divided among a vast number of school levels. For example students aged 12 years are attending a range of school levels that includes preschool to Form 3.

[^12]Figure 74: School enrollment rates by sex, Solomon Islands: 1999 and 2009


Table 29: Enrolled population by age and school level enrolled, Solomon Islands:

| $2009$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age of student | Total | Level of education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Pre school | Standard 1 | Standard 2 | Standard 3 | $\begin{gathered} \text { Standard } \\ 4 \end{gathered}$ | Standard 5 | $\begin{gathered} \hline \text { Standard } \\ 6 \\ \hline \end{gathered}$ | Form 1 | Form 2 | Form 3 | Form 4 | Form 5 | $\begin{aligned} & \hline \text { Form } \\ & 6 / 7 \\ & \hline \end{aligned}$ | Tertiary | Voca tional | Other |
| Total | 147,717 | 29,746 | 16,685 | 15,453 | 14,673 | 12,594 | 11,003 | 9,190 | 7,194 | 6,293 | 4,290 | 3,013 | 1,732 | 1,944 | 1,881 | 1,533 | 10,493 |
| 5 | 7,929 | 6,918 | 368 | 139 | - | - | - | - | - | - | - | - | - | - | - | - | 504 |
| 6 | 10,007 | 8,292 | 908 | 219 | 55 | - | - | - | - | - | - | - | - | - | - | - | 533 |
| 7 | 10,633 | 6,871 | 2,432 | 587 | 171 | 34 | - | - | - | - | - | - | - | - | - | - | 538 |
| 8 | 11,078 | 4,288 | 4,098 | 1,631 | 361 | 73 | 13 | - | - | - | - | - | - | - | - | - | 614 |
| 9 | 12,510 | 2,185 | 4,369 | 3,618 | 1,351 | 265 | 28 | - | - | - | - | - | - | - | - | - | 694 |
| 10 | 11,923 | 777 | 2,532 | 3,867 | 2,767 | 959 | 205 | 65 | 24 | - | - | - | - | - | - | - | 727 |
| 11 | 11,358 | 277 | 1,248 | 2,679 | 3,448 | 2,168 | 694 | 163 | 24 | 8 | - | - | - | - | - | - | 649 |
| 12 | 11,056 | 138 | 503 | 1,480 | 2,806 | 2,860 | 1,826 | 593 | 115 | 36 | 20 | - | - | - | - | - | 679 |
| 13 | 10,477 | - | 227 | 712 | 1,753 | 2,641 | 2,484 | 1,405 | 510 | 114 | 31 | 13 | - | - | - | - | 587 |
| 14 | 9,777 | - | - | 342 | 1,013 | 1,719 | 2,305 | 1,899 | 1,272 | 528 | 96 | 20 | 14 | - | - | - | 569 |
| 15 | 9,002 | - | - | 179 | 454 | 960 | 1,593 | 1,972 | 1,712 | 1,153 | 344 | 72 | 18 | - | - | - | 545 |
| 16 | 7,824 | - | - | - | 311 | 460 | 934 | 1,408 | 1,565 | 1,508 | 796 | 299 | 51 | 5 | 4 | 14 | 469 |
| 17 | 6,265 | - | - | - | 183 | 188 | 400 | 762 | 944 | 1,294 | 1,024 | 784 | 190 | 30 | 20 | 23 | 423 |
| 18 | 4,986 | - | - | - | - | 267 | 201 | 367 | 571 | 822 | 875 | 797 | 481 | 142 | 26 | 51 | 386 |
| 19 | 3,962 | - | - | - | - | - | 320 | 236 | 283 | 519 | 666 | 626 | 526 | 359 | 57 | 74 | 296 |
| 20 | 3,002 | - | - | - | - | - | - | 320 | 153 | 304 | 431 | 401 | 443 | 394 | 141 | 137 | 278 |
| 21 | 816 | - | - | - | - | - | - | - | 19 | 7 | 7 | 1 | 3 | 276 | 205 | 91 | 207 |
| 22 | 691 | - | - | - | - | - | - | - | 2 | - | - | - | 6 | 199 | 182 | 119 | 183 |
| 23 | 685 | - | - | - | - | - | - | - | - | - | - | - | - | 176 | 229 | 129 | 151 |
| 24 | 589 | - | - | - | - | - | - | - | - | - | - | - | - | 123 | 207 | 113 | 146 |
| 25-29 | 1,422 | - | - | - | - | - | - | - | - | - | - | - | - | 222 | 548 | 312 | 340 |
| 30-34 | 540 | - | - | - | - | - | - | - | - | - | - | - | - | 18 | 153 | 194 | 175 |
| 35-39 | 325 | - | - | - | - | - | - | - | - | - | - | - | - | - | 76 | 125 | 124 |
| 40-44 | 259 | - | - | - | - | - | - | - | - | - | - | - | - | - | 28 | 33 | 198 |
| 45-49 | 187 | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 31 | 151 |
| 50+ | 414 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 87 | 327 |

### 4.5.2 Educational attainment

Based on data on the highest level of education completed, $21 \%$ of males and $16 \%$ of females 15 years and older responded that they had attended secondary education (Form 3-7). About 56-57 $\%$ completed only primary level, and $11 \%$ of males and $21 \%$ of females had no schooling completed (no schooling, preschool, or only some primary). Six per cent of males and three per cent of females had tertiary education (Figs.75-77).

As can be expected, educational levels were much higher in the urban compared to the rural areas. The proportion of the population 15 years and older living in the urban areas that attended secondary education was $32 \%$ compared to only $15 \%$ in rural areas. On the other hand, the proportion of the population with no education was $19 \%$ in the rural areas compared to $7 \%$ in the urban areas.

The proportion of the population with no education was particularly high in Malaita (27\%), followed by Temotu (25\%).

Honiara had the highest proportion of the population with secondary education (35\%), followed by Isabel with $25 \%$.

Figure 75: Number of people 12 years and older by sex and highest level of education completed, Solomon Islands: 2009


Figure 76: Population 12 years and older by sex and highest level of education completed (\%), Solomon Islands: 2009


Figure 77: Population 15 years and older by sex, place of residence and highest level of education completed, Solomon Islands: 2009


### 4.5.3 Literacy and language ability

### 4.5.3.1 Literacy

The literacy rate in a population is one of the most important indicators of development. Literacy - defined as the ability to read and write - refers to the skill that enables people to access, understand and communicate information in today's society. This skill contributes to a better understanding of one's environment, and other people, leading to improved health, knowledge and employment. Society at large, equally benefits from high literacy rates, as it is linked to better health, efficiency, and productivity.

It is possible to distinguish between levels of literacy, for instance in terms of the degree to which people are able to read or write, or whether people can read but not write. These distinctions require elaborate testing, that a census cannot undertake as it is a timeconsuming survey method. However, the 2009 census did include a question in order to get a general indication of the literacy situation in the country. The question reads: "Can you read and write a simple sentence in one or more of the following languages: English, Pidgin, Local language, or Other language?". The way the question was phrased captures a basic skill of reading and writing, and not a more fluent literacy. A disadvantage of a question like this is that the obtained measure refers to self-reported literacy, which is likely to be biased as many illiterate people may be embarrassed to admit that they cannot read and write.

Based on the responses to the above question, the age group with the highest rate of literacy was the 15-19 year old population, with $90 \%$ literate. It is somewhat surprising that only $80 \%$ of the 10-14 year old school age population were literate as one would expect that they should be able to read and write a simple sentence(Fig 78).

From the age of 35 literacy rates gradually decline with increasing age of the population. While only $80 \%$ of the population aged 45-49 were literate, it was less than $60 \%$ of the population 70 years and older. From age 20, literacy rates were significantly higher for males than females. For example, at age $45-49$, almost $90 \%$ of males were literate compared to only about $70 \%$ of females. Overall, the literacy rate for males and females aged 5 years and older was $80 \%$ and $74 \%$ respectively, for males and females aged 15-24 years it was $91 \%$ and $88 \%$ (Fig.79), and for the population 15 years and older it was $89 \%$ and 79\% (Fig.80).

In terms of urban-rural distinction, literacy rates were noticeably higher in the urban compared to the rural areas: while almost $90 \%$ of the population 5 years and older and
$96 \%$ of the population 15-24 years was literate in the urban areas, it was only $74 \%$ and $88 \%$ in the rural areas.

The provinces with higher than average literacy rates were Rennell-Bellona, Honiara, Western, Choiseul, and Makira-Ulawa. areas. The provinces of Malaita had significantly lower literacy rates than the national average.

Figure 78: Literacy rate of the population 5 years and older by sex (\%), Solomon Islands: 2009


Figure 79: Literacy rate of the population aged 15-24 years by sex and place of residence (\%), Solomon Islands: 2009


Figure 80: Literacy rate of the population aged 15 years and older by sex and place of residence (\%), Solomon Islands: 2009


### 4.5.3.2 Language ability

Literacy in terms of language abilities is shown in Table 30 and Figures 81-88. Please note that a respondent could record speaking more than one language if applicable.

English was most widely spoken by $69 \%$ of the population 5 years and older; it was followed by Pidgin with $67 \%$, and local languages ( $66 \%$ ). An additional $27 \%$ of the population spoke 'other' languages. In most cases this category refers to other local languages if a person spoke more than one local language.

Language abilities varied extensively by place of residence. Generally language abilities in any language were much higher in the urban than the rural areas, and any language abilities were more widely spoken in Honiara, Rennell-Bellona, and the Western province. Malaita, Temotu and the Central province had the lowest literacy rate in any language.

The pattern in language ability by age and sex follows the general pattern as per the literacy rates. From the age of 20 language abilities are higher for males than females, and language proficiency for females declines from then onwards. In contrast, male language abilities remain high or even increase after age 20 and only start decreasing from age 40 onwards.

Table 30: Language ability by type of language, Solomon Islands: 2009

| Language | Number of people speakig language <br> Total | Males |  | Females | As of population 5 years and older |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Total | Males | Females |  |  |  |  |
| English | 303,384 | 163,838 | 139,546 | 69 | 73 | 65 |
| Pidgin | 292,704 | 157,374 | 135,330 | 67 | 70 | 63 |
| Local language | 290,632 | 154,628 | 136,004 | 66 | 69 | 63 |
| Other language | 117,427 | 63,211 | 54,216 | 27 | 28 | 25 |

Figure 81: English language ability of the population 5 years and older by place of residence (\%), Solomon Islands: 2009


Figure 82: English language ability of the population 5 years and older by age and sex (\%), Solomon Islands: 2009


Figure 83: Pidgin language ability of the population 5 years and older by place of residence (\%), Solomon Islands: 2009


Figure 84: Pidgin language ability of the population 5 years and older by age and sex (\%), Solomon Islands: 2009


Figure 85: Local language ability of the population 5 years and older by place of residence (\%), Solomon Islands: 2009


Figure 86: Local language ability of the population 5 years and older by age and sex (\%), Solomon Islands: 2009


Figure 87: Other language ability of the population 5 years and older by place of residence (\%), Solomon Islands: 2009


Figure 88: Other language ability of the population 5 years and older by age and sex (\%), Solomon Islands: 2009


## 5. HOUSEHOLD AND HOUSING

### 5.1 Introduction

The household is the smallest organizational entity in the census and provided the unit of enumeration of individuals. The household also has important social significance in terms of production and reproduction, gender relations and group identification within communities. Although there is a large overlap with families, households are conceptually different, as they are defined by agreement on collaboration, not necessarily on kinship or consanguinity (blood ties). A distinction in this respect is made between private and collective household types (institutions).

This section addresses the average household size, but also household structure. In all households, one person was designated as head of that household. In principle, the household itself did this, but where necessary, the enumerator had to identify a head. All other household members were identified by their relationship to this head. Besides size and structure, households can be characterised by the characteristics of the individual household members. However, it is out of the scope of this report to elaborate on this matter.

## Household: definition and types

In the census a household is defined as a group of people who share a common eating arrangement: members of a household normally eat food prepared in the same kitchen or they share in the cost, collection and preparation of that food. Although the identification of a household was based on a usual common eating arrangement of a group of people, enumeration coverage rules prescribed the inclusion of all and only those people who slept in the household on census night.

The census distinguished between two types of households:

A private household: a group of related people (for example a family) with or without additional persons who live together and share a common eating arrangement. A private household can also consist of one person or two to five unrelated persons who have a common eating arrangement.
A collective household (institution) consists of unrelated persons staying together for special reasons, like education, medical treatment, boarding, travel or imprisonment.

### 5.2 Number and size of households

In 2009, 92,241 households were counted; 91,251 private households and 990 nonprivate dwellings (institutions). The number of private households increased from 63,404 thousand in 1999 to 91,251 thousand in 2009, an overall increase of almost 28 thousand households (Tables 31 and 32).

Table 31: Number of households by household type and location, Solomon Islands: 2009

| Province / | Total households | Household Type <br> Private households | Institutions |
| :--- | ---: | ---: | ---: |
| Urban-Rural area | $\mathbf{9 2 , 2 4 1}$ | $\mathbf{9 1 , 2 5 1}$ | $\mathbf{9 9 0}$ |
| Choiseul | 4,740 | 4,712 | 28 |
| Western | 13,998 | 13,762 | 236 |
| Isabel | 5,212 | 5,143 | 69 |
| Central | 4,924 | 4,905 | 19 |
| RenBell | 709 | 688 | 21 |
| Guadacanal | 17,379 | 17,163 | 216 |
| Malaita | 24,556 | 24,421 | 135 |
| Makira | 7,311 | 7,173 | 138 |
| Temotu | 4,331 | 4,303 | 28 |
| Honiara | 9,081 | 8,981 | 100 |
| Urban | 15,643 | 15,382 | 261 |
| Rural | 76,598 | 75,869 | 729 |

Table 32: Population in private households, number of private households and average household size, by place of residence, Solomon Islands: 1999 and 2009

| Place of residence | Number of private |  | Number of people in <br> house hold |  | Average <br> private households |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | $\mathbf{1 9 9 9}$ |  | $\mathbf{2 0 0 9}$ | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 9}$ | $\mathbf{1 9 9 9}$ |
| household size |  |  |  |  |  |  |
|  | SOLOMON ISLANDS | $\mathbf{6 3 , 4 0 4}$ | $\mathbf{9 1 , 2 5 1}$ | $\mathbf{3 8 9 , 9 2 2}$ | $\mathbf{5 0 4 , 9 8 5}$ | $\mathbf{6 . 1}$ |
| Urban | 8,815 | 15,382 | 57,430 | 99,299 | 6.5 | 6.5 |
| Rural | 54,589 | 75,869 | 332,492 | 405,686 | 6.1 | 5.3 |
| Choiseul | 3,045 | 4,712 | 18,877 | 25,916 | 6.2 | 5.5 |
| Western | 9,570 | 13,762 | 57,379 | 73,333 | 6.0 | 5.3 |
| Isabel | 3,472 | 5,143 | 19,366 | 25,147 | 5.6 | 4.9 |
| Central | 3,533 | 4,905 | 20,596 | 25,809 | 5.8 | 5.3 |
| RenBell | 423 | 688 | 2,303 | 3,006 | 5.4 | 4.4 |
| Guadacanal | 10,164 | 17,163 | 58,016 | 91,919 | 5.7 | 5.4 |
| Malaita | 18,362 | 24,421 | 120,191 | 136,384 | 6.5 | 5.6 |
| Makira | 4,859 | 7,173 | 30,248 | 39,407 | 6.2 | 5.5 |
| Temotu | 3,335 | 4,303 | 18,243 | 21,104 | 5.5 | 4.9 |
| Honiara city council | 6,641 | 8,981 | 44,703 | 62,960 | 6.7 | 7.0 |

The overall average household size, the number of people per household, decreased from 6.1 to 5.5 people per household between 1999 and 2009 (Table 31and Fig.89).

The highest average household size was recorded in the Honiara city council with 7 people per household on average most likely due to incoming migrants from the other provinces.

The lowest household sizes were found in Rennell-Bellona (4.4), and Isabel and Temotu with just under 5 people per household.

In general, urban households (6.5) were significantly more crowded than rural households (5.3).

In 2009, the most common household size was 6 people per household $(14,655)$, accounting for $16.1 \%$ of all private households and $17.4 \%$ of the total population $(87,930)$ lived in households of 6 people (Table 33 and Fig.90).

There were 3,553 single-person households accounting for $3.9 \%$ of all households which represents and increase compared to the 1999 census when there were only 1,861 households with a share of $2.9 \%$.

On the other hand in 2009 there were 7,219 households with 10 persons or more ( $8 \%$ ), which is a decrease, compared to 1999 when there were 7,836 households with 10 occupants or more representing $12.4 \%$ of all households in1999.

Table 33: Number of private households by household size and people per household (\%), Solomon Islands: 2009

| Household <br> size | Private Households <br> Number |  | People per household size |  |
| :---: | ---: | ---: | ---: | ---: |
| Number | \% |  |  |  |
| 1 | 3,553 | 3.9 | 3,553 | 0.7 |
| 2 | 6,978 | 7.6 | 13,956 | 2.8 |
| 3 | 10,694 | 11.7 | 32,082 | 6.4 |
| 4 | 13,761 | 15.1 | 55,044 | 10.9 |
| 5 | 14,420 | 15.8 | 72,100 | 14.3 |
| 6 | 14,655 | 16.1 | 87,930 | 17.4 |
| 7 | 9,148 | 10.0 | 64,036 | 12.7 |
| 8 | 6,544 | 7.2 | 52,352 | 10.4 |
| 9 | 4,278 | 4.7 | 38,502 | 7.6 |
| 10 | 2,687 | 2.9 | 26,870 | 5.3 |
| 11 | 1,643 | 1.8 | 18,073 | 3.6 |
| 12 | 1,152 | 1.3 | 13,824 | 2.7 |
| 13 | 558 | 0.6 | 7,254 | 1.4 |
| 14 | 373 | 0.4 | 5,222 | 1.0 |
| $15+$ | 806 | 0.9 | 14,132 | 2.8 |
| NS | 1 | 0.0 | 55 | 0.0 |
| Total | $\mathbf{9 1 , 2 5 1}$ | $\mathbf{1 0 0 . 0}$ | $\mathbf{5 0 4 , 9 8 5}$ | $\mathbf{1 0 0 . 0}$ |

Figure 89: Average household size (number of people per household) by place of residence, Solomon Islands: 2009


Figure 90: Distribution of households and people living in private households by household size (\%), Solomon Islands: 2009


### 5.3 Household Characteristics

### 5.3.1 Household composition

Data on household composition were established by identifying a head of household who served as a reference person to whom all other people in the household, in terms of family membership, are related (Table 34).

Approximately 4 out of 5 heads of household ( $84 \%$ ) in the Solomon Islands were men $(76,653)$ with one-in-five ( 14,598 or $16 \%$ ) households headed by women. This distribution has not changed since the 1999 census.

In most cases women headed the household when her spouse was not present (temporarily absent), or when the women were widowed; her husband had died.

Not surprisingly the majority of household members (55\%) were children such as the sons and daughters of the household head, adopted children, children of in-laws, or grandchildren.

Fourteen percent of household members included the spouse of the head of household. Interestingly only $2 \%(1,271)$ of all spouses $(70,828)$ were males, which supports the finding that females only head the household if a spouse is not present.

Two per cent of all household members were other relatives or not related to the head of household.

Table 34: Population by household composition (relationship to head of household), Solomon Islands: 2009

| Relationship | In numbers |  |  | In percentage |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Total | Male | Female | Total | Male | Female |
| Head of household | 91,251 | 76,653 | 14,598 | 18 | 30 | 6 |
| Spouse of head | 70,828 | 1,271 | 69,557 | 14 | 0 | 28 |
| Son/Daughter | 229,072 | 120,726 | 108,346 | 45 | 47 | 44 |
| Adopted son/daughter | 7,505 | 4,022 | 3,483 | 1 | 2 | 1 |
| Son in law/daughter in law | 7,360 | 3,087 | 4,273 | 1 | 1 | 2 |
| Grandchild | 32,625 | 17,619 | 15,006 | 6 | 7 | 6 |
| Parent/Parents in law of head | 7,121 | 2,064 | 5,057 | 1 | 1 | 2 |
| Brother/Sister (including in laws) | 15,895 | 8,434 | 7,461 | 3 | 3 | 3 |
| Other relatives | 33,522 | 18,577 | 14,945 | 7 | 7 | 6 |
| Not related/friend | 9,806 | 5,285 | 4,521 | 2 | 2 | 2 |
| Total | $\mathbf{5 0 4 , 9 8 5}$ | $\mathbf{2 5 7 , 7 3 8}$ | $\mathbf{2 4 7 , 2 4 7}$ | $\mathbf{1 0 0}$ | $\mathbf{1 0 0}$ | $\mathbf{1 0 0}$ |

### 5.3.2 Household income

### 5.3.2.1 Main household income

In $2009,44 \%$ of the main source of household income in the Solomon Islands was from the sale of fish, crops or handicrafts. Another $24 \%$ of the main household income was from wages or salary, $6 \%$ from own business activities and $20 \%$ household income from other sources. Three percent of all households in the Solomon Islands recorded that they have no income (Fig.91).

The sources of income are very different in Honiara compared to the rest of the country. More than three-quarter of all households in Honiara received their main income from wages or salaries ( $78 \%$ ). This percentage was much lower in the other provinces. For example, in Malaita only $12 \%$ of households relied on income from wages and salary, and it was $27 \%$ in the Western province which is the highest percentage of all provinces except Honiara.

When comparing the household income distribution by province it is evident that the sale of fish/crop/handicraft is the main source of income throughout the country apart from Honiara.

Figure 91: Proportion of private households by main source of household income and by province (\%), Solomon Islands: 2009


Another important source of income was remittances, especially in Rennell-Bellona where it comprised the main source of income for $12 \%$ of all households.
'Other' sources of income include the sale of other market produce such as household non-food items like flowers, motu leaves or housing thatching materials, and the sale of livestock such as pigs or chicken.

### 5.3.2.2 Remittances

The census included one question addressing the issue of remittances and asked: "How much money (in SI\$) has this household received from remittances in the last 12 months?", followed by "What is the province/country of the sender?".

About one quarter of all households in the Solomon Islands received remittances during the 12 months before the census. Twelve percent of all households received less than SI\$500, 4\% received between SI\$500 and SI\$999, and 2\% received between SI\$1,000 1,499 and another $2 \%$ received more than SI\$ 1,500(Fig.92).

The proportion of households receiving remittances was particularly high in RennellBellona where more than half of all households received remittances, and $13 \%$ received more than SI\$1,500 during the year before the census.

There was a relatively low proportion of households receiving remittances in Central and Temotu (16\%), Guadalcanal (19\%), and Honiara (20\%).

Data by location of sender of remittances shows that for most provinces, Honiara was an important source of remittances (Fig.93), and an especially large proportion of households in Central and Rennell-Bellona received remittances from Honiara.

In general however, it needs mentioning that a sizeable proportion of remittances were received from senders within the same province of a household's residence. This is especially the case for Makira-Ulawa where $48 \%$ of all remittances are received from within the same province, Choiseul (43\%), and Guadalcanal (40\%).

Overall there were 1,254 households that received remittances from overseas, with residents in Australia being the main sender for 519 households in the Solomon Islands. Other important countries for sending remittances were New Zealand, Fiji and PNG (Table 35).

With $39 \%$ of all households that received remittances, Honiara was the province with the largest proportion of remittances received from overseas, followed by Western ( $10 \%$ ), and Guadalcanal (9\%).

Senders of remittances in Australia were of particular importance for households in Rennell-Bellona (55\%) followed by Choiseul (52\%) and Western (45\%) and Guadalcanal (45\%) (Fig.94).

Figure 92: Proportion of households by remittances received (\%), Solomon Islands: 2009


Senders from New Zealand and Fiji were relatively important for Temotu and Isabel.

PNG senders were relatively high represented among households in Rennell-Bellona (15\%), Temotu (13\%), Central 12\%), and Honiara (11\%).

Interestingly a significant proportion of 'other' countries in Makira-Ulawa included Canada.

Table 35: Number of households receiving remittances from overseas by country of sender, Solomon Islands: 2009

| Country | Number of households |
| :--- | ---: |
| Australia | 519 |
| New Zealand | 141 |
| Fiji | 127 |
| Papua New Guinea | 119 |
| United States of America | 70 |
| Other Country | 43 |
| United Kingdom | 41 |
| Other Europe | 62 |
| Vanuatu | 32 |
| Other Asia | 29 |
| Other Pacific | 23 |
| Japan | 18 |
| Canada | 17 |
| Hong Kong | 13 |
| Total | $\mathbf{1 , 2 5 4}$ |

Figure 93: Proportion of households receiving remittances by province and by location of sender of remittances (\%), Solomon Islands: 2009


Figure 94: Proportion of households receiving remittances from overseas by province and by country of sender (\%), Solomon Islands: 2009


### 5.4. Agricultural cash crop, livestock and fisheries activities

The 2009 census included several questions on whether households were engaged in agricultural and fisheries activities such as:

- Whether a household is involved in growing food, and whether it is for sale or subsistence;
- Which cash crops are grown, such as vegetables/food crops, coco/copra, betel nut, cocoa, tobacco, timber, flowers, or others;
- Whether a household raises live stock such as cows, pigs, goats, horses, or poultry;
- Whether a household is involved in fishing, and whether it is for sale or subsistence;
- The type of fish a household buys, catches and consumes, and the frequency it does so.


### 5.4.1 Agricultural activities

In 2009, only $11 \%$ of households were not involved in growing any crops (Fig.95). As can be expected, this proportion is much higher in the urban (43\%) than the rural areas $(4 \%)$. Most households that grew crops did so for the purpose of own consumption (subsistence) as well as sale, with the exception of households in Rennell-Bellona, Makira-Ulawa and Honiara where most households grew crops mainly for own consumption. Only $1 \%$ of households grew crops for the sole purpose of selling it.

From those households that were involved in growing crops, most grew vegetables and food crops ( $71 \%$ ), followed by betel nut ( $44 \%$ ), coconut/copra ( $32 \%$ ), cocoa ( $26 \%$ ), flowers (14\%), timber (10\%), tobacco (9\%), and other crops (7\%) (Table 36 and Figs.96103)

Figure 95: Proportion of private households by place of residence and whether involved in growing crops (\%), Solomon Islands: 2009


The highest proportion of households growing vegetables/food crops was in Temotu, coconut/copra in Choiseul, betel nut in Isabel, cacao in Makira-Ulawa, tobacco and timber in Temotu, and flowers in the Western province. A sizeable proportion of households in Isabel and Temotu also grew other crops.

Table 36: Proportion of private households by place of residence and agricultural activity (\%), Solomon Islands: 2009

| Place of <br> residence | Veggies/ <br> Food crops | Coconut/ <br> Copra | Betel Nut | Cocoa | Tobacco | Timber | Flowers | Other |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| SOLOMON ISL. | $\mathbf{7 1}$ | $\mathbf{3 2}$ | $\mathbf{4 4}$ | $\mathbf{2 6}$ | $\mathbf{9}$ | $\mathbf{1 0}$ | $\mathbf{1 4}$ | $\mathbf{7}$ |
| Choiseul | 82 | 51 | 60 | 9 | 3 | 20 | 12 | $\mathbf{2}$ |
| Western | 82 | 33 | 42 | 14 | 5 | 21 | 30 | 9 |
| Isabel | 81 | 30 | 77 | 5 | 17 | 14 | 17 | 35 |
| Central | 86 | 46 | 67 | 15 | 9 | 4 | 5 | 5 |
| RenBell | 81 | 18 | 1 | - | 0 | 2 | 22 | 5 |
| Guadacanal | 70 | 26 | 44 | 37 | 6 | 3 | 8 | 5 |
| Malaita | 72 | 34 | 38 | 42 | 10 | 9 | 14 | 5 |
| Makira | 67 | 44 | 56 | 49 | 15 | 8 | 5 | 2 |
| Temotu | 88 | 42 | 67 | 12 | 33 | 30 | 12 | 27 |
| Honiara | 26 | 3 | 1 | 0 | 0 | 0 | 13 | 2 |

Figure 96: Proportion of private households by place of residence and growing vegetables/food crops (\%), Solomon Islands: 2009


Figure 97: Proportion of private households by place of residence and growing coconut/copra (\%), Solomon Islands: 2009


Figure 98: Proportion of private households by place of residence and growing betel nut (\%), Solomon Islands: 2009


Figure 99: Proportion of private households by place of residence and growing cocoa (\%), Solomon Islands: 2009


Figure 100: Proportion of private households by place of residence and growing tobacco (\%), Solomon Islands: 2009


Figure 101: Proportion of private households by place of residence and growing timber (\%), Solomon Islands: 2009


Figure 102: Proportion of private households by place of residence and growing flowers (\%), Solomon Islands: 2009


Figure 103: Proportion of private households by place of residence and growing other crops (\%), Solomon Islands: 2009


### 5.4.2 Livestock

The following section provides an overview on the number of livestock counted (Table 37), and the proportion of households that raise or own livestock (Figs.104-106). The respective question asked in the census was "Does this household have any livestock?", and answer boxes were provided for the number of cows, pigs, goats, horses, and poultry.

In terms of numbers, throughout the country, 30 thousand cows were counted, 121 thousand pigs, 20 thousand goats, 2,4 thousand horses, and about 350 thousand poultry. Most live stock of any kind was counted in Malaita. There were a relatively large number of cows in Honiara and Central, pigs were plentiful in Guadalcanal, and Makira-Ulawa, and there were a sizeable number of goats in Guadalcanal. Apart from Malaita, there were a relatively large number of horses in Honiara. With the exception of Honiara and Rennell-Bellona, poultry was plentiful in all other provinces.

Table 37: Total number of livestock, Solomon Islands: 2009

| Place of | Number of livestock |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| residence | Cows | Pigs | Goats | Horses | Poultry |
| SOLOMON ISL. | $\mathbf{3 0 , 3 6 3}$ | $\mathbf{1 2 0 , 9 7 1}$ | $\mathbf{2 0 , 2 2 2}$ | $\mathbf{2 , 4 4 1}$ | $\mathbf{3 4 9 , 9 9 1}$ |
| Choiseul | 844 | 3,701 | 90 | 60 | 30,831 |
| Western | 1,751 | 5,257 | 985 | 161 | 58,534 |
| Isabel | 53 | 4,089 | 2,409 | 126 | 26,875 |
| Central | 3,102 | 6,322 | 1,104 | 343 | 17,647 |
| RenBell | - | 56 | - | - | 2,708 |
| Guadacanal | 2,235 | 23,383 | 4,110 | 21 | 65,645 |
| Malaita | 1,002 | 51,454 | 8,137 | 945 | 86,409 |
| Makira | 2,383 | 11,351 | 311 | 142 | 22,789 |
| Temotu | 2,924 | 9,356 | 1,098 | 80 | 22,491 |
| Honiara | 6,069 | 6,002 | 1,978 | 563 | 16,062 |

In terms of household's involvement in raising live stock, most households (54\%) raised at least one kind of live stock (Fig.104). The proportion of households raising live stock was especially high in Temotu ( $83 \%$ ) and Isabel ( $72 \%$ ). Not surprisingly the proportion of households in Honiara raising live stock was with only $8 \%$ much lower than elsewhere in the country.

There was a particularly high proportion of households raising pigs in Temotu (70\%), Malaita (55\%), and Makira-Ulawa (51\%)

Furthermore, there was a high proportion of households raising poultry in Isabel (61\%), Temotu (59\%), Choiseul (56\%), and Rennell-Bellona (54\%).

Only a small percentage of households in the provinces raised cows, goats and horses. For this reason, only a graphs for pigs and poultry are presented.(Figure 105 and 106).

Figure 104: Proportion of private households by place of residence and whether raising any livestock (\%), Solomon Islands: 2009


Figure 105: Proportion of private households by place of residence raising pigs (\%), Solomon Islands: 2009


Figure 106: Proportion of private households by place of residence raising poultry (\%), Solomon Islands: 2009


### 5.4.3 Fishing activities

The following section provides a summary on the number/proportion of households involved in fishing activities, and whether it was mainly for own consumption (subsistence), for sale, or both. The census question did not distinguish between fresh water and marine fishing activities (Fig.107).

The data show that $60 \%$ of all households in the Solomon Islands were engaged in fishing activities; $29 \%$ did this for own consumption only (subsistence), and $31 \%$ fished for personal consumption and the sale of their catch. Less than $1 \%$ of households (368) fished for the sole purpose of selling their catch.

While only $8 \%$ of households in Honiara were involved in fishing activities, it was highest in Temotu where $85 \%$ of all households did fishing, $83 \%$ in Western, and $81 \%$ in Isabel.
There were 113 households in Malaita that fished exclusively for commercial purposes.

With respect to the frequency of catching fish, most households that fish, did so once a week, and one in five households fished more than once a week. The highest proportion of households that fished more than once a month was in Choiseul (29\%), Western (28\%), and Temotu (27\%) (Fig.108).

Almost half of all households ( $47 \%$ ) in the Solomon Islands bought fish at least once a week (Fig.109). Another $24 \%$ bought fish once a month.

The highest proportion of households buying fish was in Honiara with $92 \%$ of all households buying fish at least once a month which is probably related to the fact that only a small proportion of households in Honiara catch fish themselves.

### 5.4.3.1 Fish consumption

Please note that it is not possible to extract the number or volume of fish or shellfish consumed from the 2009 census data. Rather it is the number and proportion of households involved with fish consumption, and the type of fish that is consumed (bought or caught) that is collected

The majority of households that consumed fish, caught or bought reef fish (73\%), another $41 \%$ consumed tuna, $11 \%$ shellfish, $9 \%$ freshwater fish, and $4 \%$ bought or caught other types of fish or shellfish (Fig.110).

Compared to the national average, there was a higher proportion of households consuming tuna in Honiara (56\%), Temotu (56\%), Guadalcanal (53\%), Malaita (47\%), and Makira-Ulawa (45\%).

Reef fish was most popular in Temotu (92\%) and Choiseul (91\%).

There were a noticeable proportion of households that consumed freshwater fish in Guadalcanal (29\%) and Rennell-Bellona (25\%).

With $43 \%$ a relatively large proportion of households in Temotu consumed shellfish.

