Niue Population Profile
Based on 2006 Census of Population and Housing

A Guide for Planners and Policy-makers

Niue Economics, Planning, Development & Statistics Unit,
and the SPC Statistics and Demography Programme,
Noumea, New Caledonia, 2008

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ACKNOWLEDGMENT

Niue began conducting censuses in 1900, although census taking was unofficial. Censuses conducted from 1902 to 1945 were conducted under New Zealand law and also by using the Cook Islands 1961 Census Regulations. Niue's censuses from 1971 onwards were conducted under the 1971