Figure 107: Proportion of private households by place of residence and marine fishing activities (\%), Solomon Islands: 2009


Figure 108: Proportion of private households by place of residence and frequency of catching fish (\%), Solomon Islands: 2009


Figure 109: Proportion of private households by place of residence and frequency of buying fish (\%), Solomon Islands: 2009


Figure 110: Proportion of the type of fish or shellfish consumed (bought or caught) by private households and place of residence (\%), Solomon Islands: 2009


### 5.5 Housing

### 5.5.1 Introduction

As early as the 1970s, the national government's housing policy was to enable every Solomon Islands family to live in an affordable and adequate house, with reasonable comfort, health and safety. One of the government's aims was to ensure that private housing in the rural areas is of reasonable standard and comfort, and to rely to an important extent on local resources and skills to do so. According to the Sixth Development Plan, "Employers are required by the Labour Ordinance to provide 'proper and adequate' housing for employees who cannot return to their homes at the conclusion of their daily work" (British Solomon Islands Protectorate 1971). In the 1970s the government itself, too, was obliged by law to provide reasonable housing for its employees.

While it fulfils a variety of social roles, housing primarily provides shelter and security for the family and individuals, and provides a relative measure of social status and an expression of lifestyle choices and comfort. As an important social institution, housing provides owners with a sense of worth and belonging in any community, whether rural or urban.

The challenge for the country and any government of the day is to provide sustainable livelihoods, safe and secure living environments and a better quality of life for the poor and other vulnerable groups, while maintaining a reasonable standard of the existing housing stock. This is becoming more urgent in the urban areas because the national government has not put into place a social safety net to formally take care of the needs of the poor and vulnerable.

The Universal Declaration of Human Rights adopted in 1948 recognised the right to shelter as a component of the right to an adequate standard of living (UNCHS 1997). While recognising the importance placed on the above declaration, this chapter will not, however, discuss in detail the issue and meaning of 'adequate shelter' in the context of the Solomon Islands. Nor will it go into housing costs and the availability of credit facilities, and house rents and the affordability of these rent levels in the urban areas.

The housing stock is an important part of the country's economy and a major form of investment, and it provides employment and livelihood for a variety of other trades. "In most regions, housing has the potential of becoming an economic engine of growth because of its high yield on invested resources, a high multiplier effect, and a host of beneficial forward and backward linkages in the economy. However, while the economic
benefits of housing have been widely recognised, housing is rarely used as an element of poverty alleviation" (UNCHS 2000b).

Where population growth is more pronounced, there is more pressure on the available resources such as water and sanitation, land, and services. This competition for and access to the limited resources for house construction and services is more often a problem in urban than in rural areas.

According to the 2009 census, most private households,( $83 \%$ ), live in the rural areas. Thus, the rural sector has by far the largest population and, with 413,840 people, constitutes the major part of the Solomon Islands society and economy. For many years now, this rural sector has been providing and acting as a social safety net for many families, especially the vulnerable families who may well have been on the streets without shelter and food otherwise. This safety net mechanism is made possible by the nature of the local traditional land tenure system, which entitles every person born to an indigenous Solomon Islander to land inheritance through either the mother or the father. If the government were to recognise and support the coping mechanisms that have evolved in the rural environments and among the population over time, it would minimise the risks of economic shocks, the vulnerability of the poor with respect to land tenure, and homelessness.

### 5.5.2 Housing and land tenure

Shelter is very significant in the Solomon Islands culture. The great majority of households ( $74 \%$ ) reside in owner-occupied dwellings, although there is a large difference between urban and rural areas in this respect: as many as $(80 \%)$ of the dwellings in the rural sector are owner-occupied, compared with only (43\%) of dwellings in the urban areas (Fig.111). In contrast to the urban areas, the rural sector provides security of land tenure. One of the reasons why the vast majority of household in the rural sector are owner-occupiers is that most rural land is customary. Most, if not all, of the villages in the rural areas of the country are located on communal lands owned by tribes and almost every rural householder lives on tribal or kinship land.

In contrast, urban land is under the jurisdiction of the Ministry of Lands. In order to build a house in the urban areas, Town and Country Planning Board regulations have to be met, while land is always registered. This might imply that access to urban land by ordinary and low-income families to build owner-occupied houses is limited. Furthermore, many urban residents are in formal employment and receive either rent-free housing provided by their employer, or have employers who pay their rent costs. These factors, as well as the fact that many residents stay in town only temporarily, partly explain why almost
one-third of urban households rent their homes, and a further fifth live in rent-free dwellings either with 'wantoks' or relatives, or in dwellings owned or rented by their employers.

The proportion of households renting from a private landlord was with $22 \%$ of all households highest in Honiara, and relatively insignificant in all other provinces.

The majority of households in the Solomon Islands (75\%) reside on land classified as "freehold" (Fig.112), 9\% lived on land leased from Government, and 7\% leased land from a private land owner or occupied it as part of a customary arrangement.

The land tenure structure is very different in urban Honiara, than the largely rural other provinces. The majority of private households in Honiara lease land from Government ( $58 \%$ ). Here only $23 \%$ of households reside on land classified as 'freehold'.

Figure 111: Proportion of private households by place of residence and housing tenure (\%), Solomon Islands: 2009


Figure 112: Proportion of private households by place of residence and land tenure (\%), Solomon Islands: 2009


### 5.5.3 Type of living quarters

The 2009 census provides information on the type of building that each household lives in. Seven building categories were distinguished:

- one family house detached from any other house,
- one family house attached to one or more houses,
- building with 2 or more apartments,
- building with 2 or more households which share a kitchen/toilet,
- lodging house
- dwelling attached to a shop or other non-residential building,
- Other (any other type of building that cannot be classified as one of the above types (e.g., hotels, ships, hospitals, prisons, police barracks, et cetera).

The majority, $92 \%$ of the Solomon Islands households had living quarters of one family house detached from any other house, $4 \%$ of households were one family house attached to one or more houses, $2 \%$ of households had living quarters classified as buildings with

2 or more households which share a kitchen/toilet, and $1 \%$ of households were living in buildings with 2 or more apartments (Fig.113).

Figure 113: Proportion of private households by place of residence and living quarters (\%), Solomon Islands: 2009


Living quarters of one family house attached to one or more houses was much higher in the urban areas of Honiara ( $11 \%$ ) than in the other provinces. In addition, $6 \%$ of all private households in Honiara lived in buildings with 2 or more households which share a kitchen/toilet.

### 5.5.4 Number of rooms

The distribution of dwellings by number of rooms is displayed in Figure 114. It shows that the majority ( $64 \%$ each) of all dwellings in the Solomon Islands had 2 rooms or 3 rooms, and another $16 \%$ had 4 rooms; $13 \%$ had only 1 room. The average number of rooms was 2.8 rooms per dwelling (Table 38). The provinces with the highest number of rooms per dwelling on average were Western (3.1), Choiseul, Isabel, and Malaita with exactly 3 rooms on average. The provinces with the lowest number of rooms were Guadalcanal (2.2), and Temotu and Central with only 2.3 rooms on average.

Table 38: Average number of rooms per dwelling by place of residence, Solomon Islands: 2009

| SOLOMON ISL. | URBAN | RURAL | Choiseul | Western Isabel | Central | RenBell | Guadacanal Malaita | Makira | Temotu | Honiara |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 . 8}$ | 2.9 | 2.8 | 3.0 | 3.1 | 3.0 | 2.3 | 2.8 | 2.2 | 3.0 | 2.8 | 2.3 | 2.9 |

Figure 114: Proportion of private households by place of residence and number of rooms (\%), Solomon Islands: 2009


### 5.5.5 Construction material used for dwellings

Walls

Fifty four percent of the material used for the walls of private dwellings was traditional materials, followed by wood (38\%), and 3\% used the more durable concrete (3\%) (Fig.115). While traditional materials for the walls were mainly used in Temotu ( $86 \%$ ) and Makira-Ulawa, wood was the preferred material in Rennell-Bellona (79\%), Honiara (67\%) and Western (59\%). A sizeable proportion of dwellings in Honiara used concrete for the walls (16\%).

## Roofs

Roofing metal accounted for $36 \%$ of the material used for roofs (Fig.116) and $61 \%$ traditional materials. Roofing metal was most commonly used in Rennell-Bellona (95\%), Honiara ( $78 \%$ ), and Western ( $49 \%$ ), while traditional materials were especially dominantly in Temotu (88\%) and Makira-Ulawa (83\%).

## Floors

The three most used materials for the construction of floors in the Solomon Islands were wood ( $62 \%$ ), traditional materials ( $29 \%$ ), and concrete ( $6 \%$ ). However, one in five dwellings in Honiara used concrete for their floors and one in six dwellings in Central as well (Fig 117).

Wooden floors were predominant in Rennell-Bellona (92\%), Western (85\%), and Honiara (76\%).

Figure 115: Proportion of private households by place of residence and main type of material used for the walls of dwellings (\%), Solomon Islands: 2009


Figure 116: Proportion of private households by place of residence and main type of material used for the roofs of dwellings (\%), Solomon Islands: 2009


Figure 117: Proportion of private households by place of residence and main type of material used for the floors of dwelling (\%), Solomon Islands: 2009


### 5.5.6 Water source for drinking and washing

### 5.5.6.1 Introduction

The general access of the population to water, sanitation, electricity and other basic amenities are an important measure of the country's development. Improving the quality and sustainability of electricity and water supply and of sanitation are very essential for social and economic growth, and employment creation.

The main providers of piped water in the Solomon Islands are the Solomon Islands Water Authority (SIWA) and the Rural Water Supply and Sanitation (RWSS). In 1992, the SIWA Act was enacted by Parliament and SIWA (formerly the Water Unit of the Public Works Ministry) then became an authority and formally commenced operations in 1994. Under the Act, "SIWA is responsible for the development and management of water and wastewater services in all urban and provincial centres throughout the Solomon Islands." Its main aim is to "...provide safe, sustainable and reliable water and wastewater services to the Solomon Islands urban areas." (Solomon Islands Water Authority 1997). SIWA provides water to Honiara, Auki, Tulagi and Noro. The mission of RWSS is to complement SIWA and to supply water to the rural areas. RWSS has implemented between 75 and 100 water supply projects and has constructed hundreds of sanitation facilities yearly, spread throughout all nine provinces.

The distribution of the Solomon Islands dwellings by main source of drinking water is displayed in Figure 118. It shows that $35 \%$ of dwellings in the country were connected to communal standpipe used as source for drinking water, another $25 \%$ used the river/stream as their source, followed by $12 \%$ who used a household tank, $11 \%$ used a communal tank, and $9 \%$ used metered piped water through SIWA.

Metered piped water was only significantly provided in Honiara where $75 \%$ of all households obtained their drinking water through SIWA. Otherwise the main source of drinking water varies widely between provinces. While the vast majority in Rennell-Bellona (80\%) used a household tank, many households in the other provinces, especially in Isabel, used a communal standpipe.

A river or stream was a significant source of drinking water in Guadalcanal (38\%), Makira-Ulawa (34\%) and Malaita (33\%).

The distribution of dwellings by main source of washing water is displayed in Figure 119. It shows the great variation by main source of washing water in the provinces. Privately piped water was only a significant source of washing water in urban Honiara ( $61 \%$ ), otherwise in the other provinces the main source of washing water was a river, stream or lake, or a communal standpipe. Water from a household tank was the most common source of washing water in Rennell-Bellona (67\%).

Figure 118: Proportion of private households by place of residence and main source of drinking water (\%), Solomon Islands: 2009


Figure 119: Proportion of private households by place of residence and main source of washing water (\%), Solomon Islands: 2009


### 5.5.7 Main energy source for lighting and cooking

The main source of energy for lighting in the Solomon Islands was the kerosene lamp used by $75 \%$ of all households (Fig.120). A further $12 \%$ of all households used electricity source from the main grid, and $9 \%$ got their energy from using solar panels.

Not surprisingly urban Honiara has the highest usage of electricity main grid (64\%).

Kerosene lamp is used as the main source of lighting in all the provinces with the exception of Rennell-Bellona where solar energy was used by $75 \%$ of all households.

Figure 120: Proportion of private households by place of residence and main source of lighting (\%), Solomon Islands: 2009


The main source of energy for cooking was wood/coconut shells which were used by $93 \%$ of all households in the Solomon Islands (Fig.121).5\% of all households used gas.

However, gas usage was more dominant in the urban areas of Honiara city council where $37 \%$ of all households used gas. Still also in Honiara the majority of households (53\%) used wood or coconut shells as their main source of energy for cooking.

Figure 121: Proportion of private households by place of residence and main source for cooking (\%), Solomon Islands: 2009


### 5.5.8 Main toilet facility

Modern toilet facilities refer to installations constructed to dispose of human excreta. Therefore, they exclude toilet facilities in the sense of bush, rivers, beaches or sea. In the census,the following types of (modern) toilets are distinguished:

- Flush toilet (an installation that has its own cleaning-water system, which washes away the waste), either private or shared with other households
- Water sealed toilet (an installation where the toilet is cleaned after use by pouring water from a bucket), either private or shared with other households
- Pit latrine (a (covered) hole in the ground used as a toilet), either private or shared with other households
- Others (any type of toilet that does not fit any of the above descriptions)

One third of all households in the Solomon Islands did not have access to a toilet facility, meaning either a flush toilet, a water sealed toilet, or a pit latrine (Fig.122). This proportion is especially high in Temotu where $80 \%$ have no access to a toilet facility, Choiseul (72\%), and Central (62\%).

Fourteen percent of all households share their toilets with members of other households.

Honiara was the only place where the majority of households had access to a flush toilet, and more than half ( $54 \%$ ) of all households did not share it with other household members.

A pit latrine, either private or shared, was available to a majority of households in Rennell-Bellona, and 43\% of households in Malaita used a pit latrine.

Unfortunately a large proportion (24\%) of households used 'other' toilet facilities that are not further specified.

Figure 122: Proportion of private households by place of residence and main type of toilet facility (\%), Solomon Islands: 2009


### 5.5.9 Means of waste disposal

During the 2009 census, information was collected with respect to how households manage their rubbish disposal. The census recorded 7 different means of rubbish disposal in the Solomon Islands: Government waste collection, taken to a central place for disposal; Burry; Burning; River/stream; Sea; Backyard; or others means of waste disposal.

In the Solomon Islands, $60 \%$ of all households used their backyard as a means for waste disposal, followed by disposing it into the sea (19\%), burning it (8\%), and 5\% of all households had their rubbish collected by the Government waste collection (Fig.123). However, this service was only available by any significance in Honiara, where $36 \%$ of households used the Government waste collection to dispose of their rubbish.

In most provinces the majority of households disposed their waste in their backyard. Exceptions were households in Rennell-Bellona where $63 \%$ burned their waste, and Temotu and Central where a large proportion disposed their rubbish in the sea.

Figure 123: Proportion of private households by place of residence and main mode of waste disposal (\%), Solomon Islands: 2009


### 5.6 Amenities and capital goods

This section briefly summarizes the availability of a variety of household items and appliances. The different sections include a summary table presenting the total number of items by place of residence.

Subsequently graphs are added that show the proportion of households by place of residence with at least one item that is in working order. It excludes any items that were broken, borrowed or rented. The graphs therefore are simply divided into two categories: 'yes' if the household owns the item or 'no' if it does not own the item.

### 5.6.1 Means of communication

Means of communications include the availability and use of land line telephones, mobile phones, and internet connections.

Only $2 \%$ of all households in the Solomon Islands had a landline phone available (Fig.124), mainly in Honiara where $16 \%$ of households had a landline phone.

Mobile phones were much more commonly used than land line telephones, although by a minority of $21 \%$ of all households (Fig.125). While more than three-quarters of household in Honiara had a mobile phone, it was only $6 \%$ of households in Choiseul, and $8 \%$ in Central and Malaita.

Households with an internet connection barely exist in the Solomon Islands (Fig.126). In total there were only 541 households recorded with an Internet connection; less than $1 \%$ of all households. Of these 541 households, 365 were located in Honiara, and 102 in the Western province. There was no Internet in Rennell-Bellona and Temotu.

Figure 124: Proportion of private households by place of residence and availability of a telephone (land-line) (\%), Solomon Islands: 2009


Figure 125: Proportion of private households by place of residence and availability of a mobile phone (\%), Solomon Islands: 2009


Figure 126: Proportion of private households by place of residence and availability of an Internet connection (\%), Solomon Islands: 2009


### 5.6.2 Household utility appliances

This section briefly describes the availability of fridge/freezer and generator.

Although 6,346 fridge/freezer and 6,541 were counted during the census (Table 39).While the vast majority of fridge/freezers were located in Honiara $(4,147)$, where $39 \%$ of all households had one (Fig 127), generators were more common in the other provinces than in Honiara (Fig 128). While on average $7 \%$ of all households owned a generator, it was with $14 \%$ of all households much higher in the Western Province. One in ten households in Choiseul had a generator.

Table 39: Number of items of cooking appliances by place of residence, Solomon Islands: 2009

| Place of residence | Item |  |
| :--- | ---: | ---: |
|  | Fridge/Freezer | Generator |
| SOLOMON ISL. | $\mathbf{6 , 3 4 6}$ | $\mathbf{6 , 5 4 1}$ |
| Choiseul | 45 | 510 |
| Western | 884 | 1,979 |
| Isabel | 133 | 453 |
| Central | 99 | 397 |
| RenBell | 8 | 45 |
| Guadacanal | 523 | 1,385 |
| Malaita | 347 | 851 |
| Makira | 90 | 243 |
| Temotu | 70 | 97 |
| Honiara | 4,147 | 581 |

Figure 127: Proportion of private households by place of residence and availability of a fridge/freezer (\%), Solomon Islands: 2009


Figure 128: Proportion of private households by place of residence and availability of a generator (\%), Solomon Islands: 2009


### 5.6.3 Entertainment and communications appliances

The total count of entertainment/communication items available in the Solomon Islands during the 2009 census count TVs, computers, radios, mobiles phones and HF radios is listed in Table 40.Fingures 129-132 show the proportion of households that own at least on item in working order.

Not surprisingly the proportion of household with any of the items above is highest in Honiara where $61 \%$ own a radio, $52 \%$ a TV, $23 \%$ a computer and $77 \%$ a mobile phone. These percentages were much lower in all the other provinces with the exception of the availability of a radio which also relatively common in the other provinces.

However, overall only $3 \%$ of all households owned a computer, only $12 \%$ a TV, and only one in five households had a mobile phone. Even a radio was only available to $44 \%$ of all households.

Table 40: Number of items of entertainment/communications appliances by place of residence, Solomon Islands: 2009

| Place of residence | Item |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | TV | Computer | Radio | Mobile phone | HF radio |
| Solomon Islands | 11,455 | 4,183 | 43,626 | 33,521 | 1,298 |
| Choiseul | 380 | 58 | 2,253 | 426 | 85 |
| Western | 2,431 | 461 | 5,999 | 4,696 | 267 |
| Isabel | 386 | 45 | 3,254 | 1,269 | 41 |
| Central | 341 | 43 | 2,211 | 543 | 22 |
| Rennell-Bellona | 29 | 27 | 283 | 204 | 27 |
| Guadalcanal | 1,285 | 370 | 8,159 | 5,320 | 100 |
| Malaita | 1,313 | 239 | 11,852 | 3,694 | 172 |
| Makira-Ulawa | 79 | 62 | 2,617 | 815 | 115 |
| Temotu | 87 | 31 | 858 | 850 | 33 |
| Honiara | 5,124 | 2,847 | 6,140 | 15,704 | 436 |

Figure 129: Proportion of private households by place of residence and availability of a radio (\%), Solomon Islands: 2009


Figure 130: Proportion of private households by place of residence and availability of a TV (\%), Solomon Islands: 2009


Figure 131: Proportion of private households by place of residence and availability of a computer (\%), Solomon Islands: 2009


Figure 132: Proportion of private households by place of residence and availability of a mobile phone (\%), Solomon Islands: 2009


### 5.6.4 Means of transportation

Only a very small minority of households in the Solomon Islands had the following means of transport; car/bus ( $2 \%$ ), motor bike (< $1 \%$ ), or boat ( $2 \%$ ). However, $39 \%$ owned a canoe and $7 \%$ an outboard motor (Table 41 and Fig.133-136).

More than $70 \%$ of all cars and buses were owned by households in Honiara.

The relative high proportion of households with canoes and outboard motors in the provinces other than Honiara underlines the importance of sea travel for the economies and the people living there.

There were an especially high proportion of households with canoes and outboard motors in Western, Choiseul, Isabel and Central provinces.

Table 41: Number of transport items by place of residence, Solomon Islands: 2009

| Place of <br> residence | Car/Bus | Motobike | Truck | Canoes | Boat/Ship | Outboard Motor |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| SOLOMON ISL. | $\mathbf{2 , 9 3 1}$ | $\mathbf{4 6 8}$ | $\mathbf{1 , 8 9 8}$ | $\mathbf{5 3 , 7 3 7}$ | $\mathbf{2 , 5 4 8}$ | $\mathbf{6 , 1 0 3}$ |
| Choiseul | 11 | 26 | 40 | 5,239 | 440 | 539 |
| Western | 152 | 79 | 179 | 15,299 | 455 | 2,046 |
| Isabel | 17 | 12 | 23 | 5,203 | 475 | 644 |
| Central | 1 | 53 | 22 | 4,444 | 49 | 499 |
| RenBell | - | 6 | 3 | 117 | 8 | 42 |
| Guadacanal | 458 | 59 | 403 | 3,807 | 144 | 394 |
| Malaita | 174 | 106 | 348 | 12,986 | 699 | 1,234 |
| Makira | 8 | 10 | 53 | 3,401 | 113 | 200 |
| Temotu | 28 | 50 | 23 | 2,867 | 76 | 148 |
| Honiara | 2,082 | 67 | 804 | 374 | 89 | 357 |

Figure 133: Proportion of private households by place of residence and availability of a car/bus (\%), Solomon Islands: 2009


Figure 134: Proportion of private households by place of residence and availability of a boat (\%), Solomon Islands: 2009


Figure 135: Proportion of private households by place of residence and availability of a canoe (\%), Solomon Islands: 2009


Figure 136: Proportion of private households by place of residence and availability of an outboard motor (\%), Solomon Islands: 2009


### 5.6.5 Bednets

Although the census question specifically aimed at recording insecticide treated bednets, it seems doubtful that respondents were clear about whether or not their bednets were actually insecticide treated, and the collected information should be used with caution.

The majority of all households in the Solomon Islands had at least one insecticide treated bednet ( $75 \%$ ) as shown in Figure 137. In total 210,657 bednets were counted in the 2009 census (Table 42). More than two-third of households in all the provinces of the country stated that they had (insecticide treated) bednets, with the exception of Rennell-Bellona province where it is only one quarter of all households, and Honiara where it was only $59 \%$ of all households.

Table 42: Number of private households by place of residence and availability of bednets, Solomon Islands: 2009

| Place of <br> Residence | Households with/without bednets |  |  | Number of <br> bednets |
| :--- | ---: | ---: | ---: | ---: |
|  | Total | Yes | No |  |
| SOLOMON ISLANDS | $\mathbf{9 1 , 2 5 1}$ | $\mathbf{6 8 , 5 6 7}$ | $\mathbf{2 2 , 6 8 4}$ | $\mathbf{2 1 0 , 6 5 7}$ |
| Choiseul | 4,712 | 4,112 | 600 | 13,126 |
| Western | 13,762 | 11,601 | 2,161 | 37,809 |
| Isabel | 5,143 | 4,670 | 473 | 16,093 |
| Central | 4,905 | 4,258 | 647 | 14,056 |
| RenBell | 688 | 169 | 519 | 276 |
| Guadacanal | 17,163 | 13,025 | 4,138 | 35,747 |
| Malaita | 24,421 | 16,426 | 7,995 | 48,265 |
| Makira | 7,173 | 5,541 | 1,632 | 17,575 |
| Temotu | 4,303 | 3,441 | 862 | 11,447 |
| Honiara city council | 8,981 | 5,324 | 3,657 | 16,263 |

Figure 137: Proportion of private households by place of residence and availability of bednets (\%), Solomon Islands: 2009


## 6. POPULATION PROJECTIONS

Timely and accurate information about population trends is in high demand for anyone making decisions in business, research, government and the community. 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. As policies are aimed at resolving current issues through the achievement of 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 produce population trends is to prepare estimates and projections of population size and structure by age and sex.

The starting point for any projection is a reliable and current 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 in this report. This procedure simulates population changes as a result of changes in the components of growth: fertility, mortality and migration. Based on past information and current levels, 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:

- the age at which people die is related to their sex and age,
- women have children, and
- some people change their place of 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 migration ${ }^{15}$. The software package used for the projections was MORTPAK ${ }^{16}$, application PROJECT

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.
${ }^{15}$ 1994.Arriaga.E.E.Populations analysis with microcomputers, volume I, Presentation of techniques,p.309310.US Census Bureau ,Department of Commerce,USA.
${ }^{16}$ MORTPAK for Windows (Version 4.1) was developed by the Population Division, Department of Economic and Social Affairs of the United Nations Secretariat.

### 6.1 National projections

## Projection assumptions

As a general guideline, when preparing multiple assumptions about future levels of fertility, mortality and migration, it is advisable to arrive at outcomes that are symmetrical. This means that the level of low and high, or fast and slow, growth assumptions should be equally positioned with respect to the medium level assumption (i.e. above and below).

The following demographic inputs were developed for the projections.

## Projection period

The population projections cover the 45-year period of 2009-2054.

Base population
Projections are based on the 2009 Solomon Islands census age and sex distribution, adjusted to mid-year 2009. The population is further adjusted for suspected under enumeration of $8.3 \%$ which includes particularly the age groups 15-29 of males, children younger than 10 years, and a general undercount of females. Table 43 and Figures 138 (males) and 139 (females) show a comparison of the actual 2009 population count, and results of a population projection that used the 1999 population as a starting point (base population), and intercensal fertility and mortality estimates. The adjusted population size is consistent with the estimated levels of birth and death rates, as well as applying MORTPAK procedure CENCT to the 1999 and 2009 censuses. In general, a comparison of the enumerated and projected population shows a relatively good fit for most male and female age groups.

The undercount of young children in censuses is a common occurrence for the following reasons:

- Teenage women did not state the birth of their child
- Unmarried women did not state the birth of their child(ren)
- Women whose child died shortly after birth did not state the birth of the child
- Women did not state the birth of a child from different father than present husband
- Women who had multiple births (either twins or triplets), or had 2 births during the 12 month period before the census, only recorded 1 birth
- Women temporarily absent from their permanent household were counted, but
their fertility status was not recorded, and/or wrongly assumed to be zero.
- Older women (who may have had many children) did not remember the exact date of birth of their last child.
- Errors during data recording/processing

The 15-29 year old males are usually the highly mobile age groups who are absent from their usual place of residence/household in search for employment or further education, and have not been captured at their (temporary) place of residence during the census count, which caused the undercount of this particular age group of males.

In total the enumerated census population of 515,870 was adjusted by 43 thousand to a new total of 558,457 people (Table 43).

Because the projections should refer to the mid-year of each year of the projection period, the base year population has further been adjusted to a total of 551,525 for mid-year 2009 (the PAS procedure MOVEPOP has been used to estimate the mid-year population from the November census population) (Table 44).

Table 43: Comparison of the projected population with the enumerated population, Solomon Islands 2009

| Age Group | 2009 census count |  |  | 2009 projection |  |  | Difference = count - projected |  |  | Percentage difference |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total |
| 0-4 | 39,728 | 36,499 | 76,227 | 45,536 | 44,240 | 89,775 | -5,808 | -7,741 | -13,548 | -14.6 | -21.2 | -17.8 |
| 5-9 | 36,974 | 34,152 | 71,126 | 40,329 | 39,125 | 79,454 | -3,355 | -4,973 | -8,328 | -9.1 | -14.6 | -11.7 |
| 10-14 | 32,562 | 29,369 | 61,931 | 32,497 | 30,073 | 62,570 | 65 | -704 | -639 | 0.2 | -2.4 | -1.0 |
| 15-19 | 26,189 | 25,023 | 51,212 | 28,017 | 25,856 | 53,873 | -1,828 | -833 | -2,661 | -7.0 | -3.3 | -5.2 |
| 20-24 | 22,399 | 23,020 | 45,419 | 26,466 | 24,463 | 50,929 | -4,067 | -1,443 | -5,510 | -18.2 | -6.3 | -12.1 |
| 25-29 | 20,794 | 21,880 | 42,674 | 22,976 | 21,919 | 44,894 | -2,182 | -39 | -2,220 | -10.5 | -0.2 | -5.2 |
| 30-34 | 18,807 | 18,785 | 37,592 | 19,581 | 19,770 | 39,351 | -774 | -985 | -1,759 | -4.1 | -5.2 | -4.7 |
| 35-39 | 17,010 | 16,141 | 33,151 | 17,090 | 17,169 | 34,259 | -80 | -1,028 | -1,108 | -0.5 | -6.4 | -3.3 |
| 40-44 | 12,070 | 11,568 | 23,638 | 12,822 | 12,531 | 25,353 | -752 | -963 | -1,715 | -6.2 | -8.3 | -7.3 |
| 45-49 | 10,189 | 9,524 | 19,713 | 10,543 | 10,205 | 20,748 | -354 | -681 | -1,035 | -3.5 | -7.2 | -5.3 |
| 50-54 | 7,498 | 6,841 | 14,339 | 7,837 | 7,345 | 15,182 | -339 | -504 | -843 | -4.5 | -7.4 | -5.9 |
| 55-59 | 6,111 | 5,676 | 11,787 | 6,489 | 6,252 | 12,742 | -378 | -576 | -955 | -6.2 | -10.2 | -8.1 |
| 60-64 | 4,535 | 4,381 | 8,916 | 4,859 | 4,888 | 9,747 | -324 | -507 | - 831 | -7.1 | -11.6 | -9.3 |
| 65-69 | 3,693 | 3,328 | 7,021 | 4,022 | 3,711 | 7,732 | -329 | -383 | -711 | -8.9 | -11.5 | -10.1 |
| 70-74 | 2,402 | 2,296 | 4,698 | 2,602 | 2,549 | 5,151 | -200 | -253 | -453 | -8.3 | -11.0 | -9.6 |
| 75-79 | 1,784 | 1,590 | 3,374 | 1,922 | 1,897 | 3,819 | -138 | -307 | -445 | -7.7 | -19.3 | -13.2 |
| $80+$ | 1,710 | 1,342 | 3,052 | 1,602 | 1,275 | 2,877 | 108 | 67 | 175 | 6.3 | 5.0 | 5.7 |
| Total | 264,455 | 251,415 | 515,870 | 285,188 | 273,269 | 558,457 | -20,733 | -21,854 | -42,587 | -7.8 | -8.7 | -8.3 |

Figure 138: Comparison of the projected male population with the enumerated male population, Solomon Islands 2009


Figure 139: Comparison of the projected female population with the enumerated female population, Solomon Islands 2009


Table 44: Base population for projections, Solomon Islands: 1 July 2009

| Age Group | Base population (1 July 2009) <br> Males |  |  |
| :---: | :---: | :---: | :---: |
| Females | Total |  |  |
| $0-4$ | 44,971 | 43,691 | 88,662 |
| $5-9$ | 39,828 | 38,639 | 78,467 |
| $10-14$ | 32,093 | 29,700 | 61,793 |
| $15-19$ | 27,670 | 25,535 | 53,205 |
| $20-24$ | 26,137 | 24,159 | 50,296 |
| $25-29$ | 22,691 | 21,647 | 44,338 |
| $30-34$ | 19,337 | 19,525 | 38,862 |
| $35-39$ | 16,878 | 16,956 | 33,834 |
| $40-44$ | 12,664 | 12,375 | 25,039 |
| $45-49$ | 10,412 | 10,078 | 20,490 |
| $50-54$ | 7,739 | 7,254 | 14,993 |
| $55-59$ | 6,409 | 6,175 | 12,584 |
| $60-64$ | 4,798 | 4,828 | 9,626 |
| $65-69$ | 3,972 | 3,665 | 7,637 |
| $70-74$ | 2,569 | 2,517 | 5,086 |
| $75-79$ | 1,898 | 1,874 | 3,772 |
| $80+$ | 1,582 | 1,259 | 2,841 |
| Total | 281,648 | 269,877 | 551,525 |

## Fertility

The estimated TFR of the period 2009 and associated ASFR, as described in Section 3.1 (Table 9) are used as a starting point, with four different assumptions made about future fertility developments (Fig.140).

The future TFR level of the medium fertility assumption is assumed to reach 2.0 , which is the average level of TFR of populations in present-day Australia, France, New Zealand and the United States (App. 38). This level will be reached (by means of extrapolation) with a pace of fertility decline that is based on the Solomon Islands' past fertility trend. According to this pace, the Solomon Islands will reach a TFR of 2.0 in the year 2060, and will reach a level of 2.1 at the end of the projection period in 2054.

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

1) These countries have completed the "demographic transition" (see explanatory note in App.40). Appendix 33 shows that the TFR of these four countries has remained at an almost constant level of 2.0 over the last 35 years (1975-2010).
2) They are regarded as the metropolitan focal points of Pacific Island countries.

Therefore the medium fertility assumption is set as follows.

Assumption 1 - Medium Fertility: Fertility decreases to 2.1 in the year 2054 (as described above).

The high and low fertility assumptions were built symmetrically around the medium fertility assumption.

Assumption 2 - High Fertility: The high fertility assumption assumes a TFR of 0.5 higher than the medium fertility level. Therefore, the level of TFR in 2054 is 2.6.

Assumption 3 - Low Fertility: The low fertility assumption assumes a TFR of 0.5 lower than the medium fertility level. Therefore, the level of TFR in 2054 is 1.6.

Assumption 4 - Constant Fertility: This is a purely academic assumption, with the purpose to demonstrate what would happen to the Solomon Islands in terms of population size if the current TFR of 4.1 remains constant at this level for the entire projection period.

Figure 140: Estimated past levels of fertility, and future fertility assumptions for projections, Solomon Islands: 1999-2054


## Sex ratio at birth

Available data from the respective Solomon Islands censuses consistently point to a sex ratio at birth that is significantly higher than the 105 generally found around the world. The sex ratio of children ever born to women as reported in the 2009 census (109) is comparable to the figures that were found in the 1999,1986 and 1976 censuses. The sex ratio of 109 based on children ever born is similar to the male-female ratio of the population 1 year and younger, and the age group 0-4 years. It is also consistent with sex ratio of male-female children born during the year before the census.

## Mortality

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

The estimated life expectancies at birth $[\mathrm{E}(0)]$ - 66.2 years and 73.1 years for males and females, respectively - are used as the starting point for projections in 2009. These estimates are based on the estimates as outlined in section 3.2.

Assumption: The population projections presented here assumes a rising trend in life expectancy for males and females according to the UN working models of mortality improvement, as described in "World Population Prospects, p. $144^{17}$ (App.34). According to this model, current estimated life expectancies gradually increase and reach 75.8 and 81.4 years in 2054 for males and females, respectively (Fig.141).

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.

The derived mortality pattern (age-specific death rates) was compared with the different CoaleDemeny and United Nations model life tables using MORTPAK4.1, procedure COMPAR. The assumption was made that possible under-registration of deaths is not age specific and therefore does not affect the overall pattern of mortality. It was found that the Coale-Demeny North model pattern resembles most closely the empirical mortality pattern of Solomon Islands (see section 3.2).
${ }^{17}$ 1995.United Nations. World Population prospect.NewcYork:United Nations.886p.

Figure 141: Estimated past levels of mortality, and future mortality assumptions for projections, Solomon Islands: 1986-2054


## Migration

Making meaningful assumptions about future migration developments provides the single greatest difficulty for undertaking population projections, because many of the social and economic parameters shaping migration patterns depend largely on countries’ overall social, economic and political developments, as well as environmental factors (e.g. possible sea level rise, frequency and strength of cyclones). All of these factors fluctuate widely and are hard to predict. Migration projections also depend on economic and political developments overseas.

Apart from these global considerations, making assumptions about migration is difficult because reliable information on international arrivals and departures.

However, at present the Solomon Islands population is not known for migrating permanently overseas at any significant measure, while the Solomon Islands itself is not an immigration country either. Furthermore, a brief analysis of the fertility and mortality level reveals that the last intercensal population growth rate (taking a $8.3 \%$ under enumeration of the 2009 census into account as described above) closely resembles the
current natural growth rate, which implies that there is very little international migration (see section3.3).

In view of the absence of significant past international migration, it is decided to assume zero net migration for the entire projection period as it is impossible to predict what the level of migration would be should it occur in future. Of course the projections needs to be amended should this situation change.

## Projection results

The four different fertility assumptions results in four different projections (Table 45 and Fig.142). These different projections highlight the impact of different levels of fertility on the population size and structure of Solomon Islands: The higher the fertility level assumed, the higher the population outcome.

Table 45: Population size according to four projection variants, Solomon Islands: 2010-2050

| Fertility |  |  |  | Year |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| assumption | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 2 0}$ | $\mathbf{2 0 2 5}$ | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 3 5}$ | $\mathbf{2 0 4 0}$ | $\mathbf{2 0 4 5}$ | $\mathbf{2 0 5 0}$ |
| Constant | 568,035 | 656,243 | 755,638 | 871,384 | $1,007,804$ | $1,166,692$ | $1,349,328$ | $1,557,843$ | $1,797,031$ |
| High | 568,035 | 653,609 | 743,728 | 838,624 | 937,444 | $1,039,112$ | $1,143,237$ | $1,249,915$ | $1,357,860$ |
| Medium | $\mathbf{5 6 8 , 0 3 5}$ | $\mathbf{6 5 6 , 2 4 3}$ | $\mathbf{7 5 1 , 1 9 4}$ | $\mathbf{8 4 3 , 0 6 6}$ | $\mathbf{9 3 0 , 1 0 2}$ | $\mathbf{1 , 0 1 4 , 9 6 8}$ | $\mathbf{1 , 0 9 9 , 4 6 3}$ | $\mathbf{1 , 1 8 1 , 4 5 0}$ | $\mathbf{1 , 2 6 1 , 1 6 7}$ |
| Low | 568,035 | 652,292 | 735,549 | 814,100 | 885,971 | 951,069 | $1,008,794$ | $1,060,347$ | $1,105,109$ |

The four population projection scenarios are described in detail below:

1) High population scenario. This projection outcome is determined by applying the high fertility assumption (slow fertility decline). This scenario results in a population size of 937 thousand in the year 2030, and 1.4 million people in the year 2050.
2) Medium population scenario. This projection outcome is determined by applying the medium fertility assumption (moderate fertility decline). This scenario results in a population size of 930 thousand in the year 2030, and 1.3 million people in 2050.
3) Low population scenario. This projection outcome is determined by applying the low fertility assumption (fast fertility decline). This scenario results in a population size of 886 thousand in the year 2030, and for just 1.1 million people in the year 2050.
4) Constant population scenario. This projection outcome is determined by assuming that the current high level of fertility remains constant during the entire projection period. This scenario results in a population size of 1 million people in the year 2030, and 1.8 million people in the year 2050.

Figure 142: Past and future population trends according to four projection variants, Solomon Islands: 1970-2050


In general it becomes clear that the population will increase substantially regardless of which projection scenario is used.

It can be seen that the impact of the different projections on the population size until the year 2020 are relatively minor. Significant population differences based on the different projection assumptions can only be expected thereafter.

Figures 143 to 150 provide the comparative results of the various projections, and highlight the differential impact on population size, growth and structure.

The school age population aged 6-15 years can be expected to increase from its current size of about 135 thousand regardless of the projection scenario used (Fig.143) and after the year 2020 according to the low fertility assumptions, and after year 2,035 according to the medium fertility assumptions. All other scenarios cause the school age population to constantly increase in future.

According to the constant population scenario, assuming constant fertility at its present high level, the school age population would more than double until 2050.

Should the high fertility scenario materialize in future, the school age population would continuously increase until it reaches 256 thousand pupils in 2050.

According to the medium scenario, the school age population aged 6-15 would increase to about 216 thousand people in 2030 when it stabilizes before it starts a slow decline from the year 2035 until it reaches 213 thousand in 2050.

Figure 143: School age population aged 6-15 years according to high, medium, low and constant population projection scenarios, Solomon Islands: 2009-2050


The general impact on the future population structure by broad age groups can be seen in Table 46 and Figures 144 to 146. Regardless of the projection scenario used, the size of the working age population (aged 15-59) will be much larger than in 2009 (294 thousand), and will be 348 thousand in 2015, and will further increase to more than 500 thousand people in 2030. According to the medium variant scenario, the working age population will reach 790 thousand in the year 2050. Please note that the size of the population aged 15 years and older in the year 2015 is not affected by the different fertility assumptions made, as these particular age groups were already born in 2009 at the start of the projections.

Another general outcome is that the population aged 60 and older will be significantly larger than 29 thousand in 2009, regardless of the projection scenario used. The 'elderly' population will be 36 thousand in 2015, 66 thousand in 2030, and approximately 150 thousand in 2050. Therefore the population will grow older regardless of which projection is used, as is expressed in the median age, which will increase from 19.4 years in 2009 to 22.4 in 2030 and 29.8 in 2050 according to the medium projection variant. Again, the size of the population aged 60 years and older is not affected by the different
fertility assumptions as these people were all born at the time of the 2009 census (base year of projections).

The proportion of the young population aged $0-14$ (as part of the total population) will decrease regardless of the type of projection scenario used. However, its size will increase at least until 2030, and only under the low projection scenario would the population aged 0-14 decrease thereafter.

The size of the population younger than 15 years is likely to increase from about 229 thousand in 2009 to about 321 thousand in 2030 (according to the medium population scenarios), and would be 332 thousand in 2050. On the other hand the size of the young population will be much higher than that if fertility levels follow the trend of the high fertility assumption in which case there could be almost 395 thousand people aged 0-14 years in 2050.

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 $2.2 \%$ in 2030, while the medium population scenario will only produce $1.9 \%$ annual growth in 2030, and only $1.6 \%$ in 2050 . The growth rate will slow under any projection scenario.

Finally, the different projections result in very different age-dependency ratios: the lower the level of future fertility, the lower the age-dependency ratio.

Table 46: Population structure and indicators according to four different projection scenarios, Solomon Islands: 2010, 2030 and 2050

| Indicator | Constant | High |  | Medium |  | Low |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 5 0}$ | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 5 0}$ | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 5 0}$ | $\mathbf{2 0 3 0}$ | $\mathbf{2 0 5 0}$ |
| Population by broad age groups (\%) |  |  |  |  |  |  |  |  |  |
| 0-14 years | 42 | 40 | 39 | 35 | 29 | 35 | 26 | 32 |  |
| $15-59$ years | 53 | 54 | 52 | 58 | 60 | 58 | 63 | 61 | 61 |
| 60 years and older | 5 | 7 | 8 | 7 | 11 | 7 | 12 | 7 |  |
|  |  |  |  |  |  |  |  |  |  |
| Dependency ratio | 88 | 86 | 91 | 73 | 67 | 71 | 60 | 64 | 52 |
| Median age | 19.4 | 18.3 | 20.4 | 22.2 | 27.2 | 22.4 | 29.8 | 23.6 | 33.0 |
| Average annual growth rate (\%) | 3.0 | 3.0 | 2.9 | 2.2 | 1.6 | 1.9 | 1.3 | 1.6 |  |

Figure 144: Population projections by broad age groups according to four scenarios, Solomon Islands: 2015


Figure 145: Population projections by broad age groups according to four scenarios, Solomon Islands: 2030


Figure 146: Population projections by broad age groups according to four scenarios, Solomon Islands: 2050


The different impacts on the population size and structure are furthermore illustrated as population pyramids (Figs. 147 to 150 ). The shaded area represents the 2010 population size by sex and age group, and the outlined area represents the estimated (projected) population size in 2050, according to the constant (Fig.147), high (Fig.148), medium (Fig.149), and low (Fig.150) population scenarios.

Figure 147 illustrates the impact of constant high level fertility. It shows what the population would look like if the current level of 4.7 children per woman remains at this level for the entire projection period 2009-2050. As is shown in Figure 142, the population would then be 1.8 million people.

The different shaped pyramids of the four different projection scenarios clearly illustrate that the difference in population size and structure in 2050 is the size of the population aged $0-39$. It highlights the effect of the assumed fertility level on future population size and structure: the lower the assumption of the future fertility level, the smaller the size of the population younger than 40 years of age in the future (the population size of the population 40 years and older in the year 2050 is not affected by the different fertility assumptions). It is interesting to note that according to the low fertility projection, the population under 10 years old is larger in 2010 than in 2050. This is the result of the assumed rapid and substantial fertility decline.

Figure 147: Population pyramid, Constant fertility projection, Solomon Islands: 2010 and 2050


Figure 148: Population pyramid, High fertility projection, Solomon Islands: 2010 and 2050


Figure 149: Population pyramid, Medium fertility projection, Solomon Islands: 2010 and 2050


Figure 150: Population pyramid, Low fertility projection, Solomon Islands: 2010 and 2050


## 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 prediction, the more uncertain the outcome.

Therefore, several projection variants need to be produced to allow users to choose from an outcome that seems most probable according to their own views and opinions. Most data users, however, prefer to use a recommended projection scenario that depicts a "most likely outcome". Such a variant is usually called the "medium" projection scenario using the medium assumptions made.

Population changes close to those presented in the medium population scenario appears to be the most likely outcome because:

- The current fertility level is expected to decline as it has in the Solomon Islands' recent past, and is furthermore expected to do so based on historical worldwide observations of countries with a similar level of fertility (see also the "theory of demographic transition", App.35). Therefore, the high fertility assumption, with its very slow fertility decline, seems to be a more unlikely outcome, and a constant high level of the current TFR of 4.7 is surely an unrealistic scenario.
- Regarding the low fertility assumption, fertility levels (TFR) have already declined to well below 2 in many parts of the world, and it is therefore a realistic assumption to make. Nevertheless, such rapid fertility decline does not seem likely to occur in the Solomon Islands as it seems "uncharacteristic" for Pacific Islands populations at the moment, and the decline in fertility levels have been relatively moderate in the recent past. In addition, the general assumption was made that the fertility level of the Solomon Islands will eventually reach the present day levels of countries such as Australia, France, New Zealand and the USA.


### 6.2 Sub-national projections

Population projections for each of Solomon Islands' ten provinces were prepared according to the same principles as the national projection. The cohort-component method was applied, and the fertility and mortality indicators as estimated from the 2009 census were used as inputs for each province.

However, there is one significant difference in the preparation of sub-national projections compared to the national projection, and that is the assumptions of (internal) migration. While no migration assumption was made for the national projections (net international migration is zero), a migration assumption for the provinces had to be included as the demographic pattern of each province is strongly influenced by internal migration.

## Base population

The census age distributions of each province as recorded in the census are used and prorated to be consistent with the adjusted base population for the national projections (App. 41 and Table 47).

## Fertility

The trend of fertility of each province throughout the projection period follows the same pattern as that established for the national projection (medium variant). However, the level of fertility is determined by the estimated level for 2009, and the provincial TFRs will eventually converge (Fig.151); the higher the level in 2009, the higher the level throughout the projection period.

Figure 151: Fertility trend by province, Solomon Islands: 2009-2054


Note: The line showing the fertility level and trend for Guadalcanal and Malaita, the Rural areas and Rennell-Bellona, and Isabel and Central overlap as their TFR in 2009 was the same, and therefore is their future trend

## Mortality

The level of future mortality (life expectancy at birth) of each province is determined by using the UN working models of mortality improvement as described earlier (App.34), applied to the estimated life expectancy at birth of each province as described in section 3.2.2.

## Migration

In order to estimate the migration component of each province, the balancing equation was used.

## Balancing equation:

Population growth $=$ Births minus Deaths plus Migration

Net migration can be estimated as

Migration $=$ Population growth minus Births plus Deaths or

Migration rate $=$ population growth rate - crude birth rate $(\mathbf{C B R})+$ crude death rate (CDR)

Since the population growth rate and the level of fertility and mortality are known from the census, the migration component can be roughly calculated (see section 3.3).Table 47 shows the levels of fertility, mortality and estimated migration that were used as a starting point for each province .

In addition two variants of migration have been prepared.

1. Constant migration: The estimated level in 2009 has been kept constant throughout the projection period
2. Zero net migration: Zero net migration is assumed for the entire projection period (only natural growth influences population growth).

The zero migration variant has been prepared in order to illustrate the impact of migration on the population size of the different provinces.

With regard to the age and sex structure of migrants, it is assumed that there will be equal numbers of males and females, and the age structure resembles that of a family type migration pattern (App.37).

Table 47: Demographic components for provincial projections

| Place of residence | Demographic components |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Annual growth rate (\%) | TFR |  | E(0)-2009 |  |  | E(0)-2055 |  | Net Migration (annual) |
|  |  |  |  | Males |  | Females | Males | Females |  |
| Urban | 5.4 | 3.3 |  | 67.9 |  | 74.9 | 76.3 | 82.6 | 3154 |
| Rural | 2.3 | 5.2 |  | 65.1 |  | 71.9 | 75.4 | 81.4 | -3154 |
| Choiseul | 2.6 | 4.6 |  | 63.5 |  | 70.1 | 74.8 | 80.8 | 41 |
| Western | 2.3 | 4.7 |  | 65.7 |  | 72.5 | 75.8 | 81.5 | -316 |
| Isabel | 2.9 | 4.8 |  | 65.7 |  | 72.5 | 75.8 | 81.5 | 41 |
| Central | 2.6 | 5.4 |  | 62.0 |  | 68.5 | 74.0 | 80.2 | -153 |
| Rennell-Bellona | 2.2 | 4.5 |  | 61.0 |  | 69.6 | 73.6 | 80.6 | 20 |
| Guadacanal | 5.0 | 4.8 |  | 66.2 |  | 73.1 | 75.9 | 81.5 | 1,885 |
| Malaita | 2.1 | 5.6 |  | 64.0 |  | 70.7 | 75.1 | 80.9 | -1,802 |
| Makira-Ulawa | 3.0 | 5.1 |  | 67.3 |  | 74.3 | 76.4 | 82.1 | -71 |
| Temotu | 1.5 | 4.2 |  | 62.2 |  | 73.1 | 74.2 | 81.5 | -174 |
| Honiara | 4.0 | 3.9 |  | 67.9 |  | 74.9 | 76.6 | 82.6 | 529 |
| Solomon Islands | 3.0 |  | 4.7 |  | 66.2 | 73.1 | 75.9 | 81.5 | 0 |

*not adjusted for under enumeration

## Projection results

Appendix 43 and Figures 152-168 illustrate the impact of migration on the size of the different provinces, and on the population structure (Figs.169-181).

In general, all provinces will increase in size until 2050 regardless of which type of migration assumption was applied, although the rate of increase varies considerably depending on the type of migration assumption used.

With respect to Figures $157-168$, if the blue columns grow higher than the red ones in future means that these areas (provinces) gain population though migration such as the urban areas, Guadalcanal and Honiara, while those areas where the red columns grow higher than the blue one lose population through migration such as the rural areas, Western, Central, Malaita and Temotu. Provinces that do not show much difference between the blue and the red columns are not significantly affected by (net) migration.

The most important outcome of the projections is the fact that Guadalcanal will eventually become the province with the largest population size if current estimated
migration levels prevail into the future, and will have the highest number of people of all provinces just after the year 2020 (Fig.152).

The other outcome is that the rural population size will increase rapidly, even if they lose population to the urban areas (Fig.154), but it would increase even faster without rural to urban migration (Fig.155).

The proportion of the urban population will surely increase in future, and according to these projections it will increase from $20 \%$ in 2010 to $28 \%$ in 2030 and almost one-third of the total Solomon Islands population in 2050 (Fig.156).

Examining the population structures, Figures 169-181 show the population pyramids of the years 2012 (in blue), 2030 (in grey), and 2050 ( outlined). The future population structures of all areas in the Solomon Islands are deviating more and more from that of a classical pyramid shape (Fig.15). The younger age groups will 'straighten' while the older age groups are widening. The 'straightening' - or in some cases they even narrow is a result of the anticipated decreasing fertility rates. The widening of the older age groups is the result of the young population of today growing older over time.

All in all, the populations will be ageing, with a lower proportion of young people, and higher proportions of older people. The urban (Honiara) population structure (pyramid) will be most affected because the fertility level of the urban population will be considerably lower than that of the rural population, and in addition the urban population structure is affected by migration from the rural areas, as the migration numbers will affect the urban population proportionally more than the rural population.

## Most likely outcome

Clearly the Solomon Islands' provinces are not and will not be closed to migration, and internal migration (rural-urban) will continue. In view of the currently relative small urban proportion of Solomon Islands, it can be expected to grow substantially in future, as has been the case in most other countries in the world.

The urban growth will not be limited to Honiara, but will most likely include the other provincial urban centers, as has happened in the recent past (1999-2009). Most importantly, the growth of what is described as 'Honiara urban area' will continue, and this will affect the urban areas of Guadalcanal bordering Honiara probably more than Honiara itself. As a result rural to urban migration will cause Guadalcanal's population to increase very rapidly and its urban part in particular.

Figure 152: Population size by province according to the constant migration variant, Solomon Islands: 2009-2050


Figure 153: Population size by province according to the zero migration variant, Solomon Islands: 2009-2050


Figure 154: Population size by urban-rural areas according to the constant migration variant, Solomon Islands: 2009-2050


Figure 155: Population size by urban-rural areas according to the zero migration variant, Solomon Islands: 2009-2050


Figure 156: Past and projected population size by urban-rural residence in numbers and percentages, Solomon Islands: 1976-2050


Figure 157: Population size according to two different migration variants, urban areas: 2009-2050


Figure 158: Population size according to two different migration variants, Rural areas: 2009-2050


Figure 159: Population size according to two different migration variants, Choiseul: 2009-2050


Figure 160: Population size according to two different migration variants, Western: 2009-2050


Figure 161: Population size according to two different migration variants, Isabel: 2009-2050


Figure 162: Population size according to two different migration variants, Central: 2009-2050


Figure 163: Population size according to two different migration variants, RennellBellona: 2009-2050


Figure 164: Population size according to two different migration variants, Guadalcanal: 2009-2050


Figure 165: Population size according to two different migration variants, Malaita: 2009-2050


Figure 166: Population size according to two different migration variants, MakiraUlawa: 2009-2050


Figure 167: Population size according to two different migration variants, Temotu: 2009-2050


Figure 168: Population size according to two different migration variants, Honiara: 2009-2050


Figure 169: Population pyramid, Solomon Islands: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 170: Population pyramid, urban areas: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 171: Population pyramid, Rural areas: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 172: Population pyramid, Choiseul: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$
Figure 173: Population pyramid, Western: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 174: Population pyramid, Isabel: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 175: Population pyramid, Central: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 176: Population pyramid, Rennell-Bellona: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$
Figure 177: Population pyramid, Guadalcanal: 2010, 2030, and 2050


Note: blue $=2010$, grey $=2030$, outlined $=2050$

Figure 178: Population pyramid, Malaita: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 179: Population pyramid, Makira-Ulawa: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 180: Population pyramid, Temotu: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

Figure 181: Population pyramid, Honiara: 2010, 2030, and 2050


Note: blue $=2010$, gray $=2030$, outlined $=2050$

# 7. IMPLICATIONS OF DEMOGRAPHIC TRENDS 

### 7.1. Population dynamics

### 7.1.1 Growth rate

The Solomon Islands annual population growth rate in 2009 is estimated at $3.0 \%$ (unadjusted 2.3\%); an increase compared to the 1986-1999 intercensal growth rate of $2.8 \%$. While 515,780 people were enumerated during the 2009 census, the enumeration suffered approximately from a $8.3 \%$ undercount, and the population size stood more likely at 558 thousand at the time of the census. The country has one of the highest growth rates in the Pacific region.

According to the medium variant projections presented in this report, the population currently (2010-2015) grows at an annual rate of $2.89 \%$ which translates into an annual increase of more than 18 thousand people per year - an increase of about 48 people per day, with the population doubling in size in 24 years.

The Solomon Islands' population density of 17 people per sq. km is one of the lowest in the region. However, it is unevenly distributed. Honiara, the capital is the most densely populated area with 2,953 people per sq. km . Central province is a distant second with 42 people per sq. km and with 5 people per sq. km , Rennell-Bellona province is the lowest.

### 7.1.2 Fertility

In the absence of any significant international migration, the Solomon Islands population growth is determined by its (high) natural growth rate.

The average number of children per woman (TFR) is 4.7. This means that on average every woman has 4 children at the end of her childbearing years. While this represents a decrease from 5.0 in 1999, there are still approximately 18,800 births per year.

The estimated TFR for the Solomon Islands is higher than in Vanuatu (4.1), PNG (4.4), and much higher than Fiji's TFR of about 2.6.

Fertility levels were especially high in Malaita (5.1), and it was much lower in the urban (3.3) than the rural areas (5.2).

An analysis of fertility levels by educational background of women shows a very strong correlation between the two variables: the higher the educational attainment of women, the lower the number of children she has.

The government needs to do more if it wants to influence the fertility levels and ensure the well-being of mothers and her children. Such a move should be directed at policies and programmes that are geared towards the expansion and improving of family-planning services and reproductive health. These services and programmes should be accessible available throughout the country, especially to people in rural and remote areas.

Any government initiatives should include, but not be restricted to, the following. First, is the inclusion of life education in the curriculum of young people providing basic information and support needed before childbearing age. Second, making family planning services for women (and their partners) of all ages available and accessible thus empowering them to make conscious decisions about the number and spacing of their children. Additionally, the provision of such services will help to reduce the number of unwanted pregnancies as well as safeguard partners from risks of being infected by sexually transmitted disease and HIV/AIDS. Rural women and their partners should be targeted since their fertility levels are much higher than their urban counterparts.

The promotion of arranged marriage at an early age, through custom and culture, and the strict role of women as child bearers can also affect fertility. These practices and beliefs must not only be discouraged but controlled. The government and NGOs should discourage early age marriages so that child bearing for women is delayed to older ages.

A teenage pregnancy is not only a social issue but especially a health risk to mothers and child. The most affected are the uneducated and unemployed teens. Most often, children of teenage mothers have lower educational levels, higher rates of poverty, and other poorer "life outcomes". Since teenage pregnancy usually occurs outside of marriage it often carries a social stigma. Therefore, social protection for the solo parents and young mothers which should include the provision of child support and maintenance needs to be provided.

Many stakeholders (government and non-government organizations) are involved in the teenage reproductive health strategies. They work at various levels in the community 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 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. This group must be supported and if possible, provided with financial assistance. All this should align with the country's policy directions.

### 7.1.3 Mortality

Improved mortality rates mean that healthier people live longer lives.

Based on census data for the number of children ever born and still alive, the infant mortality rate (IMR) was estimated at 22; 24 for males and 20 for females. This estimate is lower than the 1999 levels when the IMR was 29 and 26 for males and females - and is thus an improvement in infant mortality rates. Please note that a re-assessment of the 1999 levels produced much lower rates for 1999 when the IMR was estimated at a much higher level of 66. It should therefore not be concluded that there was a considerable improvement in infant mortality rates (from 66 to 22 ), as it was only from 29 to 22. However, even this moderate decline implies improvements in health services in the country.

The estimated IMR of 22 based on the 2009 Solomon Islands census is similar to 24 derived from the 2007 Solomon Islands DHS. Otherwise the IMR was 21 in Vanuatu, 17 in Fiji, 58 in PNG, and about 5 in Australia and New Zealand.

In general the IMR of males is higher than that of females and it was particularly high in Central (31), Rennell-Bellona (29), Choiseul (27), and Malaita (26). Infant mortality rates are significantly lower in the urban than the rural areas. One likely important factor is the better availability and accessibility of (reproductive) health services in the urban areas.

Estimates of mortality level presented in this report suggest that females live longer than males, and live on average about 6.9 years longer than males. Life expectancy at birth is estimated at 66.2 and 73.1 for males and females, respectively. Life expectancy increased for females (from 70.2 in 1999) it unfortunately slightly decreased for males from 67 years in 1999. Possible reasons for this trend could be an increase of life style diseases (diabetes, hypertension, etc) caused by unhealthy eating habits, smoking and excessive alcohol consumption, and/or a lack of regular physical exercise etc. Then again, it is very well possible that the violent ethnic unrest of the recent past may have taken its toll, particularly on the male population.

Life expectancies for males and females in the Solomon Islands compare with 78.8 and 82.7 years for males and females in New Zealand and in Australia it is 79.3 and 83.9 years. Therefore an average person in New Zealand or Australia lives more than 10 years
longer than a Solomon Islander. On the other hand, life expectancies at birth for Fiji are estimated at 63.8 and 67.7 years for males and females in 2001, which is considerably shorter than in the Solomon Islands. Vanuatu's levels are very similar to the Solomon Islands with 69.6 years and 72.7 years for males and females.

The directly calculated maternal mortality ratio was 127 , and the maternal mortality rate was 0.19 , based on the reported number of pregnancy related deaths in the census. However, the reporting of deaths of women aged 15-44 years suffered from an estimated undercount of about $12.5 \%$. Assuming that the reported number of maternal deaths is affected by the same factor of underreporting of deaths of female aged 15-44 would increase the maternal mortality ratio to 143 and the maternal mortality rate to 0.21 .

The adjusted Solomon Islands maternal mortality ratio compares to a value of 145 based on reported numbers of maternal deaths and births from vital statistics, and it compares to estimates of 312 for PNG, 178 for Vanuatu, and 85 for Fiji (Lancet article 2011).

It is advised to use the derived maternal mortality indicators with caution as it is not clear whether enumerators and respondents were clear about the concept and definition of what exactly constitutes a 'pregnancy related death', as it is not further described in the Enumerator Manual. Therefore the values could be either under or overstated.

### 7.1.4 Internal Migration

Migration is the movement of people from one ward to another, whether inside or across provincial boundaries. Internal migration affects services offered and provided in the areas of people's origin and destination. Therefore community, regional and national planners need timely and accurate information on internal migration flows.

Guadalcanal province had the highest population growth rate of all provinces; a clear sign of internal migration flowing towards Guadalcanal and the capital Honiara. On the other hand, provinces such as Malaita and Temotu with a very low population growth rate lose population to other areas, most likely Guadalcanal and Honiara. The fact that about $36 \%$ of the total national population was enumerated in a place other than their place (ward) of birth gives an indication of the magnitude of internal migration flows. Furthermore, more than $11 \%$ of the population was enumerated in a place (ward) different from where they lived 5 years ago.

Areas that lose its population through migration is an indication of people's dissatisfaction with local living conditions such as the lack of education opportunities (for tertiary or vocational/technical qualifications), and limited employment opportunities.

The urban centers attract people by offering higher living standards through the availability and accessibility to services such as medical and educational institutions, entertainment facilities, and a wider range of employment opportunities.

If the government wishes to change the trend of people migrating to urban centres, at least some of the disadvantages of living in the remote rural areas and outer islands need to be eased by improving the above-mentioned services and opportunities through:
$\checkmark$ Promotion of policies for employment and livelihood in rural areas;
$\checkmark$ Decentralization of services to all provinces;
$\checkmark$ Support of income generating opportunities in other provinces to retain populations, in particular the youth;
$\checkmark$ Provision of better education in the rural areas;
$\checkmark$ Promotion of better market distribution systems;
$\checkmark$ Provision of better and cheaper transport;
$\checkmark$ Conducting of in depth research into youth migration and their reasons for migrating;
$\checkmark$ Provision of basic services for the growing population in the urban/peri-urban areas.

However, in view of the relatively low proportion of the urban population in the Solomon Islands, it is certain that urbanization will continue and possibly at a higher rate than ever before.

### 7.1.5 International migration

Data on arrivals and departures remain incomplete for detailed migration analysis. As such the net migration level can only be crudely estimated by comparing intercensal population growth with estimated 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 makeup of opposing migration streams in order 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 the Solomon Islands.

If improvements are proved to be 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 could prove more time
consuming and costly than an efficient registration system that would provide regular and timely migration information.

As the national average annual population growth rates are similar to the estimated natural growth, it can be concluded that net migration rates are negligible, and no significant international migration had occurred during the intercensal period 1999-2009.

### 7.1.6 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 report point to a continuously growing population for the Solomon Islands during the next 40 years. The mediumvariant scenario of the projections points to a population of about 656 thousand in 2015, a little over a million in the year 2030, and 1.3 million people in 2050.

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, employment, social welfare, people with special needs, environment, economic growth, climate change and disaster management to fulfill the aspirations of the Solomon Islands' communities.

Changes in the Solomon Islands' population age structure, as a result of possible declining fertility rates, will have an impact on the proportion of the young population aged $0-14$. Changes will be reflected in a smaller proportion of those under the age of 15 , and a larger working age population aged 15-59. As a result, the dependency ratio of the Solomon Islands' population will decrease, and the population's median age will increase.

The proportion of the population aged 60 and older will increase from 5\% in 2009 to $8 \%$ and $14 \%$ of the total population in 2030 and 2050.

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 about 543 thousand people in 2030, compared to 294 thousand in 2009.

In general, all provinces will increase in population size until at least 2050, although the rate of increase varies by province. The most important outcome of the projections is the fact that Guadalcanal will eventually become the province with the largest population size if current estimated migration levels prevail into the future, and will have the highest number of people of all provinces just after the year 2020.

The other outcome is that the rural population will increase rapidly, even if they lose population to the urban areas at current rates.

The proportion of the urban population will surely increase in future, and according to these projections it will increase from just below $20 \%$ in 2009 to $28 \%$ in 2030 and almost one-third of the total Solomon Islands population in 2050.

Since more than $80 \%$ of the land in the Solomon Islands is customary owned, expanding the urban areas will have to be carefully negotiated with the rural customary land owners.

### 7.2 Crosscutting issues

### 7.2.1 Vital statistics

A well functioning registration system that is able to supply accurate and timely statistics on population development is of fundamental importance to planners and policy makers. To make reliable estimates regarding fertility and mortality levels and trends, a complete registration system needs to be in place; one that records the number of deaths by age and sex, and cause of death, and the number of births by sex and age of mother, date and place of birth and of mothers usual place of residence.

The Ministry of Home Affairs in collaboration with the Ministry of Health and Medical Services are working collaboratively on a civil registration system that will see new births and deaths recorded electronically. Information on vital events of previous years will have to be entered manually from hard copies of birth and death certificates. Currently, a project is being piloted by the two ministries, and a newly established Civil Registration Office is in operation since 2011.

Based on the reported number of births and deaths for the years 2006-2007 of about 14,400 births and 1,100 deaths annually, and the estimated number of births and deaths for those years of about 17,200 births and 3,000 deaths, the completeness of birth registration is approximately $84 \%$ while death registration is less than $37 \%$ complete. Once the births and deaths for the years after 2007 will be entered into the vital
registration system, it can be established whether there has been improvements in coverage since then.

There are certainly improvements needed with the collection and processing of vital events and it is hoped that the renewed collaboration between the relevant agencies will lead to timely and accurate dissemination of the number of births and deaths, and cause of deaths in future.

### 7.2.2 The environment

Careful use of terrestrial and marine resources forms the basis of a sustainable and healthy life for all Solomon Islanders. As such, maintaining a healthy and sustainable living environment should be a top priority for the government and its people. Apart from providing a pleasant living environment for the local people, conservation of the environment can foster a vibrant tourism industry in future.

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

High population densities put considerable stress on the environment. Consequently, there is an increasing demand for environmental health services, such as public garbage collection, a well-functioning sewage system, availability of hygienic toilets, and protection of secure and clean water sources.

Economic activities such as the deforestation of timber, and the harvest of marine resources help the national government to raise much needed revenues. However the exploitation of the Solomon Islands natural resources needs to be carefully planned to ensure its sustainability.

### 7.2.3 Households

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

Households and families that are economically incapable of sustaining an acceptable and healthy lifestyle might need extra assistance from the government, since unhealthy living environments affect everyone in the long term. In particular, access to clean water, public electricity, an adequate public sewage system and waste disposal facilities should all be the minimum housing standard for the Solomon Islands’ population. Specific areas of assistance include:

- Dwellings: More than half of the dwellings are made of traditional materials and they are found mostly in rural areas. While wood is the most commonly used material, tin corrugated iron and concrete cement brick have also been increasingly used. This should be encouraged not only because these housing materials last longer and with dwindling timber supply, cement could be the best alternative. Given that the country is prone to natural disaster, the government needs to improve housing in rural areas using local materials where possible as they are affordable as long as the structures are cyclone proof.
- Water supply: Almost 0ne-third of households in the Solomon Islands has no access to safe and clean (improved) drinking water. Guadalcanal and Malaita have a particular high proportion of households without improved drinking water sources, where many use rivers and streams. The development of more community programmes focusing on safe water supply, and providing water tanks, or water pumps is required.
- Lighting: 75\% of households use kerosene lamps as the main source of light and predominantly in the rural areas. With continued rising prices, kerosene is no longer an affordable source for the home, community, school, or business. Alternatives are needed and 'green power' sources such as solar (currently used by $9 \%$ of households), wind, or renewable energy should be researched. In this respect, government could encourage students to enter into engineering or environmental studies.
- Toilet facilities: A high percentage of households either do not have proper toilets or none at all. For example, $33 \%$ of all households do not have toilets at all while another $24 \%$ use types of toilets that are not hygienic. Health awareness programmes and assistance in the introduction and improvement of toilet facilities are needed.


### 7.2.4 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, accessibility, use and affordability of quality health care and medical services are major issues of concern. Government and health officials need to address the challenges of health services and the health care system.

In the remote areas and outer islands, small population size and isolation inhibit the operation of state-of-the-art health services that require the employment of specialist personnel and the purchase and maintenance of specialised equipment. However resident medical staff needs to be sufficiently qualified to provide basic health care. An efficient referral service to the nearest health facility, together with regular visits by medical specialists is needed to ensure that peoples' health demands are met.

More deaths in Solomon Islands are due to inefficient long referrals. Thus an efficient referral service to the nearest health facility, together with regular visits by medical specialists is required to ensure that peoples' health demands are met, and unnecessary deaths are prevented.

The population projections show that the population aged 60 and older will increase substantially in future. This requires strengthening of special services for the growing number of elderly people, including a pension scheme with retirement benefits, and specialised health care.

In working towards a healthier population, the following efforts should be made:
$\checkmark$ Improve infant, child and maternal health by improving primary health care programmes;
$\checkmark$ Improve emergency obstetric care to decrease neo natal mortality;
$\checkmark$ Expand immunization programmes;
$\checkmark$ Prevent HIV and AIDS, and other STIs by:

- Increasing awareness and knowledge of safer sexual behaviours and practices by using appropriate language;
- Targeting priority groups (youth, women and men, particularly aged 1024);
- Enhancing education programmes to encourage open discussions (between partners and their children) on issues of sexual behaviours;
- Promoting and disseminating information outlining the advantages and proper use of condoms by men and women, with an emphasis on targeting male organisations;
- Reviewing, developing, implementing and evaluating the effectiveness of appropriate policies;
- Delaying young peoples' initial sexual activity;
- Developing a well-planned media campaign throughout the year based on health promotion with regards to HIV and AIDS;
- Ensuring protection of the rights of people living with HIV and AIDS;
- Ensuring that people living with HIV and AIDS have free and unrestricted access to medical treatment, facilities and support services;
- Ensuring that a reliable HIV and AIDS testing system is in place;
- Establishing a voluntary, confidential system of HIV and AIDS testing with informed consent that includes pre and post test counseling;
$\checkmark$ Address the increasing occurrence of Non Communicable Diseases (NCDs);
$\checkmark$ Combat the prevalence of diabetes and heart disease;
$\checkmark$ Promote healthy eating habits and food nutrition programmes;
$\checkmark$ Advocate a general healthy life style including regular physical exercise;
$\checkmark$ Discourage smoking and excessive alcohol consumption;
$\checkmark$ Provide a hygienic and safe living environment;
$\checkmark$ Improve the quality of drinking water;
$\checkmark$ Distribute and promote the use of insecticide treated bednets as a way of combating malaria.


### 7.2.5 Disabilities

The Solomon Islands is a signatory to a United Nations convention to uphold the rights of people with disabilities; and is therefore obliged to:
"Promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities and to promote respect for their inherent dignity."

While only about 5,300 people reported a severe disability in the Solomon Islands, they constitute a vulnerable and disadvantaged group, and they are a target group in need of specialized medical assistance.

Although it is commendable that the government supports and an inclusive education policy, which includes three specialized schools currently in operation, the government
needs to do more in order to meet its obligation as stated above. Further special facilities and resources in schools and work places are required to cater for the special needs of people with disabilities, and specialized education facilities are needed in the different provinces.

### 7.2.6 Education

Educational level is a key indicator of 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 for people who have little or no formal education and training.

The goal of the Ministry of Education and Human Resources Development (MEHRD) is to provide universal access to quality basic education for all children in 2015 and improved access to relevant and demand oriented community, technical, vocational, and tertiary education and training. To achieve this, the cooperation of everyone in the community is paramount.

The Sector Wide Approach (SWAP) which was adopted in 2004 has been developed to encourage the involvement of people in all levels of education and community to be part of the process. It resulted in the development of a three year National Education Action Plan (NEAP) for the period 2010-2012. Together with the Education Strategic Framework 2007-2015, NEAP 2010-2012 provides the basis for course of action that should be taken to achieve the set goals of which two of the most important is to

- Provide full enrolment opportunity to all children of the age of 6 up to 15 years on equitable basis;
- Achieve $100 \%$ enrolment rate for primary education by 2015

Through the concerted efforts of development partners, 'fee free' primary level education up to Year 9 in all Primary, Community High, Provincial and National Secondary schools began in 2009. In the arrangement, compulsory primary school contributions were supposed to have been phased out and replaced by grants paid directly to schools. The initiative was made in direct response to the (MDGs) of universal education and subsequent research which highlighted rising parental contributions (school fees) as one of the main reasons why many children do not go to school. While preliminary findings
of the survey carried out do not show a drastic increase in enrolments, it highlighted that for most parents this initiative eases the burden of school contributions they are paying each year. It is also important to note that many schools are still charging parents school contributions.

Other options that the government can take could consider is increasing school budgets (for materials and teachers) to reduce year 6 and 9 drop-outs and phasing out entrance exams in these two years. The Ministry of Education and Human Resources Development's move to adopt a new curriculum (Outcome Based Approach) to replace the old one is moving in this direction. In addition, the building of vocational centres in the provinces featuring youth development programmes could provide life skills (including family planning). The programmes may reduce teenage delinquency, and teenage pregnancy, while providing the youth with skills they need to be part of the work force and community. Last but not least an effort needs to be made to encourage young girls who have given birth to continue their education as mothers.

Sustainability is the main constraint for universal primary and secondary education in the country. With part of the funds for Fee Free Basic Education strategy externally funded there is fear that the program will cease to operate if the government is not economically viable to fully support it. Also, the provision of school materials to schools cannot continue annually because of the government's limited resources. This means that alternative plans must be put in place.

School attendance, educational attainment, and literacy rates are much lower in the rural than in the urban areas, which is the result of the disparities of the educational systems in the urban and rural areas where schools lack resources and qualified teachers. This disparity surely is one of the important causes of rural to urban migration.

### 7.2.7 Economic activity and labour market

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

Although a high proportion (63\%) of the population aged 12 and older was economically active (in the labour force), only a relatively small proportion ( $24 \%$ ) was engaged in paid employment. These relatively few people (81 thousand) supported the rest of the population with respect to paid income, meaning that one paid person supports, on average, about 5 other people financially.

The Solomon Islands enjoys the benefits of migrant labour with Government agreements with New Zealand. The New Zealand's Recognized Seasonal Employer (RSE) programme officially began in 2008 with a pilot programme, and larger numbers followed thereafter. However, some Solomon Islanders went to work in New Zealand even before the scheme was officially signed.

During the seasons 2007 to 2012, and total of 1,374 Solomon Islands workers went to work temporarily in New Zealand. These were 888 males and 486 females. The workers are mostly unskilled and are mainly involved in agricultural work.

In view of the success of the New Zealand programme, the Solomon Islands government should vigorously pursue an arrangement with Australia as well.

According to projection results presented in this report, the working age population will increase substantially during the next years. The private and public sector needs to absorb an increasing number of job seekers in future and are encouraged to collaborate in developing innovative strategies that will promote economic diversification and growth.

### 7.2.8 Communication and internet use

The access and use of telecommunications has increased a lot since liberalization in the mid 2008. Existing research in telecommunications suggests that access can increase economic growth, attract foreign investment, improve market efficiencies, increase accessibility to health and education and empower women and others. The telecommunication sector is presumed to provide new opportunities and frontiers across businesses, social, economic and the political arena. An improvement in the infrastructure and facilities of telecommunications will have a direct effect on the well being of individuals in the country.

Examples where assistance is needed include:

- Telephone and Mobile phone access: Only $21 \%$ of all households have a mobile phone available, mainly in Honiara; this may be due to both coverage issues and the expensive nature of the service. The number however could increase with the introduction of other service providers providing competition thus reducing prices and hopefully will widen the area of phone coverage to reach more people. Work to expand and improve coverage to all the islands is progressing, and the mobile phone service providers in the country are obligated to ensure that this is achieved.
- Radio availability: Only $44 \%$ of all households have a radio. The reason for this relatively low percentage of radio owners does not seems to be problems with reception rather than affordability and/or how radios and radio programmes are valued by the communities. One way to improve reception in remote areas is through the establishment of provincial radio stations devoting air time not only to music but topics such as culture, sport, education, and health awareness programmes. In addition government should assist existing radio stations by improving radio transmitters to reach out to a wider community. Radios are crucial in disaster management for transmitting important information to affected communities.
- Internet access: although Internet is a significant mode of communication in modern day society and business operations, hardly any households in the Solomon Islands are connected to the Internet; less than $1 \%$ of all households, and even in Honiara it was a mere $4 \%$ of households. The main reason is the costs it involves: paying for the very expensive Internet is one, being able to afford a computer another. The government must encourage competition by inviting different internet providers to provide Internet access at affordable prices. A well functioning Internet system
- offers online educational/learning opportunities (through for example the "one laptop per child programme").
- makes medical advice available to medical staff in remote areas;
- provides information, news and entertainment to the general public;
- facilitates tourism operators and businesses.


### 7.2.9 Good governance

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

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

## GLOSSARY

## Indicator

Adult mortality (45q15)

Age-dependency ratio

Average age at (first) marriage (SMAM)

Balance equation
Births - estimated number for 2009

Child-woman ratio (CWR)

Child mortality rate (1q5)
Crude birth rate (CBR)

Crude death rate (CDR)

Crude net migration rate
Deaths - estimated number for
2009

Employment-population ratio

General fertility rate

Infant mortality rate (IMR)

## Definition

Probability of death between the ages of 15 years and 60 years

Number of people in the "dependent" age category (population < 15 plus population $60+$ ) per 100 in the "economically productive ages" $15-59$ years

Approximation of average age at marriage, based on proportion of population never married (single)

Population growth $=$ births - deaths + net migration
Estimated age-specific fertility rates (ASFR) multiplied by enumerated number of women by age in 2009

Number of children under age 5 per 1,000 women aged 15-49

The probability of dying between age 1 and age 5
Estimated number of births per 1,000 population (7,335/234,023 X 1,000)

Estimated number of deaths per 1,000 population (1,260/234,023 X 1,000)

Rate of growth minus rate of natural increase
Estimated age-specific death rates [m(x)] by sex (from life multiplied by enumerated population by age and sex in 2009

Proportion of employed people in cash work (by a given age and sex), as part of the corresponding total number of people of the same age and sex

Annual number of births per 1,000 women of childbearing age (15-49)

Number of infant deaths (children younger than 1 year) per 1,000 births

| Institutions | Boarding schools, prisons, hospitals, hotels/hostels/guesthouses |
| :---: | :---: |
| Intercensal period | Time period between two censuses |
| Labour force | People employed (cash work plus village work) and unemployed (excludes those not seeking employment) |
| Labour force participation rate | Proportion of people in the labour force (by a given age and sex), as part of the corresponding total number of people of the same age and sex |
| Language ability | see Literacy rate |
| Life expectancy at birth | Number of years a newborn baby can expect to live on average |
| Life expectancy at age 20 | Number of additional years a 20 year old can expect to live on average |
| LTR, lifetime risk of maternal death | The chances of a woman dying from maternal causes over the course of her 35-year reproductive life span $=35 \mathrm{x}$ maternal mortality rate |
| Literacy rate | Proportion of the population aged 15 years and older or 15-24 years, who are able to read and write a simple sentence in any language |
| Maternal mortality rate | Number of maternal deaths per 1,000 women |
| Maternal mortality ratio | Number of maternal deaths per 100,000 live births |
| 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 |
| Parity (average) | Average number of children per woman |
| PMFD, proportion of deaths due to maternal causes | Ratio between numbers of reported female deaths and maternal deaths. |
| Rate of growth (\%) | Average annual growth rate during 1999-2009 $\ln ($ TotPop2009/TotPop1999)/10 X 100 |

Crude birth rate (CBR) minus crude death rate (CDR)

Sex ratio

Teenage fertility rate
Total fertility rate (TFR)
Under 5 mortality (q5)

Number of males per 100 females
Number of births by women aged 15-19 per 1,000
Average number of children per woman
The probability of dying between birth and age 5

## APPENDICES

## Appendix 1: Accuracy of age reporting - Indexes of age heaping

The 2009 Solomon Islands census population shows the following distinct age patterns (Fig.A):

1. Age heaping at ages ending with ' 0 , ' 5 ' and to a lesser degree with ' 7 ' and ' 9 ', and avoidance of ages ending in ' 1 ' and ' 8 ', and to lesser degrees with ' 2 ', ' 3 ', ' 4 ', and ' 6 '.
2. Relatively high number of people aged 75 years and older, and of those more males than females.

Figure A: Population pyramid, Solomon Islands: 2009


The occurrence of age heaping is expressed by the calculated Whipple, Myers, Bachi, and the United Nations age-sex accuracy indexes (Table A).

Table A: Age accuracy indices, Solomon Islands: 1999 and 2009

| Census year | Myers' |  | Bachi |  | Whipples |  | UN <br> Secretariat |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Males | Females | Males | Females |  |
| 1999 | 6.6 | 5.3 | 4.7 | 3.8 | 109 | 106 | 19.5 |
| 2009 | 7.6 | 7.1 | 5.3 | 5.0 | 119 | 117 | 20.2 |

Figure B1: Myers Preference by digit, Solomon Islands: 1999


Figure C1: Bachi Preference by digit, Solomon Islands: 1999


Figure B2: Myers Preference by digit, Solomon Islands: 2009


Figure C2: Bachi Preference by digit, Solomon Islands: 2009


Software used: US Census Bureau, Population Analysis Spreadsheets (PAS), procedure SINGAGE

With respect to the interpretation of these indices (Table A and Figs. B and C):
A. Myers - the higher the index, the greater the concentration on the age examined. Positive values show a preference for the digit, and negative values avoidance of the digit (Figs.2a and b). The index calculated for males is $\mathbf{7 . 6}$ and for females 7.1. As a comparison, the index for the 1999 Solomon Islands census population was 6.6 and 5.3 for males and females respectively. The theoretical range of Myer's index is 0 , representing no heaping, to 90 , which would result if all ages were reported at a single digit.
B. Bachi - the higher the index, the greater the concentration on the age examined. Positive values show a preference for the digit, and negative values avoidance of the digit. The index calculated for Males is 5.3; Females 5.0, which compares to 4.7 and 3.8 for males and females for the 1999 census (Figs.3a and b). The Bachi index as indicator of the general extend of heaping differs little from Myers'. The theoretical range of Bach's index is also 0 , representing no heaping, to 90 , which would result if all ages were reported at a single digit, say zero.
C. Whipple: Males and Females was 119 and 117 respectively. This measure means that the Solomon Islands population overstated ages ending in 0 or 5 by $19 \%$ and $17 \%$ for males and females. As a comparison, the index for 1999 Solomon Islands census population was 109 for males and 106 for females.

The slight increase of the different indices is an indication that age reporting in the 2009 census is slightly more inaccurate compared to the 1999 census, but certainly in an acceptable range. It is worth noting that female age reporting was a little better than that of males.

In general it is not possible to measure digit preference precisely, because an accurate distinction between the error due to digit preference, other errors, and real fluctuations cannot be made. Therefore none of the above indexes provides a critical value of age heaping/misreporting because of each country-specific effect of past trends of births, deaths and migration on a population's age distribution. The genuine fluctuations become the more pronounced the smaller the population (sample) size. Nonetheless, the fluctuations observed suggest some faulty reporting.

Depending on extend of the observed digit preference/avoidance, the population age distribution needs smoothing. One smoothing-procedure is described in Manual X, Indirect Techniques for Demographic Estimation, United Nations, 1983, p.241. Others are available using USCB PAS procedure $A G E S M T H$. However, smoothing procedures remove some true fluctuations implicit in the original single-year-of-age figures, and it needs to be decided on a case by case basis whether smoothing of an observed age distribution is warranted (whether it doesn't cause more damage than good).

Finally, the United Nations age-sex accuracy index for the Solomon Islands 2009 census population is calculated in the PAS ${ }^{18}$ procedure AGESEX. It shows a (corrected) index of
20.2. Census age-sex data are described by the United Nations as "accurate", "inaccurate", or "highly inaccurate" depending on whether the UN index is under 20, 2040 , or over 40 . However, this procedure as a measurement of age-sex accuracy is labeled as questionable due to its problematic underlying assumptions made ${ }^{19}$.

The occurrence of higher number of males than females at older ages has to be regarded as suspect, because life expectancy of females is higher than males (more females survive to older ages than males). However, countries where the status of women is low, male life expectancy can be higher than female.

The fact that there was such a relatively high count of old people (60+), and a higher number of older males than older females is a very important observation, as it either points to

1. Under-enumeration of (older) females;
2. (Sex-selective) age misreporting - old people (particularly males) reported to be even older than they really were.

Without the availability of reliable vital statistics (registered number of deaths by age and sex), it is difficult to verify the census count of higher number of males than females at older ages (and consequently lower mortality rates of males than females).

Nevertheless, child mortality rates by sex were estimated using data on children ever born by age of mother and number of children still alive by age of mother. An analysis of childhood mortality is presented in chapter 3.2, and shows that child mortality rates for males are higher than females.

Another data source to verify sex-differential survival rates is to study the reported number of widows/widowers collected from data on marital status. An analysis of data on marital status is presented in section 4.1 and it shows that the proportion of widowed females at older ages was significantly higher than males. The number of widows increases (much) faster than widowers at older ages. This is explained by the higher death rates among men. Thus there are more widows than widowers among the old.

Furthermore a question was included asking respondents whether their father and/or mother is still alive; the so-called orphanhood question (chapter 4). It shows that a considerable higher proportion of respondent's mothers than fathers was still alive, and therefore survived to older ages.

These findings contradicts the access count of older males versus females, and point to both, an undercount of (older) females, and to age misreporting of males (reporting to be older than they really are).

[^13]Appendix 2: Arriaga's approach for estimation of ASFR for one point in time (1999) and the age pattern of fertility (Brass)

| Arriaga's approach for estimation of ASFR for one point in time and age pattern of fertility (Brass) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month November <br> Year $\mathbf{1 9 9 9}$ <br> Fertility pattern is tabulated by age of woman at enumeration  |  |  |  |  |  |  |  |  |  |  |  |
| Age Group of Woman | Children Ever Born | Age Specific <br> Fertility <br> Pattern <br> (A.S.F.P.) | Fertility Consistent with C.E.B. (A.S.F.R.) | Fertility <br> Pattern by Age at Survey Date | Fertility <br> Pattern by Age at Birth of Child | Cumulatio <br> A.S.F.R. | on of <br> Fertility <br> Pattern by <br> Age at Birth | Adjustment Factors | Age <br> Rates Bas Factor for $20-25$ | ecific Fertility on Adjustm the Age Grou $25-30$ | $30-35$ |
| November 1999 |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Recorded | Calculated |  |  |  |  |  |  |
| 15-20 | 0.102 | 0.048 | 0.081 | 0.048 | 0.060 | 0.081 | 0.060 | 1.349 | 0.071 | 0.073 | 0.072 |
| 20-25 | 0.940 | 0.186 | 0.223 | 0.186 | 0.196 | 0.304 | 0.256 | 1.186 | 0.233 | 0.238 | 0.235 |
| 25-30 | 2.150 | 0.216 | 0.268 | 0.216 | 0.215 | 0.572 | 0.471 | 1.214 | 0.255 | 0.261 | 0.258 |
| 30-35 | 3.580 | 0.184 | 0.267 | 0.184 | 0.178 | 0.839 | 0.649 | 1.293 | 0.211 | 0.216 | 0.214 |
| 35-40 | 4.650 | 0.118 | 0.164 | 0.118 | 0.111 | 1.003 | 0.760 | 1.320 | 0.132 | 0.135 | 0.133 |
| 40-45 | 5.410 | 0.046 | 0.103 | 0.046 | 0.042 | 1.107 | 0.802 | 1.380 | 0.050 | 0.051 | 0.050 |
| 45-50 | 5.820 | 0.018 | 0.037 | 0.018 | 0.014 | 1.144 | 0.816 | 1.402 | 0.017 | 0.017 | 0.017 |
| Mean Age of | Childbearing: |  | 28.58 |  | 27.59 |  |  |  |  |  |  |
| Total Fertility | Rate: |  | 5.72 |  | 4.08 |  |  |  | 4.8 | 5.0 | 4.9 |
| Software: MORTPAK for Windows (4.1), application FERTPF, Population Division, United Nations Secretariat |  |  |  |  |  |  |  |  |  |  |  |

Appendix 3: Arriaga's approach for estimation of ASFR for one point (2009) in time and the age pattern of fertility (Brass)

| Arriaga's approach for estimation of ASFR for one point in time and age pattern of fertility (Brass) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fertility pattern is tabulated by age of woman at enumeration |  |  |  |  |  |  |  |  |  |  |  |
| Age Group of Woman | Children <br> Ever Born | Age Specific Fertility Pattern (A.S.F.P.) | Fertility Consistent with C.E.B. (A.S.F.R.) | Fertility <br> Pattern by Age at Survey Date | Fertility Pattern by Age at Birth of Child | Cumulation A.S.F.R. | on of <br> Fertility <br> Pattern by <br> Age at Birth | Adjustment Factors | Age S <br> Rates Bas Factor fo $20-25$ | ecific Fertility d on Adjustm the Age Gro 25-30 | 30-35 |
| November 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | 0.102 | 0.042 | 0.075 | 0.042 | 0.053 | 0.075 | 0.053 | 1.431 | 0.058 | 0.058 | 0.058 |
| 20-25 | 0.841 | 0.178 | 0.191 | 0.178 | 0.188 | 0.266 | 0.241 | 1.105 | 0.208 | 0.208 | 0.208 |
| 25-30 | 1.866 | 0.206 | 0.228 | 0.206 | 0.205 | 0.494 | 0.446 | 1.107 | 0.227 | 0.227 | 0.227 |
| 30-35 | 3.075 | 0.178 | 0.223 | 0.178 | 0.173 | 0.717 | 0.619 | 1.158 | 0.191 | 0.191 | 0.191 |
| 35-40 | 3.959 | 0.120 | 0.141 | 0.120 | 0.114 | 0.857 | 0.733 | 1.170 | 0.126 | 0.126 | 0.126 |
| 40-45 | 4.676 | 0.053 | 0.096 | 0.053 | 0.048 | 0.953 | 0.781 | 1.220 | 0.053 | 0.053 | 0.053 |
| 45-50 | 5.118 | 0.019 | 0.035 | 0.019 | 0.015 | 0.988 | 0.796 | 1.241 | 0.017 | 0.017 | 0.017 |
| Mean Age of Childbearing: |  |  | 28.54 |  | 27.86 |  |  |  |  |  |  |
| Total Fertility Rate: |  |  | 4.94 |  | 3.98 |  |  |  | 4.40 | 4.40 | 4.40 |

Software: MORTPAK for Windows (4.1), application FERTPF, Population Division, United Nations Secretariat

Appendix 4: Arriaga's approach for estimation of ASFR for two points in time (1999 and 2009) and the age patterns of fertility (Arriaga-Brass)

## First enumeration, November 1999



November 1999 to November 2000

|  |  |  | Recorded |  | Calculated |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15-20 | 0.102 | 0.048 | 0.080 | 0.048 | 0.060 | 0.080 | 0.060 | 1.344 | 0.068 | 0.067 | 0.068 |
| 20-25 | 0.940 | 0.186 | 0.211 | 0.186 | 0.196 | 0.292 | 0.256 | 1.139 | 0.223 | 0.220 | 0.222 |
| 25-30 | 2.150 | 0.216 | 0.238 | 0.216 | 0.215 | 0.529 | 0.471 | 1.123 | 0.245 | 0.242 | 0.243 |
| 30-35 | 3.580 | 0.184 | 0.215 | 0.184 | 0.178 | 0.744 | 0.649 | 1.146 | 0.203 | 0.200 | 0.201 |
| 35-40 | 4.650 | 0.118 | 0.095 | 0.118 | 0.111 | 0.839 | 0.760 | 1.104 | 0.126 | 0.125 | 0.125 |
| 40-45 | 5.410 | 0.046 | 0.052 | 0.046 | 0.042 | 0.890 | 0.802 | 1.110 | 0.048 | 0.047 | 0.047 |
| 45-50 | 5.820 | 0.018 | 0.019 | 0.018 | 0.014 | 0.909 | 0.816 | 1.114 | 0.016 | 0.016 | 0.016 |
| Mean Age of Childbearing: |  |  | 27.37 |  | 27.59 |  |  |  |  |  |  |
| Total Fertility Rate: |  |  | 4.55 |  | 4.08 |  |  |  | 4.65 | 4.58 | 4.62 |

## Second enumeration, November 2009

Fertility pattern is tabulated by age of woman at enumeration

|  |  | Age Specific | Fertility | Fertility | Fertility | Cumulation of | Age Specific Fertility |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age Group <br> of Woman | Children | Fertility | Consistent | Pattern | Pattern |  | Fertility | Adjustment | | Rates Based on Adjustment |
| :---: |
|  |

November 2008 to November 2009


Software: MORTPAK for Windows (4.1), application FERTPF, Population Division, United Nations Secretariat

Appendix 5: Fertility estimates using the Trussell P/F Ratio Technique, Solomon Islands: 1999

|  | Reported <br> ASFR <br> $\mathrm{f}(\mathrm{i})$ | Average <br> CEB | Cumulative <br> fertility <br> Phi(i) |  | P(i) |  |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- |

* Age code: ASFR based on age of mother at:

0 census/survey
1 birth of child

|  |  | Adjusted ASFR's |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | P2/F2 | P3/F3 |  | P4/F4 |  | Avg(P3/F3,P4/F4) |  |
| Age | ASFR * | 1.236 | 1.182 | 1.266 | 1.224 |  |  |  |
|  |  |  |  |  |  |  |  |  |
| $15-19$ | 0.060 | 0.074 | 0.071 | 0.076 | 0.073 |  |  |  |
| $20-24$ | 0.196 | 0.242 | 0.232 | 0.248 | 0.240 |  |  |  |
| $25-29$ | 0.215 | 0.266 | 0.254 | 0.272 | 0.263 |  |  |  |
| $30-34$ | 0.178 | 0.220 | 0.210 | 0.225 | 0.218 |  |  |  |
| $35-39$ | 0.111 | 0.137 | 0.131 | 0.140 | 0.136 |  |  |  |
| $40-44$ | 0.042 | 0.052 | 0.050 | 0.053 | 0.051 |  |  |  |
| $45-49$ | 0.014 | 0.017 | 0.017 | 0.018 | 0.017 |  |  |  |
|  |  |  |  |  |  |  |  |  |
| TFR | 4.08 | 5.04 | 4.82 | 5.16 | 4.99 |  |  |  |

[^14]Software: Population Analysis spreadsheet, procedure PFRATIO, US Census Bureau, Washington, USA

Appendix 6: Fertility estimates using the Trussell P/F Ratio Technique, Solomon Islands: 2009

| Age | Reported <br> ASFR $\mathrm{f}(\mathrm{i})$ |  | Average <br> CEB <br> P(i) |  | Cumulative fertility Phi(i) |  | F(i) | $\begin{aligned} & \mathrm{P} / \mathrm{F} \\ & \text { ratio } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15-19 |  | 0.042 |  | 0.102 |  | 0.209 |  | 0.082 | 1.245 |
| 20-24 |  | 0.178 |  | 0.841 |  | 1.100 |  | 0.710 | 1.185 |
| 25-29 |  | 0.206 |  | 1.866 |  | 2.128 |  | 1.717 | 1.087 |
| 30-34 |  | 0.178 |  | 3.075 |  | 3.018 |  | 2.684 | 1.146 |
| 35-39 |  | 0.120 |  | 3.959 |  | 3.617 |  | 3.402 | 1.164 |
| 40-44 |  | 0.053 |  | 4.676 |  | 3.880 |  | 3.773 | 1.240 |
| 45-49 |  | 0.019 |  | 5.118 |  | 3.976 |  | 3.954 | 1.295 |
| Age code * |  | 0 |  |  |  |  |  |  |  |
| TFR |  | 3.98 |  |  |  |  |  |  |  |

$*$ Age code: ASFR based on age of mother at:
0 $\quad$ census/survey 10

|  |  | Adjusted ASFR's |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | P2/F2 | $\mathrm{P} 3 / \mathrm{F} 3$ |  | $\mathrm{P} 4 / \mathrm{F} 4$ | $\mathrm{Avg}(\mathrm{P} 3 / \mathrm{F} 3, \mathrm{P} 4 / \mathrm{F} 4$ |  |
| Age |  | 1.185 | 1.087 | 1.146 | 1.116 |  |
|  |  |  |  |  |  |  |
| $15-19$ | 0.052 | 0.062 | 0.057 | 0.060 | 0.059 |  |
| $20-24$ | 0.188 | 0.223 | 0.205 | 0.216 | 0.210 |  |
| $25-29$ | 0.205 | 0.243 | 0.223 | 0.235 | 0.229 |  |
| $30-34$ | 0.173 | 0.205 | 0.188 | 0.198 | 0.193 |  |
| $35-39$ | 0.114 | 0.135 | 0.124 | 0.130 | 0.127 |  |
| $40-44$ | 0.048 | 0.057 | 0.052 | 0.055 | 0.053 |  |
| $45-49$ | 0.015 | 0.018 | 0.016 | 0.017 | 0.017 |  |
|  |  |  |  |  |  |  |
| TFR | 3.98 | 4.71 | 4.32 | 4.55 | 4.44 |  |

*Pattern corrected for one-half year between birth and reporting
ASFR Age-specific fertility rate
CEB Average number of children ever born
Software: Population Analysis spreadsheet, procedure PFRATIO, US Census Bureau, Washington, USA

Appendix 7: Fertility estimates using the Relational Gompertz method, Solomon Islands: 1999 and 2009

Summary Estimates of the Total Fertility Rate - 1999

|  | Based on CEB only |  | Based on ASFR and CEB |  |
| :--- | :---: | :---: | :---: | ---: |
| Age | $2+2$ points | 3+3 points | 2+2 points | 3+3 points |
| $15-19$ | 5.359 | 5.886 | 6.263 | 5.674 |
| $20-24$ | 5.803 | 6.347 | 4.990 | 5.435 |
| $25-29$ | 5.621 | 6.017 | 4.735 | 5.214 |
| $30-34$ | 5.840 | 6.117 | 5.121 | 5.505 |
| $35-39$ | 5.720 | 5.870 | 5.299 | 5.519 |
| $40-44$ | 5.693 | 5.745 | 5.549 | 5.621 |
| $45-49$ | 5.844 | 5.850 | 5.828 | 5.835 |
| Average | 5.70 | 5.98 | 5.40 | 5.54 |
| Average 20-44 | 5.75 | 6.09 | 5.14 | 5.42 |
| 2+2 points based on the age groups 15-19 to 35-39 |  |  |  |  |
| 3+3 points based on the age groups 15-19 to 45-49 |  |  |  |  |
| CEB Children ever born. |  |  |  |  |
| ASFR Age-specific fertility rate. |  |  |  |  |

Summary Estimates of the Total Fertility Rate - 2009

|  | Based on CEB only |  | Based on ASFR and CEB |  |
| :--- | :---: | :---: | :---: | ---: |
| Age | $2+2$ points | 3+3 points | 2+2 points | 3+3 points |
| $15-19$ | 4.366 | 4.754 | 5.952 | 5.139 |
| $20-24$ | 4.992 | 5.857 | 4.733 | 5.188 |
| $25-29$ | 4.732 | 5.448 | 4.240 | 4.745 |
| $30-34$ | 4.916 | 5.451 | 4.471 | 4.878 |
| $35-39$ | 4.815 | 5.121 | 4.542 | 4.777 |
| $40-44$ | 4.902 | 5.015 | 4.804 | 4.884 |
| $45-49$ | 5.136 | 5.152 | 5.125 | 5.134 |
| Average | 4.84 | 5.26 | 4.84 | 4.96 |
| Average 20-44 | 4.86 | 5.47 | 4.56 | 4.90 |
| 2+2 points based on the age groups 15-19 to 35-39 |  |  |  |  |
| 3+3 points based on the age groups 15-19 to 45-49 |  |  |  |  |
| CEB Children ever born. |  |  |  |  |
| ASFR Age-specific fertility rate. |  |  |  |  |

Appendix 8: Comparison of empirical mortality rates to those from model life tables for males
(MORTPAK procedure COMPAR)

| Age Group | Empirical$\mathbf{m}(\mathbf{x}, \mathbf{n})$ | Implied Life Expectancy at Birth United Nations Models |  |  |  |  | Coale-Demeny Models |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Latin Am. | Chilean | So. Asian | Far East | General | West | North | East | South |
| 0-1 | 0.0294 | 73.8 | 73.5 | 74.5 | 66.5 | 71.7 | 69.3 | 70.2 | 70.1 | 75.8 |
| 1-5 | 0.0021 | 73.0 | 66.5 | 74.0 | 65.0 | 69.9 | 67.0 | 69.5 | 65.7 | 70.9 |
| 5-10 | 0.0009 | 69.0 | 61.7 | 68.6 | 62.9 | 66.6 | 66.7 | 70.5 | 64.5 | 65.0 |
| 10-15 | 0.0008 | 65.6 | 61.3 | 62.0 | 63.2 | 64.5 | 65.8 | 69.1 | 63.9 | 63.9 |
| 15-20 | 0.0008 | 69.9 | 67.6 | 64.6 | 67.4 | 68.9 | 70.9 | 75.6 | 70.2 | 67.5 |
| 20-25 | 0.0015 | 67.9 | 65.7 | 58.6 | 65.4 | 66.4 | 68.5 | 73.4 | 67.9 | 64.9 |
| 25-30 | 0.0021 | 66.1 | 64.9 | 56.7 | 63.8 | 64.4 | 65.6 | 70.4 | 64.5 | 62.1 |
| 30-35 | 0.0020 | 68.1 | 67.9 | 60.7 | 66.0 | 66.8 | 67.2 | 71.8 | 66.2 | 65.3 |
| 35-40 | 0.0018 | 72.0 | 71.8 | 66.8 | 70.0 | 70.9 | 70.1 | 74.1 | 69.4 | 68.4 |
| 40-45 | 0.0027 | 71.4 | 71.9 | 67.4 | 70.8 | 70.9 | 70.2 | 72.7 | 69.3 | 68.4 |
| 45-50 | 0.0037 | 72.5 | 73.2 | 70.0 | 72.6 | 72.4 | 72.2 | 72.8 | 71.6 | 69.8 |
| 50-55 | 0.0081 | 67.3 | 69.3 | 66.7 | 71.0 | 69.0 | 69.1 | 67.8 | 69.3 | 65.2 |
| 55-60 | 0.0079 | 75.0 | 76.2 | 75.1 | 76.7 | 75.9 | 76.0 | 73.8 | 76.6 | 73.0 |
| 60-65 | 0.0128 | 74.9 | 76.7 | 76.6 | 78.3 | 76.7 | 76.6 | 74.3 | 77.0 | 72.6 |
| 65-70 | 0.0152 | 79.5 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $e(0)>80.0$ | 79.3 | 80.0 | 76.8 |
| 70-75 | 0.0241 | 79.9 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $e(0)>80.0$ | 80.0 | $\mathrm{e}(0)>80.0$ | 78.9 |
| 75-80 | 0.0318 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $e(0)>80.0$ | $e(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ |
| Average absolute deviation from the median |  |  |  |  |  |  |  |  |  |  |
|  | 0 to 10 | 1.6 | 3.9 | 2.0 | 1.2 | 1.7 | 0.9 | 0.3 | 1.9 | 3.6 |
| Ages | d over | 4.1 | 5.0 | 6.6 | 5.1 | 4.6 | 4.2 | 2.8 | 4.6 | 4.4 |
| Ag | d over | 3.7 | 5.1 | 6.3 | 5.2 | 4.2 | 3.9 | 2.8 | 4.4 | 4.4 |
| Medn(0-10)-Medn(10+) |  | 1.3 | -5.4 | 6.9 | -5.9 | -1.0 | -3.5 | -3.4 | -4.1 | 2.6 |

Software: MORTPAK for Windows (4.1), application COMPAR, Population Division, United Nations Secretariat

Appendix 9: Comparison of empirical mortality rates to those from model life tables for females
(MORTPAK procedure COMPAR)

| Age Group | $\begin{gathered} \text { Empirical } \\ \mathbf{m}(\mathbf{x}, \mathbf{n}) \\ \hline \end{gathered}$ | Implied Life Expectancy at BirthUnited Nations Models |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Latin Am. | Chilean | So. Asian | Far East | General | West | North | East | South |
| 0-1 | 0.0254 | 77.9 | 79.7 | 78.9 | 73.4 | 76.3 | 72.0 | 72.7 | 74.0 | 79.6 |
| 1-5 | 0.0019 | 77.2 | 72.2 | 76.7 | 70.4 | 74.5 | 70.3 | 72.6 | 70.1 | 75.1 |
| 5-10 | 0.0010 | 70.3 | 63.4 | 68.6 | 63.7 | 68.3 | 67.7 | 71.1 | 66.5 | 66.4 |
| 10-15 | 0.0007 | 67.7 | 64.8 | 64.0 | 64.8 | 67.2 | 68.4 | 71.7 | 66.8 | 66.3 |
| 15-20 | 0.0008 | 68.9 | 68.1 | 65.8 | 69.4 | 69.2 | 70.8 | 73.5 | 69.1 | 68.4 |
| 20-25 | 0.0010 | 69.9 | 69.2 | 65.4 | 70.2 | 69.9 | 71.5 | 74.3 | 70.0 | 69.4 |
| 25-30 | 0.0014 | 69.3 | 68.6 | 63.5 | 69.9 | 69.1 | 70.6 | 73.4 | 68.7 | 67.9 |
| 30-35 | 0.0021 | 67.7 | 67.1 | 61.3 | 68.4 | 67.5 | 69.1 | 70.6 | 66.7 | 65.3 |
| 35-40 | 0.0017 | 72.9 | 72.1 | 67.0 | 73.0 | 72.2 | 72.7 | 73.9 | 71.3 | 69.4 |
| 40-45 | 0.0023 | 73.2 | 73.0 | 67.9 | 74.1 | 72.9 | 73.2 | 74.7 | 71.6 | 69.5 |
| 45-50 | 0.0038 | 71.5 | 71.8 | 66.6 | 73.9 | 71.7 | 72.6 | 72.1 | 70.7 | 66.6 |
| 50-55 | 0.0057 | 70.8 | 71.5 | 68.5 | 74.5 | 72.0 | 72.8 | 72.5 | 70.8 | 66.4 |
| 55-60 | 0.0062 | 75.9 | 76.6 | 75.1 | 78.7 | 76.7 | 76.8 | 75.9 | 75.2 | 71.2 |
| 60-65 | 0.0030 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $e(0)>80.0$ | $e(0)>80.0$ | $\mathrm{e}(0)>80.0$ |
| 65-70 | 0.0120 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $e(0)>80.0$ | $\mathrm{e}(0)>80.0$ | 80.0 | 76.9 |
| 70-75 | 0.0126 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ |
| 75-80 | 0.0235 | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ | $\mathrm{e}(0)>80.0$ |
| Average absolute deviation from the median |  |  |  |  |  |  |  |  |  |  |
|  | 0 to 10 | 2.6 | 5.4 | 3.4 | 3.2 | 2.7 | 1.4 | 0.5 | 2.5 | 4.4 |
| Ages | nd over | 4.0 | 4.3 | 5.6 | 4.1 | 3.9 | 3.4 | 2.7 | 3.9 | 4.1 |
| Age | d over | 4.0 | 4.5 | 5.7 | 4.2 | 3.8 | 3.3 | 2.5 | 3.7 | 4.4 |
| Medn(0-10)-Medn(10+) |  | 5.0 | 0.2 | 9.3 | -3.6 | 2.4 | -2.5 | -1.5 | -1.0 | 5.7 |

Software: MORTPAK for Windows (4.1), application COMPAR, Population Division, United Nations Secretariat

Appendix 10: Indirect estimation of infant and childhood mortality from data on children ever born children surviving-Males

| Age Corresponding Mortality Indices |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Group of women | Reference <br> Date | United Nations Models (Palloni-Helligman Equations) |  |  |  |  | Reference <br> Date | Coale-Demeny Models (Trussell Equations) |  |  |  |
|  |  | Latin Am. | Chilean | So. Asian | Far East | General |  | West | North | East | South |
| Infant Mortality |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Oct 2008 | <. 028 | <. 031 | <. 032 | 0.027 | 0.027 | Jan 2009 | 0.029 | 0.029 | 0.029 | $<.036$ |
| 20-25 | Sep 2007 | <. 028 | <. 031 | <. 032 | 0.025 | 0.025 | Oct 2007 | 0.026 | 0.025 | 0.027 | <. 036 |
| 25-30 | Feb 2006 | <. 028 | <. 031 | <. 032 | 0.028 | 0.028 | Oct 2005 | 0.028 | 0.025 | 0.029 | <. 036 |
| 30-35 | Nov 2003 | < . 028 | < 031 | <. 032 | 0.027 | 0.027 | Jun 2003 | 0.027 | 0.025 | 0.029 | <. 036 |
| 35-40 | Mar 2001 | 0.029 | 0.033 | <. 032 | 0.029 | 0.029 | Oct 2000 | 0.028 | 0.026 | 0.031 | <. 036 |
| 40-45 | Mar 1998 | 0.031 | 0.037 | 0.033 | 0.032 | 0.032 | Dec 1997 | 0.03 | 0.027 | 0.034 | 0.036 |
| 45-50 | Sep 1994 | 0.034 | 0.041 | 0.036 | 0.034 | 0.035 | Dec 1994 | 0.032 | 0.028 | 0.036 | 0.04 |
| Probability of dying between ages 1 and 5 |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Oct 2008 | < 008 | <. 004 | <. 008 | 0.006 | 0.006 | Jan 2009 | 0.007 | 0.01 | 0.004 | <. 005 |
| 20-25 | Sep 2007 | <. 008 | <. 004 | <. 008 | 0.005 | 0.006 | Oct 2007 | 0.006 | 0.007 | 0.003 | <. 005 |
| 25-30 | Feb 2006 | <. 008 | <. 004 | <. 008 | 0.006 | 0.006 | Oct 2005 | 0.006 | 0.008 | 0.004 | <. 005 |
| 30-35 | Nov 2003 | <. 008 | <. 004 | <. 008 | 0.006 | 0.006 | Jun 2003 | 0.006 | 0.007 | 0.004 | <. 005 |
| 35-40 | Mar 2001 | 0.008 | 0.004 | <. 008 | 0.007 | 0.007 | Oct 2000 | 0.006 | 0.008 | 0.004 | <. 005 |
| 40-45 | Mar 1998 | 0.009 | 0.005 | 0.009 | 0.008 | 0.008 | Dec 1997 | 0.007 | 0.009 | 0.005 | 0.005 |
| 45-50 | Sep 1994 | 0.011 | 0.005 | 0.011 | 0.009 | 0.01 | Dec 1994 | 0.008 | 0.009 | 0.006 | 0.005 |

[^15]Appendix 11: Indirect estimation of infant and childhood mortality from data on children ever born children survivingFemales

| Age <br> Group of women | Reference Date | Latin Am. | Corresponding Mortality Indices |  |  |  |  | West | Coale-Demeny Models (Trussell Equations) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | United Nations Models (Palloni-Helligman Equations) |  |  | General | Reference Date |  |  |  |  |
|  |  |  | Chilean | So. Asian | Far East |  |  |  | North | East | South |
| Infant Mortality |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Oct 2008 | < . 028 | < . 031 | <. 032 | 0.026 | 0.026 | Dec 2008 | 0.028 | 0.027 | 0.028 | $<.036$ |
| 20-25 | Sep 2007 | <. 028 | <. 031 | <. 032 | 0.022 | <. 024 | Sep 2007 | 0.022 | 0.021 | 0.023 | <. 036 |
| 25-30 | Feb 2006 | <. 028 | < 031 | <. 032 | 0.024 | 0.024 | Nov 2005 | 0.024 | 0.022 | 0.025 | < . 036 |
| 30-35 | Nov 2003 | <. 028 | < . 031 | <. 032 | 0.025 | 0.025 | Jul 2003 | 0.025 | 0.023 | 0.027 | < . 036 |
| 35-40 | Apr 2001 | < . 028 | < 031 | <. 032 | 0.026 | 0.026 | Nov 2000 | 0.025 | 0.024 | 0.028 | <. 036 |
| 40-45 | May 1998 | 0.029 | 0.035 | <. 032 | 0.03 | 0.03 | Feb 1998 | 0.028 | 0.026 | 0.032 | <. 036 |
| 45-50 | Dec 1994 | 0.031 | 0.037 | 0.033 | 0.03 | 0.031 | Feb 1995 | 0.028 | 0.025 | 0.032 | 0.036 |
| Probability of dying between ages 1 and 5 |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Oct 2008 | < . 008 | < . 004 | < . 008 | 0.005 | 0.006 | Dec 2008 | 0.006 | 0.009 | 0.003 | <. 005 |
| 20-25 | Sep 2007 | <. 008 | <. 004 | <. 008 | 0.004 | <. 005 | Sep 2007 | 0.004 | 0.005 | 0.002 | <. 005 |
| 25-30 | Feb 2006 | <. 008 | <. 004 | < . 008 | 0.005 | 0.005 | Nov 2005 | 0.005 | 0.006 | 0.003 | <. 005 |
| 30-35 | Nov 2003 | < . 008 | <. 004 | <. 008 | 0.005 | 0.006 | Jul 2003 | 0.005 | 0.006 | 0.003 | < . 005 |
| 35-40 | Apr 2001 | < . 008 | <. 004 | <. 008 | 0.006 | 0.006 | Nov 2000 | 0.005 | 0.007 | 0.004 | <. 005 |
| 40-45 | May 1998 | 0.008 | 0.004 | < 008 | 0.007 | 0.007 | Feb 1998 | 0.006 | 0.008 | 0.005 | <. 005 |
| 45-50 | Dec 1994 | 0.009 | 0.004 | 0.009 | 0.007 | 0.008 | Feb 1995 | 0.006 | 0.008 | 0.005 | 0.005 |

Software: MORTPAK for Windows (4.1), application CEBCS, Population Division, United Nations Secretariat

## Appendix 12: Indirect estimation of male adult mortality from orphanhood data

| Age Group of <br> Respondent | Reference Date |  | United Nations Models |  |  |  |  | Coale-Demeny Models |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mon/Year | Decimal | Latin Am. | Chilean | So. Asian | Far East | General | West | North | East | South |
| Life Expectancy at Age Twenty |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Jul 1999 | 1999.5 | 51.7 | 52.0 | 49.8 | 52.8 | 51.2 | 50.4 | 51.7 | 49.7 | 50.5 |
| 20-25 | Nov 1996 | 1996.9 | 49.9 | 50.6 | 49.0 | 51.7 | 50.0 | 49.2 | 50.2 | 48.5 | 48.9 |
| 25-30 | Nov 1994 | 1994.9 | 49.1 | 49.8 | 48.8 | 51.1 | 49.6 | 48.5 | 49.1 | 47.7 | 47.8 |
| 30-35 | Aug 1994 | 1994.6 | 48.2 | 48.9 | 48.8 | 50.2 | 48.8 | 47.8 | 48.0 | 47.0 | 46.7 |
| 35-40 | Dec 1993 | 1993.9 | 48.1 | 48.5 | 49.4 | 49.3 | 48.6 | 47.6 | 47.4 | 47.1 | 46.6 |
| 40-45 | Nov 1995 | 1995.9 | 46.9 | 47.3 | 48.6 | 47.3 | 47.3 | 46.4 | 46.1 | 46.5 | 45.8 |
| 45-50 | XXXX | XXXX | 47.6 | 47.7 | 49.6 | 47.2 | 47.8 | 47.2 | 46.8 | 47.9 | 47.2 |

Software: MORTPAK for Windows (version 4.1), application ORPHAN, Population Division, United Nations Secretariat

## Appendix 13: Indirect estimation of female adult mortality from orphanhood data

| Age Group of Respondent | Reference Date |  | United Nations Models |  |  |  |  | Coale-Demeny Models |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mon/Year | Decimal | Latin Am. | Chilean | So. Asian | Far East | General | West | North | East | South |
| Life Expectancy at Age Twenty |  |  |  |  |  |  |  |  |  |  |  |
| 15-20 | Mar 2001 | 2001.2 | 57.7 | 57.8 | 55.6 | 58.5 | 56.8 | 54.8 | 56.6 | 54.3 | 55.5 |
| 20-25 | Feb 1999 | 1999.1 | 56.0 | 56.6 | 54.8 | 57.4 | 55.7 | 54.2 | 55.5 | 53.6 | 54.4 |
| 25-30 | Apr 1997 | 1997.3 | 55.8 | 56.4 | 54.8 | 57.1 | 56.0 | 54.2 | 55.3 | 53.6 | 54.0 |
| 30-35 | Mar 1996 | 1996.2 | 54.6 | 55.0 | 54.2 | 55.7 | 54.7 | 53.5 | 54.2 | 52.9 | 52.9 |
| 35-40 | Jul 1994 | 1994.6 | 54.2 | 54.4 | 54.4 | 54.6 | 54.3 | 53.5 | 53.7 | 52.9 | 52.7 |
| 40-45 | Jun 1994 | 1994.5 | 52.1 | 52.4 | 52.8 | 52.1 | 52.2 | 51.9 | 51.7 | 51.7 | 51.1 |
| 45-50 | XXXX | XXXX | 51.6 | 51.7 | 52.7 | 51.2 | 51.6 | 51.9 | 51.3 | 52.1 | 51.4 |

Software: MORTPAK for Windows (version 4.1), application ORPHAN, Population Division, United Nations Secretariat

Appendix 14: Abridged life table - Males, Urban: 2009

| Age |  | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0214 | 0.0210 | 100,000 | 2,100 | 98,116 | 0.9764 | $6,789,718$ | $\mathbf{e}(\mathbf{x})$ |
| 1 | 0.0016 | 0.0065 | 97,900 | 637 | 390,065 | 0.9917 | $6,691,602$ | 67.9 |
| 5 | 0.0018 | 0.0091 | 97,263 | 884 | 484,105 | 0.9923 | $6,301,538$ | 64.8 |
| 10 | 0.0013 | 0.0063 | 96,379 | 607 | 480,378 | 0.9912 | $5,817,433$ | 60.4 |
| 15 | 0.0024 | 0.0120 | 95,772 | 1,153 | 476,172 | 0.9865 | $5,337,055$ | 55.7 |
| 20 | 0.0029 | 0.0144 | 94,619 | 1,367 | 469,730 | 0.9852 | $4,860,883$ | 51.4 |
| 25 | 0.0030 | 0.0149 | 93,252 | 1,393 | 462,801 | 0.9845 | $4,391,153$ | 47.1 |
| 30 | 0.0033 | 0.0161 | 91,859 | 1,481 | 455,646 | 0.9829 | $3,928,352$ | 42.8 |
| 35 | 0.0037 | 0.0183 | 90,378 | 1,653 | 447,862 | 0.9797 | $3,472,706$ | 38.4 |
| 40 | 0.0046 | 0.0227 | 88,725 | 2,012 | 438,775 | 0.9743 | $3,024,843$ | 34.1 |
| 45 | 0.0060 | 0.0294 | 86,713 | 2,548 | 427,514 | 0.9640 | $2,586,069$ | 29.8 |
| 50 | 0.0089 | 0.0435 | 84,165 | 3,663 | 412,139 | 0.9495 | $2,158,554$ | 25.6 |
| 55 | 0.0121 | 0.0587 | 80,502 | 4,724 | 391,319 | 0.9272 | $1,746,415$ | 21.7 |
| 60 | 0.0188 | 0.0901 | 75,778 | 6,824 | 362,829 | 0.8882 | $1,355,096$ | 17.9 |
| 65 | 0.0295 | 0.1377 | 68,954 | 9,495 | 322,253 | 0.8293 | 992,267 | 14.4 |
| 70 | 0.0469 | 0.2106 | 59,459 | 12,522 | 267,243 | 0.7395 | 670,014 | 11.3 |
| 75 | 0.0762 | 0.3207 | 46,936 | 15,054 | 197,636 | 0.5093 | 402,771 | 8.6 |
| 80 | 0.1554 | $\ldots$ |  | 31,882 | 31,882 | 205,135 | $\ldots$ | 205,135 |

Appendix 15: Abridged life table - Females, Urban: 2009

| Age |  | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0173 | 0.0170 | 100,000 | 1,700 | 98,472 | 0.9819 | $7,490,547$ | $\mathbf{e}(\mathbf{x})$ |
| 1 | 0.0008 | 0.0030 | 98,300 | 296 | 392,458 | 0.9970 | $7,392,075$ | 75.9 |
| 5 | 0.0005 | 0.0023 | 98,004 | 221 | 489,467 | 0.9980 | $6,999,616$ | 71.4 |
| 10 | 0.0004 | 0.0018 | 97,783 | 177 | 488,472 | 0.9973 | $6,510,149$ | 66.6 |
| 15 | 0.0008 | 0.0040 | 97,606 | 394 | 487,138 | 0.9950 | $6,021,678$ | 61.7 |
| 20 | 0.0012 | 0.0058 | 97,212 | 565 | 484,690 | 0.9940 | $5,534,540$ | 56.9 |
| 25 | 0.0012 | 0.0060 | 96,646 | 579 | 481,801 | 0.9937 | $5,049,850$ | 52.3 |
| 30 | 0.0014 | 0.0068 | 96,067 | 651 | 478,746 | 0.9927 | $4,568,049$ | 47.6 |
| 35 | 0.0016 | 0.0080 | 95,416 | 764 | 475,241 | 0.9908 | $4,089,302$ | 42.9 |
| 40 | 0.0021 | 0.0107 | 94,652 | 1,009 | 470,871 | 0.9874 | $3,614,061$ | 38.2 |
| 45 | 0.0031 | 0.0152 | 93,644 | 1,420 | 464,921 | 0.9799 | $3,143,190$ | 33.6 |
| 50 | 0.0052 | 0.0257 | 92,223 | 2,369 | 455,595 | 0.9697 | $2,678,270$ | 29.0 |
| 55 | 0.0073 | 0.0357 | 89,854 | 3,205 | 441,780 | 0.9538 | $2,222,674$ | 24.7 |
| 60 | 0.0122 | 0.0593 | 86,650 | 5,135 | 421,378 | 0.9236 | $1,780,895$ | 20.6 |
| 65 | 0.0203 | 0.0968 | 81,514 | 7,888 | 389,164 | 0.8774 | $1,359,517$ | 16.7 |
| 70 | 0.0332 | 0.1539 | 73,626 | 11,328 | 341,448 | 0.8032 | 970,353 | 13.2 |
| 75 | 0.0565 | 0.2486 | 62,299 | 15,487 | 274,261 | 0.5639 | 628,905 | 10.1 |
| 80 | 0.1320 | $\ldots$ |  | 46,812 | 46,812 | 354,644 | $\ldots$ |  |

Appendix 16: Abridged life table - Males, Rural: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0266 | 0.0260 | 100,000 | 2,600 | 97,705 | 0.9703 | $6,510,942$ | $\mathbf{6 5 . 1}$ |
| 1 | 0.0023 | 0.0091 | 97,400 | 882 | 387,461 | 0.9886 | $6,413,238$ | 65.8 |
| 5 | 0.0025 | 0.0123 | 96,518 | 1,191 | 479,613 | 0.9897 | $6,025,777$ | 62.4 |
| 10 | 0.0017 | 0.0083 | 95,327 | 794 | 474,652 | 0.9885 | $5,546,164$ | 58.2 |
| 15 | 0.0032 | 0.0157 | 94,533 | 1,482 | 469,204 | 0.9824 | $5,071,512$ | 53.6 |
| 20 | 0.0038 | 0.0187 | 93,052 | 1,744 | 460,959 | 0.9809 | $4,602,308$ | 49.5 |
| 25 | 0.0039 | 0.0192 | 91,307 | 1,757 | 452,168 | 0.9801 | $4,141,349$ | 45.4 |
| 30 | 0.0042 | 0.0208 | 89,550 | 1,862 | 443,153 | 0.9782 | $3,689,181$ | 41.2 |
| 35 | 0.0047 | 0.0232 | 87,689 | 2,031 | 433,475 | 0.9746 | $3,246,028$ | 37.0 |
| 40 | 0.0057 | 0.0280 | 85,658 | 2,403 | 422,469 | 0.9687 | $2,812,553$ | 32.8 |
| 45 | 0.0072 | 0.0354 | 83,255 | 2,945 | 409,241 | 0.9574 | $2,390,084$ | 28.7 |
| 50 | 0.0104 | 0.0509 | 80,310 | 4,088 | 391,797 | 0.9417 | $1,980,843$ | 24.7 |
| 55 | 0.0138 | 0.0669 | 76,222 | 5,099 | 368,964 | 0.9180 | $1,589,046$ | 20.8 |
| 60 | 0.0211 | 0.1006 | 71,123 | 7,153 | 338,700 | 0.8761 | $1,220,082$ | 17.2 |
| 65 | 0.0327 | 0.1517 | 63,970 | 9,703 | 296,731 | 0.8134 | 881,381 | 13.8 |
| 70 | 0.0514 | 0.2287 | 54,267 | 12,412 | 241,364 | 0.7200 | 584,650 | 10.8 |
| 75 | 0.0824 | 0.3421 | 41,855 | 14,318 | 173,776 | 0.4938 | 343,286 | 8.2 |
| 80 | 0.1624 | $\ldots$ | 27,536 | 27,536 | 169,511 | $\ldots$ |  | 169,511 |

Appendix 17: Abridged life table - Females, Rural: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0224 | 0.0220 | 100,000 | 2,200 | 98,055 | 0.9762 | $7,186,468$ | 71.9 |
| 1 | 0.0012 | 0.0047 | 97,800 | 462 | 390,039 | 0.9954 | $7,088,413$ | 72.5 |
| 5 | 0.0007 | 0.0035 | 97,338 | 346 | 485,826 | 0.9968 | $6,698,374$ | 68.8 |
| 10 | 0.0006 | 0.0028 | 96,992 | 274 | 484,276 | 0.9957 | $6,212,548$ | 64.1 |
| 15 | 0.0013 | 0.0064 | 96,718 | 620 | 482,193 | 0.9920 | $5,728,271$ | 59.2 |
| 20 | 0.0019 | 0.0093 | 96,098 | 890 | 478,332 | 0.9906 | $5,246,078$ | 54.6 |
| 25 | 0.0019 | 0.0093 | 95,208 | 885 | 473,843 | 0.9903 | $4,767,746$ | 50.1 |
| 30 | 0.0021 | 0.0103 | 94,323 | 967 | 469,237 | 0.9892 | $4,293,903$ | 45.5 |
| 35 | 0.0023 | 0.0116 | 93,356 | 1,081 | 464,151 | 0.9871 | $3,824,666$ | 41.0 |
| 40 | 0.0029 | 0.0146 | 92,275 | 1,348 | 458,150 | 0.9831 | $3,360,515$ | 36.4 |
| 45 | 0.0040 | 0.0199 | 90,927 | 1,810 | 450,403 | 0.9741 | $2,902,365$ | 31.9 |
| 50 | 0.0066 | 0.0327 | 89,117 | 2,912 | 438,758 | 0.9619 | $2,451,962$ | 27.5 |
| 55 | 0.0091 | 0.0443 | 86,205 | 3,820 | 422,044 | 0.9434 | $2,013,204$ | 23.4 |
| 60 | 0.0149 | 0.0718 | 82,385 | 5,916 | 398,159 | 0.9088 | $1,591,160$ | 19.3 |
| 65 | 0.0241 | 0.1140 | 76,469 | 8,714 | 361,863 | 0.8574 | $1,193,001$ | 15.6 |
| 70 | 0.0387 | 0.1773 | 67,755 | 12,012 | 310,265 | 0.7757 | 831,138 | 12.3 |
| 75 | 0.0651 | 0.2810 | 55,743 | 15,664 | 240,677 | 0.5379 | 520,873 | 9.3 |
| 80 | 0.1430 | $\ldots$ |  | 40,080 | 40,080 | 280,196 | $\ldots$ |  |

Appendix 18: Abridged life table - Males, Choiseul: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0298 | 0.0290 | 100,000 | 2,900 | 97,465 | 0.9667 | $6,352,993$ | $\mathbf{6 3 . 5}$ |
| 1 | 0.0027 | 0.0107 | 97,100 | 1,042 | 385,864 | 0.9865 | $6,255,528$ | 64.4 |
| 5 | 0.0029 | 0.0144 | 96,058 | 1,386 | 476,828 | 0.9880 | $5,869,663$ | 61.1 |
| 10 | 0.0019 | 0.0096 | 94,673 | 910 | 471,089 | 0.9868 | $5,392,835$ | 57.0 |
| 15 | 0.0036 | 0.0179 | 93,763 | 1,682 | 464,878 | 0.9799 | $4,921,746$ | 52.5 |
| 20 | 0.0043 | 0.0214 | 92,081 | 1,972 | 455,539 | 0.9783 | $4,456,868$ | 48.4 |
| 25 | 0.0044 | 0.0219 | 90,109 | 1,975 | 445,631 | 0.9773 | $4,001,329$ | 44.4 |
| 30 | 0.0048 | 0.0237 | 88,134 | 2,086 | 435,513 | 0.9752 | $3,555,697$ | 40.3 |
| 35 | 0.0053 | 0.0261 | 86,048 | 2,248 | 424,728 | 0.9715 | $3,120,185$ | 36.3 |
| 40 | 0.0064 | 0.0313 | 83,800 | 2,620 | 412,635 | 0.9653 | $2,695,457$ | 32.2 |
| 45 | 0.0079 | 0.0389 | 81,180 | 3,158 | 398,332 | 0.9535 | $2,282,822$ | 28.1 |
| 50 | 0.0113 | 0.0551 | 78,022 | 4,302 | 379,813 | 0.9373 | $1,884,490$ | 24.2 |
| 55 | 0.0148 | 0.0715 | 73,720 | 5,273 | 356,005 | 0.9128 | $1,504,677$ | 20.4 |
| 60 | 0.0224 | 0.1064 | 68,447 | 7,281 | 324,976 | 0.8695 | $1,148,672$ | 16.8 |
| 65 | 0.0345 | 0.1593 | 61,166 | 9,744 | 282,553 | 0.8048 | 823,696 | 13.5 |
| 70 | 0.0539 | 0.2385 | 51,422 | 12,262 | 227,407 | 0.7096 | 541,143 | 10.5 |
| 75 | 0.0857 | 0.3533 | 39,161 | 13,837 | 161,365 | 0.4857 | 313,736 | 8.0 |
| 80 | 0.1662 | $\ldots$ |  | 25,324 | 25,324 | 152,371 | $\ldots$ |  |

Appendix 19: Abridged life table - Females, Choiseul: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0256 | 0.0250 | 100,000 | 2,500 | 97,812 | 0.9727 | $7,014,345$ | 70.1 |
| 1 | 0.0015 | 0.0059 | 97,500 | 576 | 388,550 | 0.9942 | $6,916,532$ | 70.9 |
| 5 | 0.0009 | 0.0045 | 96,924 | 431 | 483,541 | 0.9960 | $6,527,982$ | 67.4 |
| 10 | 0.0007 | 0.0035 | 96,493 | 340 | 481,612 | 0.9946 | $6,044,440$ | 62.6 |
| 15 | 0.0016 | 0.0081 | 96,152 | 775 | 479,015 | 0.9899 | $5,562,828$ | 57.9 |
| 20 | 0.0023 | 0.0117 | 95,377 | 1,113 | 474,181 | 0.9882 | $5,083,813$ | 53.3 |
| 25 | 0.0023 | 0.0116 | 94,264 | 1,090 | 468,606 | 0.9880 | $4,609,633$ | 48.9 |
| 30 | 0.0025 | 0.0126 | 93,174 | 1,174 | 462,975 | 0.9868 | $4,141,026$ | 44.4 |
| 35 | 0.0028 | 0.0139 | 92,000 | 1,279 | 456,877 | 0.9847 | $3,678,052$ | 40.0 |
| 40 | 0.0034 | 0.0171 | 90,721 | 1,549 | 449,881 | 0.9805 | $3,221,175$ | 35.5 |
| 45 | 0.0046 | 0.0228 | 89,172 | 2,031 | 441,091 | 0.9707 | $2,771,294$ | 31.1 |
| 50 | 0.0075 | 0.0368 | 87,141 | 3,208 | 428,159 | 0.9574 | $2,330,203$ | 26.7 |
| 55 | 0.0101 | 0.0493 | 83,933 | 4,141 | 409,900 | 0.9374 | $1,902,044$ | 22.7 |
| 60 | 0.0164 | 0.0789 | 79,792 | 6,297 | 384,253 | 0.9006 | $1,492,145$ | 18.7 |
| 65 | 0.0262 | 0.1235 | 73,495 | 9,074 | 346,060 | 0.8465 | $1,107,892$ | 15.1 |
| 70 | 0.0418 | 0.1900 | 64,420 | 12,237 | 292,938 | 0.7611 | 761,832 | 11.8 |
| 75 | 0.0698 | 0.2981 | 52,183 | 15,554 | 222,941 | 0.5245 | 468,894 | 9.0 |
| 80 | 0.1489 | $\ldots$ |  | 36,629 | 36,629 | 245,953 | $\ldots$ |  |

Appendix 20: Abridged life table - Males, Western: 2009

| Age | $\mathbf{m}(\mathbf{x , n})$ | $\mathbf{q}(\mathbf{x , n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0256 | 0.0250 | 100,000 | 2,500 | 97,786 | 0.9715 | $6,565,026$ | $\mathbf{6 5 . 7}$ |
| 1 | 0.0021 | 0.0085 | 97,500 | 831 | 387,987 | 0.9892 | $6,467,240$ | 66.3 |
| 5 | 0.0023 | 0.0117 | 96,669 | 1,127 | 480,527 | 0.9902 | $6,079,253$ | 62.9 |
| 10 | 0.0016 | 0.0079 | 95,542 | 756 | 475,819 | 0.9891 | $5,598,726$ | 58.6 |
| 15 | 0.0030 | 0.0149 | 94,786 | 1,415 | 470,623 | 0.9833 | $5,122,907$ | 54.0 |
| 20 | 0.0036 | 0.0179 | 93,370 | 1,668 | 462,741 | 0.9818 | $4,652,284$ | 49.8 |
| 25 | 0.0037 | 0.0184 | 91,702 | 1,685 | 454,323 | 0.9810 | $4,189,543$ | 45.7 |
| 30 | 0.0040 | 0.0198 | 90,017 | 1,786 | 445,678 | 0.9791 | $3,735,220$ | 41.5 |
| 35 | 0.0045 | 0.0222 | 88,231 | 1,957 | 436,374 | 0.9756 | $3,289,542$ | 37.3 |
| 40 | 0.0055 | 0.0270 | 86,275 | 2,327 | 425,742 | 0.9698 | $2,853,168$ | 33.1 |
| 45 | 0.0070 | 0.0342 | 83,948 | 2,870 | 412,889 | 0.9587 | $2,427,426$ | 28.9 |
| 50 | 0.0101 | 0.0495 | 81,077 | 4,010 | 395,830 | 0.9432 | $2,014,537$ | 24.8 |
| 55 | 0.0135 | 0.0653 | 77,067 | 5,034 | 373,359 | 0.9197 | $1,618,707$ | 21.0 |
| 60 | 0.0207 | 0.0986 | 72,034 | 7,099 | 343,397 | 0.8784 | $1,245,348$ | 17.3 |
| 65 | 0.0321 | 0.1490 | 64,934 | 9,677 | 301,636 | 0.8164 | 901,951 | 13.9 |
| 70 | 0.0506 | 0.2253 | 55,258 | 12,450 | 246,261 | 0.7236 | 600,315 | 10.9 |
| 75 | 0.0812 | 0.3381 | 42,807 | 14,474 | 178,204 | 0.4967 | 354,054 | 8.3 |
| 80 | 0.1611 | $\ldots$ |  | 28,333 | 28,333 | 175,849 | $\ldots$ |  |

Appendix 21: Abridged life table - Females, Western: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0214 | 0.0210 | 100,000 | 2,100 | 98,137 | 0.9773 | $7,245,319$ | 72.5 |
| 1 | 0.0011 | 0.0044 | 97,900 | 426 | 390,530 | 0.9957 | $7,147,181$ | 73.0 |
| 5 | 0.0007 | 0.0033 | 97,474 | 319 | 486,571 | 0.9971 | $6,756,652$ | 69.3 |
| 10 | 0.0005 | 0.0026 | 97,155 | 254 | 485,140 | 0.9960 | $6,270,080$ | 64.5 |
| 15 | 0.0012 | 0.0059 | 96,901 | 571 | 483,218 | 0.9926 | $5,784,940$ | 59.7 |
| 20 | 0.0017 | 0.0085 | 96,330 | 821 | 479,661 | 0.9914 | $5,301,722$ | 55.0 |
| 25 | 0.0017 | 0.0086 | 95,510 | 820 | 475,514 | 0.9910 | $4,822,061$ | 50.5 |
| 30 | 0.0019 | 0.0095 | 94,690 | 901 | 471,235 | 0.9899 | $4,346,547$ | 45.9 |
| 35 | 0.0022 | 0.0108 | 93,788 | 1,016 | 466,476 | 0.9878 | $3,875,313$ | 41.3 |
| 40 | 0.0028 | 0.0138 | 92,772 | 1,280 | 460,805 | 0.9840 | $3,408,836$ | 36.7 |
| 45 | 0.0038 | 0.0190 | 91,492 | 1,734 | 453,412 | 0.9753 | $2,948,031$ | 32.2 |
| 50 | 0.0064 | 0.0313 | 89,759 | 2,809 | 442,215 | 0.9634 | $2,494,619$ | 27.8 |
| 55 | 0.0087 | 0.0426 | 86,950 | 3,705 | 426,047 | 0.9454 | $2,052,404$ | 23.6 |
| 60 | 0.0143 | 0.0694 | 83,245 | 5,775 | 402,802 | 0.9117 | $1,626,357$ | 19.5 |
| 65 | 0.0233 | 0.1107 | 77,470 | 8,573 | 367,225 | 0.8612 | $1,223,556$ | 15.8 |
| 70 | 0.0377 | 0.1729 | 68,897 | 11,909 | 316,259 | 0.7809 | 856,331 | 12.4 |
| 75 | 0.0634 | 0.2749 | 56,988 | 15,669 | 246,961 | 0.5427 | 540,072 | 9.5 |
| 80 | 0.1410 | $\ldots$ |  | 41,319 | 41,319 | 293,111 | $\ldots$ |  |

Appendix 22: Abridged life table - Males, Isabel: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0256 | 0.0250 | 100,000 | 2,500 | 97,786 | 0.9715 | $6,565,026$ | $\mathbf{6 5 . 7}$ |
| 1 | 0.0021 | 0.0085 | 97,500 | 831 | 387,987 | 0.9892 | $6,467,240$ | 66.3 |
| 5 | 0.0023 | 0.0117 | 96,669 | 1,127 | 480,527 | 0.9902 | $6,079,253$ | 62.9 |
| 10 | 0.0016 | 0.0079 | 95,542 | 756 | 475,819 | 0.9891 | $5,598,726$ | 58.6 |
| 15 | 0.0030 | 0.0149 | 94,786 | 1,415 | 470,623 | 0.9833 | $5,122,907$ | 54.0 |
| 20 | 0.0036 | 0.0179 | 93,370 | 1,668 | 462,741 | 0.9818 | $4,652,284$ | 49.8 |
| 25 | 0.0037 | 0.0184 | 91,702 | 1,685 | 454,323 | 0.9810 | $4,189,543$ | 45.7 |
| 30 | 0.0040 | 0.0198 | 90,017 | 1,786 | 445,678 | 0.9791 | $3,735,220$ | 41.5 |
| 35 | 0.0045 | 0.0222 | 88,231 | 1,957 | 436,374 | 0.9756 | $3,289,542$ | 37.3 |
| 40 | 0.0055 | 0.0270 | 86,275 | 2,327 | 425,742 | 0.9698 | $2,853,168$ | 33.1 |
| 45 | 0.0070 | 0.0342 | 83,948 | 2,870 | 412,889 | 0.9587 | $2,427,426$ | 28.9 |
| 50 | 0.0101 | 0.0495 | 81,077 | 4,010 | 395,830 | 0.9432 | $2,014,537$ | 24.8 |
| 55 | 0.0135 | 0.0653 | 77,067 | 5,034 | 373,359 | 0.9197 | $1,618,707$ | 21.0 |
| 60 | 0.0207 | 0.0986 | 72,034 | 7,099 | 343,397 | 0.8784 | $1,245,348$ | 17.3 |
| 65 | 0.0321 | 0.1490 | 64,934 | 9,677 | 301,636 | 0.8164 | 901,951 | 13.9 |
| 70 | 0.0506 | 0.2253 | 55,258 | 12,450 | 246,261 | 0.7236 | 600,315 | 10.9 |
| 75 | 0.0812 | 0.3381 | 42,807 | 14,474 | 178,204 | 0.4967 | 354,054 | 8.3 |
| 80 | 0.1611 | $\ldots$ |  | 28,333 | 28,333 | 175,849 | $\ldots$ |  |

Appendix 23: Abridged life table - Females, Isabel: 2009

| Age | m(x,n) | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | l(x) | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | T(x) | e(x) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0214 | 0.0210 | 100,000 | 2,100 | 98,137 | 0.9773 | 7,245,319 | 72.5 |
| 1 | 0.0011 | 0.0044 | 97,900 | 426 | 390,530 | 0.9957 | 7,147,181 | 73.0 |
| 5 | 0.0007 | 0.0033 | 97,474 | 319 | 486,571 | 0.9971 | 6,756,652 | 69.3 |
| 10 | 0.0005 | 0.0026 | 97,155 | 254 | 485,140 | 0.9960 | 6,270,080 | 64.5 |
| 15 | 0.0012 | 0.0059 | 96,901 | 571 | 483,218 | 0.9926 | 5,784,940 | 59.7 |
| 20 | 0.0017 | 0.0085 | 96,330 | 821 | 479,661 | 0.9914 | 5,301,722 | 55.0 |
| 25 | 0.0017 | 0.0086 | 95,510 | 820 | 475,514 | 0.9910 | 4,822,061 | 50.5 |
| 30 | 0.0019 | 0.0095 | 94,690 | 901 | 471,235 | 0.9899 | 4,346,547 | 45.9 |
| 35 | 0.0022 | 0.0108 | 93,788 | 1,016 | 466,476 | 0.9878 | 3,875,313 | 41.3 |
| 40 | 0.0028 | 0.0138 | 92,772 | 1,280 | 460,805 | 0.9840 | 3,408,836 | 36.7 |
| 45 | 0.0038 | 0.0190 | 91,492 | 1,734 | 453,412 | 0.9753 | 2,948,031 | 32.2 |
| 50 | 0.0064 | 0.0313 | 89,759 | 2,809 | 442,215 | 0.9634 | 2,494,619 | 27.8 |
| 55 | 0.0087 | 0.0426 | 86,950 | 3,705 | 426,047 | 0.9454 | 2,052,404 | 23.6 |
| 60 | 0.0143 | 0.0694 | 83,245 | 5,775 | 402,802 | 0.9117 | 1,626,357 | 19.5 |
| 65 | 0.0233 | 0.1107 | 77,470 | 8,573 | 367,225 | 0.8612 | 1,223,556 | 15.8 |
| 70 | 0.0377 | 0.1729 | 68,897 | 11,909 | 316,259 | 0.7809 | 856,331 | 12.4 |
| 75 | 0.0634 | 0.2749 | 56,988 | 15,669 | 246,961 | 0.5427 | 540,072 | 9.5 |
| 80 | 0.1410 | ... | 41,319 | 41,319 | 293,111 | ... | 293,111 | 7.1 |

Appendix 24: Abridged life table - Males, Central: 2009

| Age | $\mathbf{m}(\mathbf{x , n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0329 | 0.0320 | 100,000 | 3,200 | 97,230 | 0.9629 | $6,200,810$ | $\mathbf{6 2 . 0}$ |
| 1 | 0.0031 | 0.0125 | 96,800 | 1,210 | 384,244 | 0.9844 | $6,103,579$ | 63.1 |
| 5 | 0.0033 | 0.0166 | 95,590 | 1,588 | 473,981 | 0.9862 | $5,719,336$ | 59.8 |
| 10 | 0.0022 | 0.0109 | 94,002 | 1,029 | 467,439 | 0.9851 | $5,245,354$ | 55.8 |
| 15 | 0.0041 | 0.0203 | 92,973 | 1,883 | 460,455 | 0.9773 | $4,777,915$ | 51.4 |
| 20 | 0.0049 | 0.0241 | 91,090 | 2,200 | 450,019 | 0.9755 | $4,317,460$ | 47.4 |
| 25 | 0.0050 | 0.0246 | 88,890 | 2,190 | 439,000 | 0.9745 | $3,867,440$ | 43.5 |
| 30 | 0.0054 | 0.0266 | 86,701 | 2,307 | 427,791 | 0.9723 | $3,428,440$ | 39.5 |
| 35 | 0.0059 | 0.0291 | 84,393 | 2,458 | 415,927 | 0.9684 | $3,000,649$ | 35.6 |
| 40 | 0.0070 | 0.0345 | 81,935 | 2,826 | 402,796 | 0.9620 | $2,584,723$ | 31.5 |
| 45 | 0.0087 | 0.0424 | 79,110 | 3,352 | 387,494 | 0.9497 | $2,181,927$ | 27.6 |
| 50 | 0.0122 | 0.0592 | 75,758 | 4,489 | 368,014 | 0.9331 | $1,794,432$ | 23.7 |
| 55 | 0.0158 | 0.0760 | 71,269 | 5,413 | 343,381 | 0.9079 | $1,426,419$ | 20.0 |
| 60 | 0.0236 | 0.1119 | 65,856 | 7,368 | 311,771 | 0.8632 | $1,083,038$ | 16.4 |
| 65 | 0.0362 | 0.1665 | 58,488 | 9,736 | 269,125 | 0.7968 | 771,267 | 13.2 |
| 70 | 0.0563 | 0.2475 | 48,752 | 12,065 | 214,442 | 0.7000 | 502,142 | 10.3 |
| 75 | 0.0889 | 0.3636 | 36,687 | 13,340 | 150,111 | 0.4782 | 287,700 | 7.8 |
| 80 | 0.1697 | $\ldots$ |  | 23,346 | 23,346 | 137,589 | $\ldots$ |  |

Appendix 25: Abridged life table - Females, Central: 2009

| Age |  | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0287 | 0.0280 | 100,000 | 2,800 | 97,575 | 0.9692 | $6,847,603$ | $\mathbf{e}(\mathbf{x})$ |
| 1 | 0.0018 | 0.0072 | 97,200 | 700 | 387,034 | 0.9929 | $6,750,028$ | 69.4 |
| 5 | 0.0011 | 0.0054 | 96,500 | 525 | 481,185 | 0.9951 | $6,362,994$ | 65.9 |
| 10 | 0.0009 | 0.0043 | 95,975 | 412 | 478,843 | 0.9934 | $5,881,809$ | 61.3 |
| 15 | 0.0020 | 0.0099 | 95,563 | 945 | 475,686 | 0.9876 | $5,402,966$ | 56.5 |
| 20 | 0.0029 | 0.0143 | 94,618 | 1,356 | 469,792 | 0.9856 | $4,927,280$ | 52.1 |
| 25 | 0.0028 | 0.0140 | 93,262 | 1,308 | 463,047 | 0.9855 | $4,457,488$ | 47.8 |
| 30 | 0.0030 | 0.0151 | 91,954 | 1,390 | 456,330 | 0.9843 | $3,994,440$ | 43.4 |
| 35 | 0.0033 | 0.0164 | 90,564 | 1,482 | 449,186 | 0.9822 | $3,538,110$ | 39.1 |
| 40 | 0.0040 | 0.0196 | 89,082 | 1,747 | 441,193 | 0.9778 | $3,088,925$ | 34.7 |
| 45 | 0.0052 | 0.0257 | 87,335 | 2,241 | 431,393 | 0.9672 | $2,647,732$ | 30.3 |
| 50 | 0.0083 | 0.0409 | 85,093 | 3,481 | 417,255 | 0.9529 | $2,216,339$ | 26.0 |
| 55 | 0.0111 | 0.0542 | 81,612 | 4,427 | 397,591 | 0.9316 | $1,799,084$ | 22.0 |
| 60 | 0.0179 | 0.0858 | 77,185 | 6,622 | 370,408 | 0.8927 | $1,401,492$ | 18.2 |
| 65 | 0.0283 | 0.1325 | 70,563 | 9,349 | 330,675 | 0.8362 | $1,031,084$ | 14.6 |
| 70 | 0.0447 | 0.2018 | 61,214 | 12,353 | 276,518 | 0.7475 | 700,409 | 11.4 |
| 75 | 0.0742 | 0.3137 | 48,861 | 15,329 | 206,693 | 0.5124 | 423,891 | 8.7 |
| 80 | 0.1544 | $\ldots$ |  | 33,532 | 33,532 | 217,198 | $\ldots$ |  |

Appendix 26: Abridged life table - Males, Rennell/Bellona: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathrm{n})$ | l(x) | $\mathbf{d}(\mathbf{x}, \mathrm{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | e(x) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0350 | 0.0340 | 100,000 | 3,400 | 97,077 | 0.9605 | 6,102,215 | 61.0 |
| 1 | 0.0035 | 0.0137 | 96,600 | 1,327 | 383,150 | 0.9830 | 6,005,138 | 62.2 |
| 5 | 0.0037 | 0.0181 | 95,273 | 1,726 | 472,051 | 0.9850 | 5,621,988 | 59.0 |
| 10 | 0.0024 | 0.0119 | 93,547 | 1,109 | 464,962 | 0.9839 | 5,149,937 | 55.1 |
| 15 | 0.0044 | 0.0218 | 92,438 | 2,018 | 457,458 | 0.9756 | 4,684,975 | 50.7 |
| 20 | 0.0053 | 0.0260 | 90,420 | 2,351 | 446,290 | 0.9737 | 4,227,517 | 46.8 |
| 25 | 0.0054 | 0.0265 | 88,068 | 2,332 | 434,534 | 0.9726 | 3,781,228 | 42.9 |
| 30 | 0.0058 | 0.0286 | 85,737 | 2,452 | 422,608 | 0.9703 | 3,346,694 | 39.0 |
| 35 | 0.0063 | 0.0311 | 83,285 | 2,594 | 410,040 | 0.9664 | 2,924,086 | 35.1 |
| 40 | 0.0075 | 0.0366 | 80,691 | 2,956 | 396,245 | 0.9598 | 2,514,046 | 31.2 |
| 45 | 0.0091 | 0.0447 | 77,735 | 3,472 | 380,319 | 0.9472 | 2,117,801 | 27.2 |
| 50 | 0.0128 | 0.0619 | 74,263 | 4,599 | 360,256 | 0.9303 | 1,737,482 | 23.4 |
| 55 | 0.0164 | 0.0788 | 69,664 | 5,490 | 335,149 | 0.9048 | 1,377,226 | 19.8 |
| 60 | 0.0244 | 0.1154 | 64,174 | 7,406 | 303,243 | 0.8592 | 1,042,078 | 16.2 |
| 65 | 0.0373 | 0.1710 | 56,767 | 9,707 | 260,556 | 0.7917 | 738,834 | 13.0 |
| 70 | 0.0578 | 0.2532 | 47,060 | 11,914 | 206,293 | 0.6940 | 478,279 | 10.2 |
| 75 | 0.0908 | 0.3700 | 35,146 | 13,006 | 143,168 | 0.4736 | 271,985 | 7.7 |
| 80 | 0.1719 | $\ldots$ | 22,140 | 22,140 | 128,817 | $\ldots$ | 128,817 | 5.8 |

Appendix 27: Abridged life table - Females, Rennell/Bellona: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathrm{n})$ | $\mathbf{q}(\mathbf{x}, \mathrm{n})$ | l(x) | $\mathbf{d}(\mathbf{x}, \mathrm{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathrm{n})$ | $\mathbf{T}(\mathbf{x})$ | e(x) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0266 | 0.0260 | 100,000 | 2,600 | 97,733 | 0.9716 | 6,958,232 | 69.6 |
| 1 | 0.0016 | 0.0063 | 97,400 | 616 | 388,048 | 0.9938 | 6,860,500 | 70.4 |
| 5 | 0.0010 | 0.0048 | 96,784 | 462 | 482,764 | 0.9957 | 6,472,452 | 66.9 |
| 10 | 0.0008 | 0.0038 | 96,322 | 364 | 480,701 | 0.9942 | 5,989,688 | 62.2 |
| 15 | 0.0017 | 0.0087 | 95,958 | 830 | 477,922 | 0.9892 | 5,508,987 | 57.4 |
| 20 | 0.0025 | 0.0125 | 95,128 | 1,192 | 472,744 | 0.9874 | 5,031,066 | 52.9 |
| 25 | 0.0025 | 0.0124 | 93,936 | 1,161 | 466,788 | 0.9872 | 4,558,322 | 48.5 |
| 30 | 0.0027 | 0.0134 | 92,775 | 1,245 | 460,801 | 0.9860 | 4,091,534 | 44.1 |
| 35 | 0.0030 | 0.0147 | 91,530 | 1,346 | 454,358 | 0.9839 | 3,630,733 | 39.7 |
| 40 | 0.0036 | 0.0179 | 90,184 | 1,616 | 447,029 | 0.9796 | 3,176,375 | 35.2 |
| 45 | 0.0048 | 0.0237 | 88,568 | 2,102 | 437,899 | 0.9695 | 2,729,346 | 30.8 |
| 50 | 0.0078 | 0.0382 | 86,466 | 3,302 | 424,555 | 0.9559 | 2,291,448 | 26.5 |
| 55 | 0.0104 | 0.0510 | 83,164 | 4,240 | 405,813 | 0.9355 | 1,866,892 | 22.4 |
| 60 | 0.0169 | 0.0812 | 78,924 | 6,412 | 379,629 | 0.8979 | 1,461,079 | 18.5 |
| 65 | 0.0269 | 0.1265 | 72,512 | 9,175 | 340,886 | 0.8430 | 1,081,450 | 14.9 |
| 70 | 0.0428 | 0.1940 | 63,337 | 12,287 | 287,368 | 0.7564 | 740,564 | 11.7 |
| 75 | 0.0713 | 0.3034 | 51,050 | 15,490 | 217,370 | 0.5204 | 453,196 | 8.9 |
| 80 | 0.1508 | ... | 35,561 | 35,561 | 235,826 | ... | 235,826 | 6.6 |

Appendix 28: Abridged life table - Males, Guadalcanal: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0245 | 0.0240 | 100,000 | 2,400 | 97,868 | 0.9728 | $6,619,898$ | $\mathbf{6 6 . 2}$ |
| 1 | 0.0020 | 0.0080 | 97,600 | 781 | 388,511 | 0.9898 | $6,522,031$ | 66.8 |
| 5 | 0.0022 | 0.0110 | 96,819 | 1,065 | 481,433 | 0.9907 | $6,133,520$ | 63.4 |
| 10 | 0.0015 | 0.0075 | 95,754 | 718 | 476,976 | 0.9896 | $5,652,086$ | 59.0 |
| 15 | 0.0029 | 0.0142 | 95,036 | 1,350 | 472,030 | 0.9841 | $5,175,111$ | 54.5 |
| 20 | 0.0034 | 0.0170 | 93,687 | 1,593 | 464,510 | 0.9827 | $4,703,081$ | 50.2 |
| 25 | 0.0035 | 0.0175 | 92,094 | 1,612 | 456,464 | 0.9819 | $4,238,571$ | 46.0 |
| 30 | 0.0038 | 0.0189 | 90,482 | 1,710 | 448,191 | 0.9801 | $3,782,107$ | 41.8 |
| 35 | 0.0043 | 0.0212 | 88,772 | 1,882 | 439,264 | 0.9767 | $3,333,916$ | 37.6 |
| 40 | 0.0052 | 0.0259 | 86,890 | 2,250 | 429,010 | 0.9709 | $2,894,653$ | 33.3 |
| 45 | 0.0067 | 0.0330 | 84,640 | 2,793 | 416,542 | 0.9600 | $2,465,643$ | 29.1 |
| 50 | 0.0098 | 0.0480 | 81,847 | 3,929 | 399,881 | 0.9448 | $2,049,101$ | 25.0 |
| 55 | 0.0131 | 0.0637 | 77,918 | 4,963 | 377,792 | 0.9216 | $1,649,220$ | 21.2 |
| 60 | 0.0202 | 0.0965 | 72,955 | 7,040 | 348,156 | 0.8807 | $1,271,428$ | 17.4 |
| 65 | 0.0314 | 0.1463 | 65,914 | 9,643 | 306,638 | 0.8195 | 923,272 | 14.0 |
| 70 | 0.0497 | 0.2218 | 56,271 | 12,481 | 251,290 | 0.7274 | 616,634 | 11.0 |
| 75 | 0.0800 | 0.3340 | 43,790 | 14,626 | 182,794 | 0.4997 | 365,344 | 8.3 |
| 80 | 0.1598 | $\ldots$ |  | 29,164 | 29,164 | 182,550 | $\ldots$ |  |

Appendix 29: Abridged life table - Females, Guadalcanal: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0204 | 0.0200 | 100,000 | 2,000 | 98,220 | 0.9785 | $7,305,041$ | 73.1 |
| 1 | 0.0010 | 0.0040 | 98,000 | 392 | 391,017 | 0.9961 | $7,206,821$ | 73.5 |
| 5 | 0.0006 | 0.0030 | 97,608 | 293 | 487,308 | 0.9973 | $6,815,804$ | 69.8 |
| 10 | 0.0005 | 0.0024 | 97,315 | 234 | 485,992 | 0.9964 | $6,328,496$ | 65.0 |
| 15 | 0.0011 | 0.0054 | 97,082 | 524 | 484,225 | 0.9933 | $5,842,504$ | 60.2 |
| 20 | 0.0016 | 0.0078 | 96,557 | 753 | 480,962 | 0.9921 | $5,358,279$ | 55.5 |
| 25 | 0.0016 | 0.0079 | 95,804 | 757 | 477,146 | 0.9917 | $4,877,317$ | 50.9 |
| 30 | 0.0018 | 0.0088 | 95,047 | 836 | 473,186 | 0.9906 | $4,400,172$ | 46.3 |
| 35 | 0.0020 | 0.0101 | 94,211 | 952 | 468,750 | 0.9886 | $3,926,986$ | 41.7 |
| 40 | 0.0026 | 0.0130 | 93,259 | 1,212 | 463,407 | 0.9848 | $3,458,236$ | 37.1 |
| 45 | 0.0036 | 0.0180 | 92,047 | 1,657 | 456,371 | 0.9765 | $2,994,830$ | 32.5 |
| 50 | 0.0061 | 0.0299 | 90,390 | 2,703 | 445,629 | 0.9650 | $2,538,459$ | 28.1 |
| 55 | 0.0083 | 0.0409 | 87,688 | 3,586 | 430,024 | 0.9475 | $2,092,830$ | 23.9 |
| 60 | 0.0138 | 0.0669 | 84,101 | 5,626 | 407,446 | 0.9146 | $1,662,806$ | 19.8 |
| 65 | 0.0226 | 0.1073 | 78,475 | 8,420 | 372,635 | 0.8651 | $1,255,359$ | 16.0 |
| 70 | 0.0366 | 0.1683 | 70,054 | 11,790 | 322,369 | 0.7862 | 882,724 | 12.6 |
| 75 | 0.0618 | 0.2687 | 58,264 | 15,656 | 253,448 | 0.5477 | 560,355 | 9.6 |
| 80 | 0.1388 | $\ldots$ |  | 42,609 | 42,609 | 306,908 | $\ldots$ | 306,908 |

## Appendix 30: Abridged life table - Males, Malaita: 2009

| Age | $\mathbf{m}(\mathbf{x , n})$ | $\mathbf{q}(\mathbf{x , n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0287 | 0.0280 | 100,000 | 2,800 | 97,544 | 0.9679 | $6,404,962$ | $\mathbf{6 4 . 0}$ |
| 1 | 0.0026 | 0.0102 | 97,200 | 987 | 386,399 | 0.9872 | $6,307,417$ | 64.9 |
| 5 | 0.0028 | 0.0137 | 96,213 | 1,320 | 477,764 | 0.9885 | $5,921,018$ | 61.5 |
| 10 | 0.0018 | 0.0092 | 94,893 | 871 | 472,286 | 0.9874 | $5,443,254$ | 57.4 |
| 15 | 0.0035 | 0.0172 | 94,022 | 1,615 | 466,331 | 0.9808 | $4,970,968$ | 52.9 |
| 20 | 0.0041 | 0.0205 | 92,407 | 1,896 | 457,358 | 0.9791 | $4,504,637$ | 48.7 |
| 25 | 0.0042 | 0.0210 | 90,511 | 1,902 | 447,822 | 0.9782 | $4,047,279$ | 44.7 |
| 30 | 0.0046 | 0.0227 | 88,608 | 2,012 | 438,069 | 0.9762 | $3,599,458$ | 40.6 |
| 35 | 0.0051 | 0.0251 | 86,597 | 2,176 | 427,650 | 0.9726 | $3,161,388$ | 36.5 |
| 40 | 0.0061 | 0.0302 | 84,420 | 2,549 | 415,915 | 0.9665 | $2,733,738$ | 32.4 |
| 45 | 0.0077 | 0.0377 | 81,871 | 3,089 | 401,962 | 0.9548 | $2,317,823$ | 28.3 |
| 50 | 0.0110 | 0.0537 | 78,782 | 4,234 | 383,788 | 0.9388 | $1,915,861$ | 24.3 |
| 55 | 0.0145 | 0.0700 | 74,548 | 5,219 | 360,288 | 0.9145 | $1,532,073$ | 20.6 |
| 60 | 0.0220 | 0.1045 | 69,330 | 7,243 | 329,491 | 0.8716 | $1,171,786$ | 169 |
| 65 | 0.0339 | 0.1568 | 62,086 | 9,736 | 287,192 | 0.8076 | 842,295 | 13.6 |
| 70 | 0.0531 | 0.2353 | 52,350 | 12,318 | 231,942 | 0.7130 | 555,102 | 10.6 |
| 75 | 0.0847 | 0.3497 | 40,033 | 13,999 | 165,364 | 0.4883 | 323,160 | 8.1 |
| 80 | 0.1650 | $\ldots$ |  | 26,033 | 26,033 | 157,796 | $\ldots$ | 157,796 |

Appendix 31: Abridged life table - Females, Malaita: 2009

| Age | $\mathbf{m}(\mathbf{x , n})$ | $\mathbf{q}(\mathbf{x , n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0245 | 0.0240 | 100,000 | 2,400 | 97,893 | 0.9739 | $7,071,050$ | 70.7 |
| 1 | 0.0014 | 0.0055 | 97,600 | 537 | 389,050 | 0.9946 | $6,973,157$ | 71.4 |
| 5 | 0.0008 | 0.0041 | 97,063 | 402 | 484,311 | 0.9963 | $6,584,108$ | 67.8 |
| 10 | 0.0007 | 0.0033 | 96,661 | 318 | 482,512 | 0.9950 | $6,099,797$ | 63.1 |
| 15 | 0.0015 | 0.0075 | 96,344 | 722 | 480,091 | 0.9906 | $5,617,285$ | 58.3 |
| 20 | 0.0022 | 0.0108 | 95,622 | 1,037 | 475,591 | 0.9891 | $5,137,193$ | 53.7 |
| 25 | 0.0022 | 0.0108 | 94,585 | 1,020 | 470,389 | 0.9888 | $4,661,602$ | 49.3 |
| 30 | 0.0024 | 0.0118 | 93,565 | 1,104 | 465,106 | 0.9876 | $4,191,213$ | 44.8 |
| 35 | 0.0026 | 0.0131 | 92,461 | 1,213 | 459,350 | 0.9855 | $3,726,107$ | 40.3 |
| 40 | 0.0033 | 0.0162 | 91,249 | 1,482 | 452,686 | 0.9813 | $3,266,757$ | 35.8 |
| 45 | 0.0044 | 0.0218 | 89,766 | 1,958 | 444,240 | 0.9718 | $2,814,071$ | 31.3 |
| 50 | 0.0072 | 0.0354 | 87,808 | 3,112 | 431,729 | 0.9589 | $2,369,831$ | 27.0 |
| 55 | 0.0098 | 0.0477 | 84,696 | 4,038 | 413,968 | 0.9394 | $1,938,103$ | 22.9 |
| 60 | 0.0159 | 0.0766 | 80,658 | 6,177 | 388,883 | 0.9033 | $1,524,134$ | 189 |
| 65 | 0.0255 | 0.1204 | 74,482 | 8,964 | 351,281 | 0.8501 | $1,135,251$ | 15.2 |
| 70 | 0.0408 | 0.1858 | 65,517 | 12,175 | 298,608 | 0.7658 | 783,971 | 12.0 |
| 75 | 0.0682 | 0.2925 | 53,342 | 15,605 | 228,677 | 0.5289 | 485,362 | 9.1 |
| 80 | 0.1470 | $\ldots$ |  | 37,737 | 37,737 | 256,686 | $\ldots$ |  |

## Appendix 32: Abridged life table - Males, Makira: 2009

| Age | $\mathbf{m}(\mathbf{x , n})$ | $\mathbf{q ( \mathbf { x , n } )}$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x , n})$ | $\mathbf{L}(\mathbf{x , n})$ | $\mathbf{S}(\mathbf{x , n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0224 | 0.0220 | 100,000 | 2,200 | 98,033 | 0.9752 | $6,732,183$ | $\mathbf{6 7 . 3}$ |
| 1 | 0.0018 | 0.0070 | 97,800 | 684 | 389,550 | 0.9911 | $6,634,150$ | 67.8 |
| 5 | 0.0020 | 0.0097 | 97,116 | 943 | 483,223 | 0.9918 | $6,244,601$ | 64.3 |
| 10 | 0.0013 | 0.0067 | 96,173 | 644 | 479,255 | 0.9907 | $5,761,378$ | 59.9 |
| 15 | 0.0026 | 0.0128 | 95,529 | 1,218 | 474,805 | 0.9857 | $5,282,122$ | 55.3 |
| 20 | 0.0031 | 0.0153 | 94,311 | 1,442 | 468,005 | 0.9844 | $4,807,318$ | 51.0 |
| 25 | 0.0032 | 0.0158 | 92,869 | 1,466 | 460,704 | 0.9837 | $4,339,313$ | 46.7 |
| 30 | 0.0034 | 0.0170 | 91,403 | 1,558 | 453,176 | 0.9820 | $3,878,609$ | 42.4 |
| 35 | 0.0039 | 0.0193 | 89,846 | 1,730 | 445,009 | 0.9787 | $3,425,433$ | 38.1 |
| 40 | 0.0048 | 0.0238 | 88,115 | 2,093 | 435,528 | 0.9732 | $2,980,424$ | 33.8 |
| 45 | 0.0062 | 0.0306 | 86,022 | 2,632 | 423,855 | 0.9627 | $2,544,896$ | 29.6 |
| 50 | 0.0092 | 0.0450 | 83,391 | 3,755 | 408,037 | 0.9479 | $2,121,041$ | 25.4 |
| 55 | 0.0124 | 0.0604 | 79,635 | 4,809 | 386,771 | 0.9253 | $1,713,004$ | 21.5 |
| 60 | 0.0193 | 0.0923 | 74,826 | 6,903 | 357,870 | 0.8856 | $1,326,233$ | 17.7 |
| 65 | 0.0301 | 0.1406 | 67,923 | 9,553 | 316,942 | 0.8259 | 968,362 | 14.3 |
| 70 | 0.0478 | 0.2145 | 58,370 | 12,518 | 261,773 | 0.7354 | 651,421 | 11.2 |
| 75 | 0.0775 | 0.3253 | 45,853 | 14,917 | 192,497 | 0.5060 | 389,648 | 8.5 |
| 80 | 0.1569 | $\ldots$ | 30,936 | 30,936 | 197,150 | $\ldots$ | 197,150 | 6.4 |

Appendix 33: Abridged life table - Females, Makira: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0183 | 0.0180 | 100,000 | 1,800 | 98,387 | 0.9807 | $7,427,524$ | 74.3 |
| 1 | 0.0008 | 0.0033 | 98,200 | 327 | 391,981 | 0.9967 | $7,329,137$ | 74.6 |
| 5 | 0.0005 | 0.0025 | 97,873 | 244 | 488,756 | 0.9978 | $6,937,156$ | 70.9 |
| 10 | 0.0004 | 0.0020 | 97,629 | 195 | 487,658 | 0.9970 | $6,448,400$ | 66.0 |
| 15 | 0.0009 | 0.0045 | 97,434 | 436 | 486,186 | 0.9944 | $5,960,742$ | 61.2 |
| 20 | 0.0013 | 0.0064 | 96,998 | 626 | 483,477 | 0.9934 | $5,474,557$ | 56.4 |
| 25 | 0.0013 | 0.0066 | 96,373 | 636 | 480,290 | 0.9930 | $4,991,080$ | 51.8 |
| 30 | 0.0015 | 0.0074 | 95,737 | 711 | 476,943 | 0.9920 | $4,510,790$ | 47.1 |
| 35 | 0.0017 | 0.0087 | 95,025 | 825 | 473,134 | 0.9901 | $4,033,847$ | 42.5 |
| 40 | 0.0023 | 0.0114 | 94,200 | 1,077 | 468,441 | 0.9865 | $3,560,713$ | 37.8 |
| 45 | 0.0032 | 0.0161 | 93,123 | 1,500 | 462,127 | 0.9788 | $3,092,272$ | 33.2 |
| 50 | 0.0055 | 0.0271 | 91,623 | 2,483 | 452,321 | 0.9681 | $2,630,144$ | 28.7 |
| 55 | 0.0076 | 0.0374 | 89,140 | 3,336 | 437,893 | 0.9517 | $2,177,823$ | 24.4 |
| 60 | 0.0127 | 0.0619 | 85,804 | 5,307 | 416,736 | 0.9205 | $1,739,930$ | 20.3 |
| 65 | 0.0211 | 0.1004 | 80,497 | 8,078 | 383,604 | 0.8732 | $1,323,194$ | 16.4 |
| 70 | 0.0343 | 0.1588 | 72,419 | 11,501 | 334,957 | 0.7974 | 939,591 | 13.0 |
| 75 | 0.0583 | 0.2555 | 60,918 | 15,567 | 267,083 | 0.5583 | 604,633 | 9.9 |
| 80 | 0.1344 | $\ldots$ |  | 45,351 | 45,351 | 337,550 | $\ldots$ |  |
| 3037,550 | 7.4 |  |  |  |  |  |  |  |

Appendix 34: Abridged life table - Males, Temotu: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0245 | 0.0240 | 100,000 | 2,400 | 97,868 | 0.9728 | $6,619,898$ | $\mathbf{6 6 . 2}$ |
| 1 | 0.0020 | 0.0080 | 97,600 | 781 | 388,511 | 0.9898 | $6,522,031$ | 66.8 |
| 5 | 0.0022 | 0.0110 | 96,819 | 1,065 | 481,433 | 0.9907 | $6,133,520$ | 63.4 |
| 10 | 0.0015 | 0.0075 | 95,754 | 718 | 476,976 | 0.9896 | $5,652,086$ | 59.0 |
| 15 | 0.0029 | 0.0142 | 95,036 | 1,350 | 472,030 | 0.9841 | $5,175,111$ | 54.5 |
| 20 | 0.0034 | 0.0170 | 93,687 | 1,593 | 464,510 | 0.9827 | $4,703,081$ | 50.2 |
| 25 | 0.0035 | 0.0175 | 92,094 | 1,612 | 456,464 | 0.9819 | $4,238,571$ | 46.0 |
| 30 | 0.0038 | 0.0189 | 90,482 | 1,710 | 448,191 | 0.9801 | $3,782,107$ | 41.8 |
| 35 | 0.0043 | 0.0212 | 88,772 | 1,882 | 439,264 | 0.9767 | $3,333,916$ | 37.6 |
| 40 | 0.0052 | 0.0259 | 86,890 | 2,250 | 429,010 | 0.9709 | $2,894,653$ | 33.3 |
| 45 | 0.0067 | 0.0330 | 84,640 | 2,793 | 416,542 | 0.9600 | $2,465,643$ | 29.1 |
| 50 | 0.0098 | 0.0480 | 81,847 | 3,929 | 399,881 | 0.9448 | $2,049,101$ | 25.0 |
| 55 | 0.0131 | 0.0637 | 77,918 | 4,963 | 377,792 | 0.9216 | $1,649,220$ | 21.2 |
| 60 | 0.0202 | 0.0965 | 72,955 | 7,040 | 348,156 | 0.8807 | $1,271,428$ | 17.4 |
| 65 | 0.0314 | 0.1463 | 65,914 | 9,643 | 306,638 | 0.8195 | 923,272 | 14.0 |
| 70 | 0.0497 | 0.2218 | 56,271 | 12,481 | 251,290 | 0.7274 | 616,634 | 11.0 |
| 75 | 0.0800 | 0.3340 | 43,790 | 14,626 | 182,794 | 0.4997 | 365,344 | 8.3 |
| 80 | 0.1598 | $\ldots$ |  | 29,164 | 29,164 | 182,550 | $\ldots$ |  |

Appendix 35: Abridged life table - Females, Temotu: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0204 | 0.0200 | 100,000 | 2,000 | 98,220 | 0.9785 | $7,305,041$ | $\mathbf{7 3 . 1}$ |
| 1 | 0.0010 | 0.0040 | 98,000 | 392 | 391,017 | 0.9961 | $7,206,821$ | 73.5 |
| 5 | 0.0006 | 0.0030 | 97,608 | 293 | 487,308 | 0.9973 | $6,815,804$ | 69.8 |
| 10 | 0.0005 | 0.0024 | 97,315 | 234 | 485,992 | 0.9964 | $6,328,496$ | 65.0 |
| 15 | 0.0011 | 0.0054 | 97,082 | 524 | 484,225 | 0.9933 | $5,842,504$ | 60.2 |
| 20 | 0.0016 | 0.0078 | 96,557 | 753 | 480,962 | 0.9921 | $5,358,279$ | 55.5 |
| 25 | 0.0016 | 0.0079 | 95,804 | 757 | 477,146 | 0.9917 | $4,877,317$ | 50.9 |
| 30 | 0.0018 | 0.0088 | 95,047 | 836 | 473,186 | 0.9906 | $4,400,172$ | 46.3 |
| 35 | 0.0020 | 0.0101 | 94,211 | 952 | 468,750 | 0.9886 | $3,926,986$ | 41.7 |
| 40 | 0.0026 | 0.0130 | 93,259 | 1,212 | 463,407 | 0.9848 | $3,458,236$ | 37.1 |
| 45 | 0.0036 | 0.0180 | 92,047 | 1,657 | 456,371 | 0.9765 | $2,994,830$ | 32.5 |
| 50 | 0.0061 | 0.0299 | 90,390 | 2,703 | 445,629 | 0.9650 | $2,538,459$ | 28.1 |
| 55 | 0.0083 | 0.0409 | 87,688 | 3,586 | 430,024 | 0.9475 | $2,092,830$ | 23.9 |
| 60 | 0.0138 | 0.0669 | 84,101 | 5,626 | 407,446 | 0.9146 | $1,662,806$ | 19.8 |
| 65 | 0.0226 | 0.1073 | 78,475 | 8,420 | 372,635 | 0.8651 | $1,255,359$ | 16.0 |
| 70 | 0.0366 | 0.1683 | 70,054 | 11,790 | 322,369 | 0.7862 | 882,724 | 12.6 |
| 75 | 0.0618 | 0.2687 | 58,264 | 15,656 | 253,448 | 0.5477 | 560,355 | 9.6 |
| 80 | 0.1388 | $\ldots$ |  | 42,609 | 42,609 | 306,908 | $\ldots$ |  |

Appendix 36: Abridged life table - Males, Honiara: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | l(x) | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | T(x) | e(x) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0.0214 | 0.0210 | 100,000 | 2,100 | 98,116 | 0.9764 | 6,789,718 | 67.9 |
| 1 | 0.0016 | 0.0065 | 97,900 | 637 | 390,065 | 0.9917 | 6,691,602 | 68.4 |
| 5 | 0.0018 | 0.0091 | 97,263 | 884 | 484,105 | 0.9923 | 6,301,538 | 64.8 |
| 10 | 0.0013 | 0.0063 | 96,379 | 607 | 480,378 | 0.9912 | 5,817,433 | 60.4 |
| 15 | 0.0024 | 0.0120 | 95,772 | 1,153 | 476,172 | 0.9865 | 5,337,055 | 55.7 |
| 20 | 0.0029 | 0.0144 | 94,619 | 1,367 | 469,730 | 0.9852 | 4,860,883 | 51.4 |
| 25 | 0.0030 | 0.0149 | 93,252 | 1,393 | 462,801 | 0.9845 | 4,391,153 | 47.1 |
| 30 | 0.0033 | 0.0161 | 91,859 | 1,481 | 455,646 | 0.9829 | 3,928,352 | 42.8 |
| 35 | 0.0037 | 0.0183 | 90,378 | 1,653 | 447,862 | 0.9797 | 3,472,706 | 38.4 |
| 40 | 0.0046 | 0.0227 | 88,725 | 2,012 | 438,775 | 0.9743 | 3,024,843 | 34.1 |
| 45 | 0.0060 | 0.0294 | 86,713 | 2,548 | 427,514 | 0.9640 | 2,586,069 | 29.8 |
| 50 | 0.0089 | 0.0435 | 84,165 | 3,663 | 412,139 | 0.9495 | 2,158,554 | 25.6 |
| 55 | 0.0121 | 0.0587 | 80,502 | 4,724 | 391,319 | 0.9272 | 1,746,415 | 21.7 |
| 60 | 0.0188 | 0.0901 | 75,778 | 6,824 | 362,829 | 0.8882 | 1,355,096 | 17.9 |
| 65 | 0.0295 | 0.1377 | 68,954 | 9,495 | 322,253 | 0.8293 | 992,267 | 14.4 |
| 70 | 0.0469 | 0.2106 | 59,459 | 12,522 | 267,243 | 0.7395 | 670,014 | 11.3 |
| 75 | 0.0762 | 0.3207 | 46,936 | 15,054 | 197,636 | 0.5093 | 402,771 | 8.6 |
| 80 | 0.1554 | ... | 31,882 | 31,882 | 205,135 | ... | 205,135 | 6.4 |

Appendix 37: Abridged life table - Females, Honiara: 2009

| Age | $\mathbf{m}(\mathbf{x}, \mathbf{n})$ | $\mathbf{q}(\mathbf{x}, \mathbf{n})$ | $\mathbf{l}(\mathbf{x})$ | $\mathbf{d}(\mathbf{x}, \mathbf{n})$ | $\mathbf{L}(\mathbf{x}, \mathbf{n})$ | $\mathbf{S}(\mathbf{x}, \mathbf{n})$ | $\mathbf{T}(\mathbf{x})$ | $\mathbf{e}(\mathbf{x})$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0.0173 | 0.0170 | 100,000 | 1,700 | 98,472 | 0.9819 | $7,490,547$ | 74.9 |
| 1 | 0.0008 | 0.0030 | 98,300 | 296 | 392,458 | 0.9970 | $7,392,075$ | 75.2 |
| 5 | 0.0005 | 0.0023 | 98,004 | 221 | 489,467 | 0.9980 | $6,999,616$ | 71.4 |
| 10 | 0.0004 | 0.0018 | 97,783 | 177 | 488,472 | 0.9973 | $6,510,149$ | 66.6 |
| 15 | 0.0008 | 0.0040 | 97,606 | 394 | 487,138 | 0.9950 | $6,021,678$ | 61.7 |
| 20 | 0.0012 | 0.0058 | 97,212 | 565 | 484,690 | 0.9940 | $5,534,540$ | 56.9 |
| 25 | 0.0012 | 0.0060 | 96,646 | 579 | 481,801 | 0.9937 | $5,049,850$ | 52.3 |
| 30 | 0.0014 | 0.0068 | 96,067 | 651 | 478,746 | 0.9927 | $4,568,049$ | 47.6 |
| 35 | 0.0016 | 0.0080 | 95,416 | 764 | 475,241 | 0.9908 | $4,089,302$ | 42.9 |
| 40 | 0.0021 | 0.0107 | 94,652 | 1,009 | 470,871 | 0.9874 | $3,614,061$ | 38.2 |
| 45 | 0.0031 | 0.0152 | 93,644 | 1,420 | 464,921 | 0.9799 | $3,143,190$ | 33.6 |
| 50 | 0.0052 | 0.0257 | 92,223 | 2,369 | 455,595 | 0.9697 | $2,678,270$ | 29.0 |
| 55 | 0.0073 | 0.0357 | 89,854 | 3,205 | 441,780 | 0.9538 | $2,222,674$ | 24.7 |
| 60 | 0.0122 | 0.0593 | 86,650 | 5,135 | 421,378 | 0.9236 | $1,780,895$ | 20.6 |
| 65 | 0.0203 | 0.0968 | 81,514 | 7,888 | 389,164 | 0.8774 | $1,359,517$ | 16.7 |
| 70 | 0.0332 | 0.1539 | 73,626 | 11,328 | 341,448 | 0.8032 | 970,353 | 13.2 |
| 75 | 0.0565 | 0.2486 | 62,299 | 15,487 | 274,261 | 0.5639 | 628,905 | 10.1 |
| 80 | 0.1320 | $\ldots$ |  | 46,812 | 46,812 | 354,644 | $\ldots$ |  |
| 0, |  |  |  | 754,644 | 7.6 |  |  |  |

Appendix 38: Level of TFR of Australia, France, New Zealand, and the USA since 1975

Total Fertility rate (TFR)


Appendix 39: Models for mortality improvement. Quinquennial gains in life expectancy at birth according to initial level of life expectancy

| Initial life expectancy level (years) | pace of mortality improvement |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Very fast |  | Fast |  | Medium |  | Slow |  | Very slow |  |
|  | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| 40.0-42.5 | 2.5 | 2.6 | 2.1 | 2.3 | 1.9 | 2.0 | 1.3 | 1.4 | 1.1 | 1.1 |
| 42.5-45.0 | 2.8 | 3.0 | 2.4 | 2.5 | 2.0 | 2.1 | 1.4 | 1.5 | 1.1 | 1.2 |
| 45.0-47.5 | 3.0 | 3.1 | 2.5 | 2.6 | 2.1 | 2.2 | 1.8 | 1.9 | 1.2 | 1.3 |
| 47.5-50.0 | 3.0 | 3.2 | 2.6 | 2.7 | 2.2 | 2.3 | 1.8 | 1.9 | 1.3 | 1.4 |
| 50.0-52.5 | 3.2 | 3.4 | 2.7 | 2.9 | 2.3 | 2.4 | 1.9 | 2.0 | 1.4 | 1.5 |
| 52.5-55.0 | 3.6 | 3.7 | 2.7 | 3.0 | 2.4 | 2.6 | 2.0 | 2.0 | 1.5 | 1.7 |
| 55.0-57.5 | 3.7 | 3.7 | 2.6 | 3.0 | 2.4 | 2.6 | 2.0 | 2.0 | 1.5 | 1.8 |
| 57.5-60.0 | 3.8 | 4.0 | 2.6 | 3.0 | 2.4 | 2.6 | 2.0 | 2.0 | 1.5 | 1.8 |
| 60.0-62.5 | 3.4 | 3.8 | 2.5 | 3.0 | 2.2 | 2.6 | 1.7 | 2.0 | 1.0 | 1.7 |
| 62.5-65.0 | 3.2 | 3.6 | 2.3 | 2.8 | 1.9 | 2.4 | 1.5 | 2.0 | 0.9 | 1.5 |
| 65.0-67.5 | 3.2 | 3.5 | 2.0 | 2.6 | 1.6 | 2.3 | 1.0 | 1.8 | 0.7 | 1.0 |
| 67.5-70.0 | 2.0 | 3.3 | 1.5 | 2.6 | 1.2 | 2.1 | 1.0 | 1.5 | 0.6 | 1.0 |
| 70.0-72.5 | 1.5 | 3.0 | 1.2 | 2.0 | 1.0 | 1.8 | 0.8 | 1.2 | 0.5 | 0.8 |
| 72.5-75.0 | 1.3 | 2.0 | 1.0 | 1.5 | 0.9 | 1.2 | 0.8 | 0.9 | 0.5 | 0.8 |
| 75.0-77.5 | 1.1 | 1.8 | 0.8 | 1.2 | 0.6 | 1.0 | 0.5 | 0.8 | 0.5 | 0.7 |
| 77.5-80.0 | 1.0 | 1.6 | 0.5 | 1.0 | 0.5 | 0.9 | 0.4 | 0.7 | 0.4 | 0.5 |
| 80.0-82.5 | 0.9 | 1.4 | 0.5 | 0.8 | 0.5 | 0.6 | 0.4 | 0.5 | 0.4 | 0.5 |
| 82.5-85.0 | 0.8 | 1.3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 |
| 85.0-87.5 | 0.7 | 1.3 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 |
| 87.5-90.0 | 0.6 | 1.2 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 |
| 90.0-92.5 | 0.6 | 0.8 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 |

Source: Table Vi.6. Models for mortality improvement: Quinquennial gains in Life Expectancy at Birth according to initial level of Life Expectancy (1995. United Nations. World Population Prospects. NewYork: United Nations. 886 p

## Appendix 40: The demographic transition

According to the theory of demographic transition, over time 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 $\quad \rightarrow$ little or no population growth
Stage 2: High birth rate, falling death rate $\quad \rightarrow$ high growth
Stage 3: Declining birth rate, relatively low death rate
Stage 4: Low birth rate, low death rate
$\rightarrow$ slowed growth
$\rightarrow$ very low growth

Historically, 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 preceded the decline in fertility, resulting in population growth during the transition period (stage 2). In Europe and other industrialised 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 $20^{\text {th }}$ century. These are/were primarily developing countries. Their death rates often fell much faster than in European countries because they benefited from Western inventions and innovations.

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

Stage 3 is characterized by falling birth rates, which occur for many reasons and vary from country to country and population to population. A decrease in birth rates may result from: a transition from a non-monetary to a monetary economy, urbanization, a change in values from a community emphasis to individualism, increasing emphasis on consumerism, improved education, availability of (modern) family planning methods (i.e. contraceptives), greater involvement of women in the workplace, 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 four stages described above. There is now another stage, the post-transition period (although it is uncertain whether all countries will reach this stage).

Post-transition period: Very low birth rate, low death rate $\rightarrow$ 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, resulting in a population decrease. 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 - are among the world's lowest, and those of several other countries were not far behind. The TFRs of Macao and Hong Kong were 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, 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 do not always exhibit the same patterns of change. In some cases early contact with outside societies resulted in local epidemics, as groups succumbed to diseases against which they had no natural immunity, resulting in increased death rates. 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 pre-industrial western Europe.


Figure 3-2 A SIMPLIFIED DIAGRAM OF THE EUROPEAN DEMOGRAPHIC TRANSITION
'Soürce: Ansley J. Coale, 1974, p. 49.

Sources: 2004. Population Handbook, Population Reference Bureau, Inc, Washington D.C., 5th Edition; 1999. Papua New Guinea National Population Policy 2000-2010, Department of Planning

| Age <br> group | Choiseul |  |  | Western |  |  | Isabel |  |  | Central |  |  | Rennell-Bellona |  |  | Guadacanal |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 0-4 | 2,432 | 2,255 | 4,687 | 6,565 | 6,300 | 12,865 | 2,210 | 2,165 | 4,376 | 2,281 | 2,271 | 4,551 | 213 | 235 | 448 | 8,680 | 8,412 | 17,092 |
| 5-9 | 2,144 | 2,092 | 4,236 | 5,804 | 5,694 | 11,498 | 2,035 | 1,971 | 4,006 | 2,100 | 1,993 | 4,093 | 215 | 224 | 439 | 7,311 | 7,136 | 14,448 |
| 10-14 | 1,696 | 1,556 | 3,252 | 4,794 | 4,385 | 9,179 | 1,599 | 1,457 | 3,056 | 1,650 | 1,477 | 3,127 | 232 | 206 | 438 | 5,734 | 5,400 | 11,133 |
| 15-19 | 1,318 | 1,282 | 2,600 | 4,263 | 3,881 | 8,144 | 1,336 | 1,182 | 2,517 | 1,251 | 1,169 | 2,420 | 150 | 121 | 271 | 4,955 | 4,644 | 9,598 |
| 20-24 | 1,173 | 1,035 | 2,208 | 3,609 | 3,196 | 6,805 | 1,000 | 1,127 | 2,127 | 1,099 | 1,021 | 2,120 | 125 | 115 | 240 | 5,131 | 4,524 | 9,656 |
| 25-29 | 1,098 | 937 | 2,035 | 3,264 | 2,851 | 6,115 | 1,009 | 1,036 | 2,044 | 1,002 | 1,129 | 2,132 | 90 | 68 | 158 | 4,248 | 4,008 | 8,256 |
| 30-34 | 954 | 934 | 1,888 | 2,854 | 2,661 | 5,514 | 1,013 | 1,010 | 2,023 | 957 | 1,066 | 2,023 | 106 | 105 | 210 | 3,598 | 3,606 | 7,204 |
| 35-39 | 887 | 905 | 1,792 | 2,621 | 2,541 | 5,163 | 940 | 875 | 1,815 | 953 | 940 | 1,893 | 86 | 89 | 175 | 3,155 | 3,061 | 6,217 |
| 40-44 | 667 | 677 | 1,343 | 2,303 | 2,066 | 4,370 | 641 | 607 | 1,248 | 644 | 647 | 1,290 | 65 | 63 | 127 | 2,298 | 2,134 | 4,433 |
| 45-49 | 571 | 526 | 1,096 | 1,814 | 1,562 | 3,376 | 561 | 559 | 1,120 | 548 | 549 | 1,097 | 61 | 76 | 137 | 1,806 | 1,699 | 3,505 |
| 50-54 | 402 | 386 | 788 | 1,295 | 1,137 | 2,432 | 471 | 450 | 922 | 379 | 398 | 777 | 81 | 58 | 139 | 1,277 | 999 | 2,276 |
| 55-59 | 326 | 359 | 686 | 1,001 | 951 | 1,951 | 427 | 373 | 800 | 392 | 296 | 688 | 86 | 59 | 144 | 965 | 981 | 1,946 |
| 60-64 | 236 | 252 | 488 | 770 | 731 | 1,501 | 327 | 280 | 607 | 270 | 272 | 543 | 47 | 54 | 101 | 682 | 679 | 1,361 |
| 65-69 | 223 | 261 | 483 | 635 | 555 | 1,190 | 240 | 246 | 485 | 219 | 194 | 413 | 14 | 40 | 54 | 619 | 601 | 1,221 |
| 70-74 | 134 | 151 | 285 | 436 | 407 | 842 | 170 | 168 | 337 | 154 | 128 | 283 | 28 | 39 | 67 | 448 | 372 | 820 |
| 75-79 | 82 | 120 | 202 | 317 | 319 | 637 | 124 | 153 | 277 | 111 | 107 | 218 | 29 | 35 | 64 | 282 | 239 | 522 |
| $80+$ | 70 | 55 | 126 | 177 | 184 | 361 | 93 | 114 | 206 | 113 | 72 | 186 | 22 | 16 | 38 | 233 | 163 | 396 |
| Total | 14,412 | 13,783 | 28,194 | 42,522 | 39,420 | 81,942 | 14,194 | 13,772 | 27,966 | 14,123 | 13,729 | 27,853 | 1,650 | 1,602 | 3,251 | 51,422 | 48,659 | 100,081 |


| $\begin{aligned} & \text { Age } \\ & \text { group } \end{aligned}$ | Malaita |  |  | Makira-Ulawa |  |  | Temotu |  |  | Honiara |  |  | Urban |  |  | Rural |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 0-4 | 12,319 | 12,156 | 24,474 | 3,995 | 3,948 | 7,943 | 1,774 | 1,629 | 3,402 | 4,503 | 4,322 | 8,824 | 7,420 | 7,150 | 14,570 | 37,551 | 36,541 | 74,092 |
| 5-9 | 11,408 | 11,017 | 22,425 | 3,355 | 3,067 | 6,422 | 1,752 | 1,672 | 3,423 | 3,705 | 3,773 | 7,477 | 6,288 | 6,242 | 12,530 | 33,540 | 32,397 | 65,937 |
| 10-14 | 9,406 | 8,523 | 17,929 | 2,484 | 2,277 | 4,762 | 1,298 | 1,272 | 2,570 | 3,199 | 3,147 | 6,347 | 5,290 | 5,067 | 10,357 | 26,803 | 24,633 | 51,436 |
| 15-19 | 7,569 | 6,903 | 14,472 | 1,949 | 1,721 | 3,671 | 1,062 | 1,058 | 2,120 | 3,818 | 3,575 | 7,393 | 5,823 | 5,622 | 11,445 | 21,847 | 19,913 | 41,760 |
| 20-24 | 6,106 | 6,150 | 12,256 | 1,875 | 1,820 | 3,695 | 822 | 876 | 1,698 | 5,197 | 4,296 | 9,493 | 7,404 | 6,323 | 13,727 | 18,733 | 17,836 | 36,569 |
| 25-29 | 5,396 | 5,446 | 10,842 | 1,770 | 1,731 | 3,500 | 682 | 884 | 1,567 | 4,132 | 3,557 | 7,689 | 6,201 | 5,443 | 11,644 | 16,490 | 16,204 | 32,694 |
| 30-34 | 4,591 | 4,958 | 9,548 | 1,572 | 1,545 | 3,117 | 621 | 778 | 1,400 | 3,072 | 2,862 | 5,935 | 4,685 | 4,448 | 9,133 | 14,652 | 15,077 | 29,729 |
| 35-39 | 3,867 | 4,105 | 7,971 | 1,280 | 1,322 | 2,602 | 620 | 801 | 1,421 | 2,469 | 2,317 | 4,786 | 3,959 | 3,647 | 7,607 | 12,919 | 13,309 | 26,227 |
| 40-44 | 2,799 | 3,157 | 5,956 | 887 | 872 | 1,759 | 516 | 590 | 1,106 | 1,845 | 1,562 | 3,407 | 2,939 | 2,536 | 5,475 | 9,725 | 9,839 | 19,564 |
| 45-49 | 2,405 | 2,655 | 5,060 | 756 | 737 | 1,493 | 443 | 506 | 948 | 1,448 | 1,210 | 2,657 | 2,309 | 1,918 | 4,227 | 8,103 | 8,160 | 16,263 |
| 50-54 | 1,882 | 2,104 | 3,986 | 533 | 534 | 1,067 | 363 | 399 | 763 | 1,057 | 788 | 1,844 | 1,699 | 1,248 | 2,947 | 6,040 | 6,006 | 12,046 |
| 55-59 | 1,657 | 1,804 | 3,461 | 464 | 475 | 939 | 316 | 358 | 673 | 776 | 521 | 1,297 | 1,253 | 892 | 2,145 | 5,156 | 5,284 | 10,439 |
| 60-64 | 1,411 | 1,596 | 3,007 | 363 | 347 | 711 | 229 | 243 | 472 | 463 | 375 | 837 | 766 | 607 | 1,373 | 4,032 | 4,221 | 8,253 |
| 65-69 | 1,168 | 1,092 | 2,260 | 349 | 267 | 616 | 199 | 187 | 385 | 306 | 225 | 531 | 500 | 395 | 895 | 3,472 | 3,270 | 6,742 |
| 70-74 | 687 | 788 | 1,474 | 200 | 173 | 372 | 151 | 173 | 324 | 162 | 120 | 281 | 276 | 242 | 518 | 2,293 | 2,275 | 4,568 |
| 75-79 | 560 | 541 | 1,100 | 170 | 141 | 311 | 127 | 144 | 271 | 96 | 74 | 170 | 170 | 142 | 311 | 1,728 | 1,733 | 3,461 |
| $80+$ | 505 | 391 | 896 | 139 | 95 | 234 | 172 | 128 | 300 | 57 | 41 | 98 | 99 | 69 | 168 | 1,483 | 1,190 | 2,673 |
| Total | 73,733 | 73,384 | 147,117 | 22,140 | 21,071 | 43,212 | 11,147 | 11,696 | 22,843 | 36,305 | 32,761 | 69,067 | 57,081 | 51,991 | 109,071 | 224,567 | 217,886 | 442,454 |

Appendix 42: UN migration model: Family migration


Source: UN Population Division, New York, USA

Appendix 43: Population size by province according to different migration variants, Solomon Islands: 2009-2050

| Migration variant and year | Solomon <br> Islands | Urban | Rural | Choiseul | Western | Is abel | Central | Rennell- <br> Bellona | Guadacanal | Malaita | Makira- <br> Ulawa | Temotu | Honiara |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2009 | 551,524 | 109,071 | 442,454 | 28,194 | 81,942 | 27,966 | 27,853 | 3,251 | 100,081 | 147,117 | 43,212 | 22,843 | 69,067 |
| Constant migration |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | 568,035 | 115,180 | 452,856 | 28,915 | 83,777 | 28,773 | 28,567 | 3,322 | 105,115 | 150,055 | 44,506 | 23,167 | 71,841 |
| 2015 | 656,243 | 149,088 | 507,155 | 32,837 | 93,552 | 33,067 | 32,181 | 3,731 | 133,082 | 164,952 | 51,246 | 24,911 | 86,684 |
| 2020 | 751,194 | 186,544 | 564,650 | 37,263 | 104,132 | 37,750 | 35,869 | 4,249 | 164,793 | 180,164 | 58,407 | 26,796 | 101,773 |
| 2025 | 843,066 | 222,883 | 620,183 | 41,742 | 114,284 | 42,299 | 39,388 | 4,805 | 197,121 | 194,419 | 65,406 | 28,571 | 115,031 |
| 2030 | 930,102 | 256,206 | 673,896 | 46,029 | 123,677 | 46,587 | 42,880 | 5,350 | 228,656 | 207,943 | 72,383 | 30,105 | 126,492 |
| 2035 | 1,014,968 | 288,026 | 726,942 | 50,047 | 132,473 | 50,750 | 46,430 | 5,861 | 259,838 | 221,314 | 79,348 | 31,440 | 137,467 |
| 2040 | 1,099,463 | 319,878 | 779,584 | 53,922 | 141,014 | 54,934 | 49,961 | 6,357 | 291,200 | 234,587 | 86,351 | 32,575 | 148,562 |
| 2045 | 1,181,450 | 350,859 | 830,591 | 57,654 | 148,814 | 59,078 | 53,406 | 6,837 | 322,779 | 246,933 | 93,073 | 33,634 | 159,242 |
| 2050 | 1,261,167 | 380,424 | 880,743 | 61,238 | 155,852 | 63,107 | 56,777 | 7,325 | 354,513 | 259,127 | 99,682 | 34,543 | 169,003 |
| Zero migration |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | 568,035 | 111,948 | 456,087 | 28,872 | 84,100 | 28,730 | 28,725 | 3,301 | 103,168 | 151,921 | 44,579 | 23,344 | 71,297 |
| 2015 | 656,243 | 127,283 | 528,960 | 32,527 | 95,732 | 32,753 | 33,269 | 3,585 | 119,550 | 178,035 | 51,726 | 26,105 | 82,962 |
| 2020 | 751,194 | 142,599 | 608,595 | 36,609 | 108,512 | 37,084 | 38,089 | 3,951 | 137,017 | 207,159 | 59,358 | 29,191 | 94,224 |
| 2025 | 843,066 | 155,276 | 687,790 | 40,710 | 121,013 | 41,248 | 42,824 | 4,344 | 153,919 | 236,519 | 66,853 | 32,248 | 103,389 |
| 2030 | 930,102 | 165,145 | 764,957 | 44,620 | 132,734 | 45,151 | 47,532 | 4,725 | 170,049 | 265,134 | 74,319 | 35,051 | 110,786 |
| 2035 | 1,014,968 | 173,680 | 841,288 | 48,262 | 143,840 | 48,927 | 52,296 | 5,074 | 185,827 | 293,613 | 81,764 | 37,645 | 117,721 |
| 2040 | 1,099,463 | 181,633 | 917,829 | 51,732 | 154,739 | 52,692 | 57,076 | 5,401 | 201,195 | 322,695 | 89,241 | 40,051 | 124,640 |
| 2045 | 1,181,450 | 188,138 | 993,312 | 55,033 | 164,974 | 56,387 | 61,850 | 5,706 | 215,958 | 351,814 | 96,453 | 42,251 | 131,022 |
| 2050 | 1,261,167 | 192,839 | 1,068,327 | 58,141 | 174,424 | 59,915 | 66,596 | 6,009 | 230,010 | 381,809 | 103,525 | 44,387 | 136,350 |

The provincial and the urban-rural projections were adjusted to match the national projection (medium variant)

Appendix 44: National and provincial population trend and age and sex structure: 19992009

## SOLOMON ISLANDS

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009



## CHOISEUL

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Choiseul |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 1,705 | 1,579 | 3,284 | 0-4 | 2,150 | 1,892 | 4,042 |
| 5-9 | 1,513 | 1,362 | 2,875 | 5-9 | 1,989 | 1,851 | 3,840 |
| 10-14 | 1,364 | 1,255 | 2,619 | 10-14 | 1,720 | 1,541 | 3,261 |
| 15-19 | 1,119 | 961 | 2,080 | 15-19 | 1,246 | 1,260 | 2,506 |
| 20-24 | 800 | 864 | 1,664 | 20-24 | 1,003 | 989 | 1,992 |
| 25-29 | 791 | 850 | 1,641 | 25-29 | 1,004 | 950 | 1,954 |
| 30-34 | 626 | 649 | 1,275 | 30-34 | 927 | 901 | 1,828 |
| 35-39 | 544 | 512 | 1,056 | 35-39 | 893 | 864 | 1,757 |
| 40-44 | 411 | 356 | 767 | 40-44 | 635 | 634 | 1,269 |
| 45-49 | 325 | 326 | 651 | 45-49 | 558 | 498 | 1,056 |
| 50-54 | 246 | 258 | 504 | 50-54 | 389 | 365 | 754 |
| 55-59 | 259 | 232 | 491 | 55-59 | 311 | 330 | 641 |
| 60-64 | 179 | 197 | 376 | 60-64 | 222 | 229 | 451 |
| 65-69 | 137 | 167 | 304 | 65-69 | 207 | 237 | 444 |
| 70-74 | 91 | 93 | 184 | 70-74 | 125 | 138 | 263 |
| 75-79 | 65 | 63 | 128 | 75-79 | 77 | 102 | 179 |
| 80+ | 61 | 48 | 109 | 80+ | 76 | 59 | 135 |
| Total | 10,236 | 9,772 | 20,008 | Total | 13,532 | 12,840 | 26,372 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 4,582 | 4,196 | 8,778 | 0-14 | 5,859 | - 5,284 | 11,143 |
| 15-24 | 1,919 | 1,825 | 3,744 | 15-24 | 2,249 | - 2,249 | 4,498 |
| 25-59 | 3,202 | 3,183 | 6,385 | 25-59 | 4,717 | 4,542 | 9,259 |
| 25-64 | 3,381 | 3,380 | 6,761 | 25-64 | 4,939 | 4,771 | 9,710 |
| 60+ | 533 | 568 | 1,101 | 60+ | 707 | 765 | 1,472 |
| $65+$ | 354 | 371 | 725 | 65+ | 485 | 536 | 1,021 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 45 | 43 | 44 | 0-14 | 43 | 41 | 42 |
| 15-24 | 19 | 19 | 19 | 15-24 | 17 | 18 | 17 |
| 25-59 | 31 | 33 | 32 | 25-59 | 35 | 35 | 35 |
| 25-64 | 33 | 35 | 34 | 25-64 | 36 | 37 | 37 |
| 60+ | 5 | 6 | 6 | 60+ | 5 | 6 | 6 |
| 65+ | 3 | 4 | 4 | 65+ | 4 | 4 | 4 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 98 | 15-59 |  |  | 92 |
| 15-64 |  |  | 90 | 15-64 |  |  | 86 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 105 |  |  |  | 105 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 17.4 | 18.6 | 17.9 | Total | 18.6 | 19.5 | 19.1 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 3,296 | 3,068 | 6,364 |
| Average annual change (in numbers) |  |  |  |  | 330 | 307 | 636 |
| Percentage difference (\%) |  |  |  |  | 32.2 | 31.4 | 31.8 |
| Average annual growth rate (\%) |  |  |  |  | 2.8 | 2.7 | 2.8 |

## WESTERN

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Western |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 5,003 | 4,617 | 9,620 | 0-4 | 5,807 | 5,275 | 11,082 |
| 5-9 | 4,453 | 4,135 | 8,588 | 5-9 | 5,378 | 5,030 | 10,408 |
| 10-14 | 3,967 | 3,695 | 7,662 | 10-14 | 4,857 | 4,336 | 9,193 |
| 15-19 | 3,535 | 3,073 | 6,608 | 15-19 | 4,024 | 3,805 | 7,829 |
| 20-24 | 3,198 | 2,829 | 6,027 | 20-24 | 3,085 | 3,048 | 6,133 |
| 25-29 | 2,988 | 2,588 | 5,576 | 25-29 | 2,986 | 2,885 | 5,871 |
| 30-34 | 2,348 | 2,086 | 4,434 | 30-34 | 2,770 | 2,562 | 5,332 |
| 35-39 | 1,920 | 1,603 | 3,523 | 35-39 | 2,638 | 2,421 | 5,059 |
| 40-44 | 1,380 | 1,174 | 2,554 | 40-44 | 2,192 | 1,933 | 4,125 |
| 45-49 | 1,086 | 957 | 2,043 | 45-49 | 1,773 | 1,477 | 3,250 |
| 50-54 | 880 | 711 | 1,591 | 50-54 | 1,251 | 1,072 | 2,323 |
| 55-59 | 748 | 625 | 1,373 | 55-59 | 953 | 874 | 1,827 |
| 60-64 | 585 | 515 | 1,100 | 60-64 | 726 | 663 | 1,389 |
| 65-69 | 456 | 424 | 880 | 65-69 | 590 | 504 | 1,094 |
| 70-74 | 242 | 234 | 476 | 70-74 | 407 | 371 | 778 |
| 75-79 | 211 | 153 | 364 | 75-79 | 298 | 271 | 569 |
| 80+ | 190 | 130 | 320 | 80+ | 191 | 196 | 387 |
| Total | 33,190 | 29,549 | 62,739 | Total | 39,926 | 36,723 | 76,649 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 13,423 | 12,447 | 25,870 | 0-14 | 16,042 | 14,641 | 30,683 |
| 15-24 | 6,733 | 5,902 | 12,635 | 15-24 | 7,109 | 6,853 | 13,962 |
| 25-59 | 11,350 | 9,744 | 21,094 | 25-59 | 14,563 | 13,224 | 27,787 |
| 25-64 | 11,935 | 10,259 | 22,194 | 25-64 | 15,289 | 13,887 | 29,176 |
| 60+ | 1,684 | 1,456 | 3,140 | 60+ | 2,212 | 2,005 | 4,217 |
| 65+ | 1,099 | 941 | 2,040 | 65+ | 1,486 | 1,342 | 2,828 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 40 | 42 | 41 | 0-14 | 40 | 40 | 40 |
| 15-24 | 20 | 20 | 20 | 15-24 | 18 | 19 | 18 |
| 25-59 | 34 | 33 | 34 | 25-59 | 36 | 36 | 36 |
| 25-64 | 36 | 35 | 35 | 25-64 | 38 | 38 | 38 |
| 60+ | 5 | 5 | 5 | 60+ | 6 | 5 | 6 |
| 65+ | 3 | 3 | 3 | 65+ | 4 | 4 | 4 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 86 | 15-59 |  |  | 84 |
| 15-64 |  |  | 80 | 15-64 |  |  | 78 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 112 |  |  |  | 109 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 19.5 | 18.8 | 19.2 | Total | 19.9 | 19.9 | 19.9 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 6,736 | 7,174 | 13,910 |
| Average annual change (in numbers) |  |  |  |  | 674 | 717 | 1,391 |
| Percentage difference (\%) |  |  |  |  | 20.3 | 24.3 | 22.2 |
| Average annual growth rate (\%) |  |  |  |  | 1.8 | 2.2 | 2.0 |

ISABEL

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Isabel |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 1,613 | 1,482 | 3,095 | 0-4 | 1,949 | 1,815 | 3,764 |
| 5-9 | 1,426 | 1,321 | 2,747 | 5-9 | 1,882 | 1,743 | 3,625 |
| 10-14 | 1,450 | 1,292 | 2,742 | 10-14 | 1,616 | 1,441 | 3,057 |
| 15-19 | 1,065 | 1,046 | 2,111 | 15-19 | 1,260 | 1,159 | 2,419 |
| 20-24 | 876 | 910 | 1,786 | 20-24 | 854 | 1,074 | 1,928 |
| 25-29 | 794 | 839 | 1,633 | 25-29 | 920 | 1,048 | 1,968 |
| 30-34 | 584 | 585 | 1,169 | 30-34 | 982 | 973 | 1,955 |
| 35-39 | 514 | 544 | 1,058 | 35-39 | 944 | 834 | 1,778 |
| 40-44 | 380 | 438 | 818 | 40-44 | 609 | 567 | 1,176 |
| 45-49 | 422 | 378 | 800 | 45-49 | 547 | 529 | 1,076 |
| 50-54 | 313 | 293 | 606 | 50-54 | 455 | 424 | 879 |
| 55-59 | 256 | 279 | 535 | 55-59 | 406 | 343 | 749 |
| 60-64 | 237 | 189 | 426 | 60-64 | 308 | 254 | 562 |
| 65-69 | 197 | 174 | 371 | 65-69 | 222 | 222 | 444 |
| 70-74 | 94 | 98 | 192 | 70-74 | 158 | 153 | 311 |
| 75-79 | 103 | 76 | 179 | 75-79 | 116 | 130 | 246 |
| 80+ | 100 | 53 | 153 | 80+ | 100 | 121 | 221 |
| Total | 10,424 | 9,997 | 20,421 | Total | 13,328 | 12,830 | 26,158 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 4,489 | 4,095 | 8,584 | 0-14 | 5,447 | 4,999 | 10,446 |
| 15-24 | 1,941 | 1,956 | 3,897 | 15-24 | 2,114 | 2,233 | 4,347 |
| 25-59 | 3,263 | 3,356 | 6,619 | 25-59 | 4,863 | 4,718 | 9,581 |
| 25-64 | 3,500 | 3,545 | 7,045 | 25-64 | 5,171 | 4,972 | 10,143 |
| 60+ | 731 | 590 | 1,321 | 60+ | 904 | 880 | 1,784 |
| 65+ | 494 | 401 | 895 | 65+ | 596 | 626 | 1,222 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 43 | 41 | 42 | 0-14 | 41 | 39 | 40 |
| 15-24 | 19 | 20 | 19 | 15-24 | 16 | 17 | 17 |
| 25-59 | 31 | 34 | 32 | 25-59 | 36 | 37 | 37 |
| 25-64 | 34 | 35 | 34 | 25-64 | 39 | 39 | 39 |
| 60+ | 7 | 6 | 6 | 60+ | 7 | 7 | 7 |
| 65+ | 5 | 4 | 4 | 65+ | 4 | 5 | 5 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 94 | 15-59 |  |  | 88 |
| 15-64 |  |  | 87 | 15-64 |  |  | 81 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 104 |  |  |  | 104 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 18.4 | 19.3 | 18.9 | Total | 19.8 | 21.2 | 20.6 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 2,904 | 2,833 | 5,737 |
| Average annual change (in numbers) |  |  |  |  | 290 | 283 | 574 |
| Percentage difference (\%) |  |  |  |  | 27.9 | 28.3 | 28.1 |
| Average annual growth rate (\%) |  |  |  |  | 2.5 | 2.5 | 2.5 |

## CENTRAL

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Central |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 1,730 | 1,538 | 3,268 | 0-4 | 2,010 | 1,898 | 3,908 |
| 5-9 | 1,482 | 1,418 | 2,900 | 5-9 | 1,945 | 1,763 | 3,708 |
| 10-14 | 1,410 | 1,337 | 2,747 | 10-14 | 1,670 | 1,462 | 3,132 |
| 15-19 | 1,252 | 1,128 | 2,380 | 15-19 | 1,181 | 1,147 | 2,328 |
| 20-24 | 967 | 982 | 1,949 | 20-24 | 939 | 974 | 1,913 |
| 25-29 | 936 | 939 | 1,875 | 25-29 | 916 | 1,143 | 2,059 |
| 30-34 | 691 | 695 | 1,386 | 30-34 | 928 | 1,027 | 1,955 |
| 35-39 | 581 | 541 | 1,122 | 35-39 | 958 | 896 | 1,854 |
| 40-44 | 435 | 377 | 812 | 40-44 | 612 | 605 | 1,217 |
| 45-49 | 426 | 368 | 794 | 45-49 | 535 | 519 | 1,054 |
| 50-54 | 330 | 290 | 620 | 50-54 | 366 | 376 | 742 |
| 55-59 | 292 | 239 | 531 | 55-59 | 373 | 272 | 645 |
| 60-64 | 197 | 159 | 356 | 60-64 | 255 | 247 | 502 |
| 65-69 | 172 | 171 | 343 | 65-69 | 203 | 176 | 379 |
| 70-74 | 130 | 96 | 226 | 70-74 | 144 | 117 | 261 |
| 75-79 | 73 | 52 | 125 | 75-79 | 104 | 91 | 195 |
| 80+ | 89 | 54 | 143 | 80+ | 122 | 77 | 199 |
| Total | 11,193 | 10,384 | 21,577 | Total | 13,261 | 12,790 | 26,051 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 4,622 | 4,293 | 8,915 | 0-14 | 5,625 | 5,123 | 10,748 |
| 15-24 | 2,219 | 2,110 | 4,329 | 15-24 | 2,120 | 2,121 | 4,241 |
| 25-59 | 3,691 | 3,449 | 7,140 | 25-59 | 4,688 | 4,838 | 9,526 |
| 25-64 | 3,888 | 3,608 | 7,496 | 25-64 | 4,943 | 5,085 | 10,028 |
| 60+ | 661 | 532 | 1,193 | 60+ | 828 | 708 | 1,536 |
| $65+$ | 464 | 373 | 837 | 65+ | 573 | 461 | 1,034 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 41 | 41 | 41 | 0-14 | 42 | 40 | 41 |
| 15-24 | 20 | 20 | 20 | 15-24 | 16 | 17 | 16 |
| 25-59 | 33 | 33 | 33 | 25-59 | 35 | 38 | 37 |
| 25-64 | 35 | 35 | 35 | 25-64 | 37 | 40 | 38 |
| 60+ | 6 | 5 | 6 | 60+ | 6 | 6 | 6 |
| 65+ | 4 | 4 | 4 | 65+ | 4 | 4 | 4 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 88 | 15-59 |  |  | 89 |
| 15-64 |  |  | 82 | 15-64 |  |  | 83 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 108 |  |  |  | 104 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 18.9 | 19.0 | 18.9 | Total | 19.3 | 20.6 | 19.9 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 2,068 | 2,406 | 4,474 |
| Average annual change (in numbers) |  |  |  |  | 207 | 241 | 447 |
| Percentage difference (\%) |  |  |  |  | 18.5 | 23.2 | 20.7 |
| Average annual growth rate (\%) |  |  |  |  | 1.7 | 2.1 | 1.9 |

RENNELL-BELLONA

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Rennell-Bellona |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 187 | 171 | 358 | 0-4 | 187 | 197 | 384 |
| 5-9 | 158 | 154 | 312 | 5-9 | 198 | 199 | 397 |
| 10-14 | 157 | 148 | 305 | 10-14 | 234 | 204 | 438 |
| 15-19 | 132 | 91 | 223 | 15-19 | 141 | 119 | 260 |
| 20-24 | 80 | 92 | 172 | 20-24 | 106 | 110 | 216 |
| 25-29 | 87 | 80 | 167 | 25-29 | 82 | 69 | 151 |
| 30-34 | 52 | 66 | 118 | 30-34 | 102 | 101 | 203 |
| 35-39 | 57 | 69 | 126 | 35-39 | 86 | 85 | 171 |
| 40-44 | 54 | 55 | 109 | 40-44 | 61 | 59 | 120 |
| 45-49 | 60 | 39 | 99 | 45-49 | 59 | 72 | 131 |
| 50-54 | 37 | 33 | 70 | 50-54 | 78 | 55 | 133 |
| 55-59 | 27 | 30 | 57 | 55-59 | 81 | 54 | 135 |
| 60-64 | 21 | 37 | 58 | 60-64 | 44 | 49 | 93 |
| 65-69 | 40 | 38 | 78 | 65-69 | 13 | 36 | 49 |
| 70-74 | 30 | 24 | 54 | 70-74 | 26 | 36 | 62 |
| 75-79 | 35 | 13 | 48 | 75-79 | 27 | 30 | 57 |
| 80+ | 16 | 7 | 23 | 80+ | 24 | 17 | 41 |
| Total | 1,230 | 1,147 | 2,377 | Total | 1,549 | 1,492 | 3,041 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 502 | 473 | 975 | 0-14 | 619 | 600 | 1,219 |
| 15-24 | 212 | 183 | 395 | 15-24 | 247 | 229 | 476 |
| 25-59 | 374 | 372 | 746 | 25-59 | 549 | 495 | 1,044 |
| 25-64 | 395 | 409 | 804 | 25-64 | 593 | 544 | 1,137 |
| 60+ | 142 | 119 | 261 | 60+ | 134 | 168 | 302 |
| $65+$ | 121 | 82 | 203 | $65+$ | 90 | 119 | 209 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 41 | 41 | 41 | 0-14 | 40 | 40 | 40 |
| 15-24 | 17 | 16 | 17 | 15-24 | 16 | 15 | 16 |
| 25-59 | 30 | 32 | 31 | 25-59 | 35 | 33 | 34 |
| 25-64 | 32 | 36 | 34 | 25-64 | 38 | 36 | 37 |
| 60+ | 12 | 10 | 11 | 60+ | 9 | 11 | 10 |
| 65+ | 10 | 7 | 9 | $65+$ | 6 | 8 | 7 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 108 | 15-59 |  |  | 100 |
| 15-64 |  |  | 98 | 15-64 |  |  | 89 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 107 |  |  |  | 104 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 19.3 | 20.5 | 19.8 | Total | 20.7 | 21.3 | 21.0 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
| Total difference |  |  |  |  | Males | Females | Total |
|  |  |  |  |  | 319 | 345 | 664 |
| Average annual change (in numbers) |  |  |  |  | 32 | 35 | 66 |
| Percentage difference (\%) |  |  |  |  | 25.9 | 30.1 | 27.9 |
| Average annual growth rate (\%) |  |  |  |  | 2.3 | 2.6 | 2.5 |

## GUADALCANAL

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Guadalcanal |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 5,131 | 4,682 | 9,813 | 0-4 | 7,706 | 7,058 | 14,764 |
| 5-9 | 4,164 | 3,854 | 8,018 | 5-9 | 6,795 | 6,307 | 13,102 |
| 10-14 | 3,900 | 3,571 | 7,471 | 10-14 | 5,823 | 5,336 | 11,159 |
| 15-19 | 3,393 | 3,195 | 6,588 | 15-19 | 4,695 | 4,549 | 9,244 |
| 20-24 | 3,039 | 2,977 | 6,016 | 20-24 | 4,399 | 4,316 | 8,715 |
| 25-29 | 2,773 | 2,591 | 5,364 | 25-29 | 3,895 | 4,055 | 7,950 |
| 30-34 | 2,136 | 1,918 | 4,054 | 30-34 | 3,503 | 3,470 | 6,973 |
| 35-39 | 1,622 | 1,468 | 3,090 | 35-39 | 3,184 | 2,915 | 6,099 |
| 40-44 | 1,176 | 1,043 | 2,219 | 40-44 | 2,194 | 1,997 | 4,191 |
| 45-49 | 955 | 911 | 1,866 | 45-49 | 1,770 | 1,607 | 3,377 |
| 50-54 | 774 | 797 | 1,571 | 50-54 | 1,238 | 943 | 2,181 |
| 55-59 | 717 | 605 | 1,322 | 55-59 | 921 | 902 | 1,823 |
| 60-64 | 557 | 471 | 1,028 | 60-64 | 645 | 615 | 1,260 |
| 65-69 | 423 | 356 | 779 | 65-69 | 577 | 545 | 1,122 |
| 70-74 | 273 | 197 | 470 | 70-74 | 420 | 338 | 758 |
| 75-79 | 200 | 126 | 326 | 75-79 | 266 | 203 | 469 |
| 80+ | 190 | 90 | 280 | 80+ | 252 | 174 | 426 |
| Total | 31,423 | 28,852 | 60,275 | Total | 48,283 | 45,330 | 93,613 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 13,195 | 12,107 | 25,302 | 0-14 | 20,324 | 18,701 | 39,025 |
| 15-24 | 6,432 | 6,172 | 12,604 | 15-24 | 9,094 | 8,865 | 17,959 |
| 25-59 | 10,153 | 9,333 | 19,486 | 25-59 | 16,705 | 15,889 | 32,594 |
| 25-64 | 10,710 | 9,804 | 20,514 | 25-64 | 17,350 | 16,504 | 33,854 |
| 60+ | 1,643 | 1,240 | 2,883 | 60+ | 2,160 | 1,875 | 4,035 |
| 65+ | 1,086 | 769 | 1,855 | 65+ | 1,515 | 1,260 | 2,775 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 42 | 42 | 42 | 0-14 | 42 | 41 | 42 |
| 15-24 | 20 | 21 | 21 | 15-24 | 19 | 20 | 19 |
| 25-59 | 32 | 32 | 32 | 25-59 | 35 | 35 | 35 |
| 25-64 | 34 | 34 | 34 | 25-64 | 36 | 36 | 36 |
| 60+ | 5 | 4 | 5 | 60+ | 4 | 4 | 4 |
| 65+ | 3 | 3 | 3 | 65+ | 3 | 3 | 3 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 88 | 15-59 |  |  | 85 |
| 15-64 |  |  | 82 | 15-64 |  |  | 81 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 109 |  |  |  | 107 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 18.7 | 18.6 | 18.7 | Total | 19.1 | 19.4 | 19.2 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
| Total difference |  |  |  |  | Males | Females | Total |
|  |  |  |  |  | 16,860 | 16,478 | 33,338 |
| Average annual change (in numbers) |  |  |  |  | 1,686 | 1,648 | 3,334 |
| Percentage difference (\%) |  |  |  |  | 53.7 | 57.1 | 55.3 |
| Average annual growth rate (\%) |  |  |  |  | 4.3 | 4.5 | 4.4 |

MALAITA

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Malaita |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 10,613 | 9,707 | 20,320 | 0-4 | 10,892 | 10,180 | 21,072 |
| 5-9 | 9,349 | 8,567 | 17,916 | 5-9 | 10,578 | 9,748 | 20,326 |
| 10-14 | 8,843 | 8,011 | 16,854 | 10-14 | 9,538 | 8,438 | 17,976 |
| 15-19 | 6,742 | 6,923 | 13,665 | 15-19 | 7,158 | 6,772 | 13,930 |
| 20-24 | 4,980 | 5,848 | 10,828 | 20-24 | 5,225 | 5,870 | 11,095 |
| 25-29 | 4,215 | 4,840 | 9,055 | 25-29 | 4,938 | 5,514 | 10,452 |
| 30-34 | 3,165 | 3,627 | 6,792 | 30-34 | 4,459 | 4,777 | 9,236 |
| 35-39 | 2,694 | 3,086 | 5,780 | 35-39 | 3,894 | 3,913 | 7,807 |
| 40-44 | 2,149 | 2,302 | 4,451 | 40-44 | 2,666 | 2,956 | 5,622 |
| 45-49 | 1,807 | 2,055 | 3,862 | 45-49 | 2,351 | 2,513 | 4,864 |
| 50-54 | 1,541 | 1,781 | 3,322 | 50-54 | 1,822 | 1,987 | 3,809 |
| 55-59 | 1,465 | 1,436 | 2,901 | 55-59 | 1,579 | 1,660 | 3,239 |
| 60-64 | 988 | 1,110 | 2,098 | 60-64 | 1,333 | 1,449 | 2,782 |
| 65-69 | 1,016 | 957 | 1,973 | 65-69 | 1,086 | 992 | 2,078 |
| 70-74 | 726 | 594 | 1,320 | 70-74 | 642 | 719 | 1,361 |
| 75-79 | 456 | 323 | 779 | 75-79 | 526 | 459 | 985 |
| 80+ | 460 | 244 | 704 | 80+ | 545 | 417 | 962 |
| Total | 61,209 | 61,411 | 122,620 | Total | 69,232 | 68,364 | 137,596 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 28,805 | 26,285 | 55,090 | 0-14 | 31,008 | 28,366 | 59,374 |
| 15-24 | 11,722 | 12,771 | 24,493 | 15-24 | 12,383 | 12,642 | 25,025 |
| 25-59 | 17,036 | 19,127 | 36,163 | 25-59 | 21,709 | 23,320 | 45,029 |
| 25-64 | 18,024 | 20,237 | 38,261 | 25-64 | 23,042 | 24,769 | 47,811 |
| 60+ | 3,646 | 3,228 | 6,874 | 60+ | 4,132 | 4,036 | 8,168 |
| $65+$ | 2,658 | 2,118 | 4,776 | $65+$ | 2,799 | 2,587 | 5,386 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 47 | 43 | 45 | 0-14 | 45 | 41 | 43 |
| 15-24 | 19 | 21 | 20 | 15-24 | 18 | 18 | 18 |
| 25-59 | 28 | 31 | 29 | 25-59 | 31 | 34 | 33 |
| 25-64 | 29 | 33 | 31 | 25-64 | 33 | 36 | 35 |
| 60+ | 6 | 5 | 6 | 60+ | 6 | 6 | 6 |
| $65+$ | 4 | 3 | 4 | $65+$ | 4 | 4 | 4 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 102 | 15-59 |  |  | 96 |
| 15-64 |  |  | 95 | 15-64 |  |  | 89 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 100 |  |  |  | 101 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 16.3 | 18.2 | 17.3 | Total | 17.5 | 19.3 | 18.4 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 8,023 | 6,953 | 14,976 |
| Average annual change (in numbers) |  |  |  |  | 802 | 695 | 1,498 |
| Percentage difference (\%) |  |  |  |  | 13.1 | 11.3 | 12.2 |
| Average annual growth rate (\%) |  |  |  |  | 1.2 | 1.1 | 1.2 |

MAKIRA-ULAWA

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Makira-Ulawa |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 2,611 | 2,387 | 4,998 | 0-4 | 3,545 | 3,322 | 6,867 |
| 5-9 | 2,081 | 1,825 | 3,906 | 5-9 | 3,118 | 2,716 | 5,834 |
| 10-14 | 2,217 | 2,024 | 4,241 | 10-14 | 2,523 | 2,259 | 4,782 |
| 15-19 | 1,917 | 1,819 | 3,736 | 15-19 | 1,845 | 1,692 | 3,537 |
| 20-24 | 1,411 | 1,504 | 2,915 | 20-24 | 1,604 | 1,738 | 3,342 |
| 25-29 | 1,223 | 1,360 | 2,583 | 25-29 | 1,621 | 1,754 | 3,375 |
| 30-34 | 899 | 914 | 1,813 | 30-34 | 1,530 | 1,492 | 3,022 |
| 35-39 | 781 | 754 | 1,535 | 35-39 | 1,291 | 1,262 | 2,553 |
| 40-44 | 571 | 577 | 1,148 | 40-44 | 846 | 816 | 1,662 |
| 45-49 | 481 | 504 | 985 | 45-49 | 741 | 698 | 1,439 |
| 50-54 | 361 | 399 | 760 | 50-54 | 517 | 504 | 1,021 |
| 55-59 | 392 | 315 | 707 | 55-59 | 443 | 438 | 881 |
| 60-64 | 307 | 211 | 518 | 60-64 | 344 | 316 | 660 |
| 65-69 | 291 | 220 | 511 | 65-69 | 324 | 243 | 567 |
| 70-74 | 140 | 122 | 262 | 70-74 | 187 | 158 | 345 |
| 75-79 | 132 | 74 | 206 | 75-79 | 160 | 120 | 280 |
| 80+ | 128 | 54 | 182 | 80+ | 150 | 102 | 252 |
| Total | 15,943 | 15,063 | 31,006 | Total | 20,789 | 19,630 | 40,419 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 6,909 | 6,236 | 13,145 | 0-14 | 9,186 | 8,297 | 17,483 |
| 15-24 | 3,328 | 3,323 | 6,651 | 15-24 | 3,449 | 3,430 | 6,879 |
| 25-59 | 4,708 | 4,823 | 9,531 | 25-59 | 6,989 | 6,964 | 13,953 |
| 25-64 | 5,015 | 5,034 | 10,049 | 25-64 | 7,333 | 7,280 | 14,613 |
| 60+ | 998 | 681 | 1,679 | 60+ | 1,165 | 939 | 2,104 |
| $65+$ | 691 | 470 | 1,161 | $65+$ | 821 | 623 | 1,444 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 43 | 41 | 42 | 0-14 | 44 | 42 | 43 |
| 15-24 | 21 | 22 | 21 | 15-24 | 17 | 17 | 17 |
| 25-59 | 30 | 32 | 31 | 25-59 | 34 | 35 | 35 |
| 25-64 | 31 | 33 | 32 | 25-64 | 35 | 37 | 36 |
| 60+ | 6 | 5 | 5 | 60+ | 6 | 5 | 5 |
| $65+$ | 4 | 3 | 4 | $65+$ | 4 | 3 | 4 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 92 | 15-59 |  |  | 94 |
| 15-64 |  |  | 86 | 15-64 |  |  | 88 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 106 |  |  |  | 106 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 17.8 | 18.6 | 18.2 | Total | 18.3 | 19.5 | 18.9 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
|  |  |  |  |  | Males | Females | Total |
| Total difference |  |  |  |  | 4,846 | 4,567 | 9,413 |
| Average annual change (in numbers) |  |  |  |  | 485 | 457 | 941 |
| Percentage difference (\%) |  |  |  |  | 30.4 | 30.3 | 30.4 |
| Average annual growth rate (\%) |  |  |  |  | 2.7 | 2.6 | 2.7 |

## TEMOTU

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009



HONIARA

Population trend: 1970-2009


Population pyramid by five-year age group and sex, 1999 and 2009


| Honiara |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999 |  |  |  | 2009 |  |  |  |
| Age | Males | Females | Total | Age | Males | Females | Total |
| Population by 5-year age groups and sex |  |  |  |  |  |  |  |
| 0-4 | 3,207 | 3,063 | 6,270 | 0-4 | 4,071 | 3,623 | 7,694 |
| 5-9 | 2,470 | 2,165 | 4,635 | 5-9 | 3,441 | 3,294 | 6,735 |
| 10-14 | 2,295 | 2,167 | 4,462 | 10-14 | 3,247 | 3,080 | 6,327 |
| 15-19 | 3,368 | 2,874 | 6,242 | 15-19 | 3,616 | 3,465 | 7,081 |
| 20-24 | 4,170 | 3,176 | 7,346 | 20-24 | 4,453 | 4,049 | 8,502 |
| 25-29 | 3,334 | 2,580 | 5,914 | 25-29 | 3,789 | 3,561 | 7,350 |
| 30-34 | 2,296 | 1,668 | 3,964 | 30-34 | 2,992 | 2,726 | 5,718 |
| 35-39 | 1,826 | 1,356 | 3,182 | 35-39 | 2,494 | 2,185 | 4,679 |
| 40-44 | 1,377 | 908 | 2,285 | 40-44 | 1,765 | 1,446 | 3,211 |
| 45-49 | 1,163 | 706 | 1,869 | 45-49 | 1,420 | 1,133 | 2,553 |
| 50-54 | 780 | 488 | 1,268 | 50-54 | 1,027 | 734 | 1,761 |
| 55-59 | 511 | 255 | 766 | 55-59 | 743 | 473 | 1,216 |
| 60-64 | 268 | 142 | 410 | 60-64 | 439 | 337 | 776 |
| 65-69 | 152 | 96 | 248 | 65-69 | 285 | 201 | 486 |
| 70-74 | 76 | 45 | 121 | 70-74 | 152 | 108 | 260 |
| 75-79 | 53 | 19 | 72 | 75-79 | 91 | 62 | 153 |
| 80+ | 41 | 12 | 53 | 80+ | 64 | 43 | 107 |
| Total | 27,387 | 21,720 | 49,107 | Total | 34,089 | 30,520 | 64,609 |
| Population by broad age groups (in numbers) |  |  |  |  |  |  |  |
| 0-14 | 7,972 | 7,395 | 15,367 | 0-14 | 10,759 | 9,997 | 20,756 |
| 15-24 | 7,538 | 6,050 | 13,588 | 15-24 | 8,069 | 7,514 | 15,583 |
| 25-59 | 11,287 | 7,961 | 19,248 | 25-59 | 14,230 | 12,258 | 26,488 |
| 25-64 | 11,555 | 8,103 | 19,658 | 25-64 | 14,669 | 12,595 | 27,264 |
| 60+ | 590 | 314 | 904 | 60+ | 1,031 | 751 | 1,782 |
| $65+$ | 322 | 172 | 494 | 65+ | 592 | 414 | 1,006 |
| Population by broad age groups (in percentages) |  |  |  |  |  |  |  |
| 0-14 | 29 | 34 | 31 | 0-14 | 32 | 33 | 32 |
| 15-24 | 28 | 28 | 28 | 15-24 | 24 | 25 | 24 |
| 25-59 | 41 | 37 | 39 | 25-59 | 42 | 40 | 41 |
| 25-64 | 42 | 37 | 40 | 25-64 | 43 | 41 | 42 |
| 60+ | 2 | 1 | 2 | 60+ | 3 | 2 | 3 |
| 65+ | 1 | 1 | 1 | 65+ | 2 | 1 | 2 |
| Age dependency ratio |  |  |  |  |  |  |  |
| 15-59 |  |  | 50 | 15-59 |  |  | 54 |
| 15-64 |  |  | 48 | 15-64 |  |  | 51 |
| Sex ratio (males per 100 females) |  |  |  |  |  |  |  |
|  |  |  | 126 |  |  |  | 112 |
| Median age (years) |  |  |  |  |  |  |  |
| Total | 22.8 | 20.9 | 22.0 | Total | 23.0 | 22.2 | 22.6 |
| Population change 1999-2009 |  |  |  |  |  |  |  |
| Total difference |  |  |  |  | Males | Females | Total |
|  |  |  |  |  | 6,702 | 8,800 | 15,502 |
| Average annual change (in numbers) |  |  |  |  | 670 | 880 | 1,550 |
| Percentage difference (\%) |  |  |  |  | 24.5 | 40.5 | 31.6 |
| Average annual growth rate (\%) |  |  |  |  | 2.2 | 3.4 | 2.7 |


[^0]:    ${ }^{1}$ United Nations, DESA, Population Division, World Population Prospects: The 2005 Revision

[^1]:    ${ }^{2}$ For a discussion on the accuracy of age reporting, and calculation of age accuracy indices, please refer to Appendix 1

[^2]:    *ASFR = Age-Specific Fertility Rate
    **TFR = Total Fertility Rate

[^3]:    ${ }^{3}$ Population Analysis Spreadsheets (PAS), procedure GRBAL, US Census Bureau, Washington, USA
    ${ }^{4}$ Population Analysis Spreadsheets (PAS), procedure PRECOA, US Census Bureau, Washington, USA

[^4]:    ${ }^{6}$ Estimating child mortality from information on children ever born and children surviving
    Brass (1964, United Nations 1983) developed a procedure to convert proportions of dead children experienced by women in age groups $15-19,20-24$, et cetera into estimates of the probability of a child dying ( $\mathrm{q}_{0}$ ) before attaining certain exact age (i.e. before ages $1,2,3,5,10,15$ and 20). He found that the reported proportions of dead children are primarily a function of the age pattern of fertility of women, and more specifically of the mean age at childbearing. Depending on the mean age at childbearing in the population, a set of multipliers was derived to facilitate conversion of observed proportions of dead children in each age group of women into life table probabilities of dying. Later, Coale and Trussell (1974) derived new sets of multipliers using a wider range of empirical evidence to underpin the values that multipliers take on. The assumption of the Brass method of constant fertility and mortality can be relaxed if the rate of mortality decline is known and more or less constant over time. If so, the different probabilities of dying that are estimated can be exactly located in historical time so that a series of estimates of the IMR and, by extrapolation, $\mathrm{e}(0)$ can be deduced. It has been found that the probabilities of dying $2 \mathrm{q}_{0}, 3 \mathrm{q}_{0}$ and ${ }_{5} \mathrm{q}_{0}$ are most reliable and these values are generally taken to estimate the mortality in early childhood, notably the IMR.

[^5]:    ${ }^{7} 1999$ Solomon Islands population and housing census, Analytical report, page 96

[^6]:    ${ }^{8}$ CME Info is a database containing the latest child mortality estimates based on the research of the UN Inter-agency Group for Child Mortality Estimation

[^7]:    ${ }^{9}$ Estimating adult mortality from orphanhood data:
    Brass (1974, United Nations 1983) developed a method whereby the reported proportions of respondents in two contiguous five-year age groups reporting that their mother was still alive at the time of the interview are converted into conditional probabilities of surviving from age 25 to age $35,40,45, \ldots$, et cetera. Similarly, because of the different age range of the reproductive life of men, conditional probabilities of survival of fathers are estimated from age 32.5 to $42.5,47.5,52.5, \ldots$, et cetera or from age 37.5 to 47.5 , $52.5,57.5, \ldots$, et cetera depending on the local situation.

    For each five-year age group the reported proportions of respondents with a surviving mother or father is multiplied by a particular factor. Factors are based on outcomes of simulation studies using particular model mortality and fertility schedules. Hill and Trussell (1977) and Timaeus (1992) refined Brass' original method. The method assumes that men and women who do not have children have the same mortality characteristics as those who do. In situations where mortality levels change and the extent of change is known, the probabilities of survival provided can be computed as referring to a particular time in the past. Manual X of the United Nations (1983) discusses other assumptions of the method.

[^8]:    ${ }^{10}$ It must be remembered that, strictly speaking, the resulting composite life tables pertain to some illdefined reference period, because the reference period for childhood mortality estimates (e.g. l(1), l(5)) reflect the situation around 2007, whereas the adult mortality estimates of e(20) reflect mortality conditions around 1999

[^9]:    ${ }^{11}$ Please note that the officially released estimates of life expectancies at birth of 60.6 and 61.6 years from the 1999 census have been readjusted to be comparable to estimation methods used in this report.

[^10]:    ${ }^{12}$ 1983. United Nations. Manual X, indirect techniques for demographic estimation. New York: United Nations. 304 p.

[^11]:    ${ }^{13}$ Policy Statement and Guidelines for Basic Education in Solomon Islands, 30th November 2009

[^12]:    ${ }^{14}$ In this context this age group has been used in order to be comparable with the 1999 census report

[^13]:    ${ }^{18}$ Population Analysis Spreadsheets, US Census Bureau
    ${ }^{19}$ Methods and Materials of Demography, Second Edition, Jacob S. Siegel/David A. Swanson, p. 150

[^14]:    *Pattern corrected for one-half year between birth and reporting
    ASFR Age-specific fertility rate
    CEB Average number of children ever born

[^15]:    Software: MORTPAK for Windows (4.1), application CEBCS, Population Division, United Nations Secretariat

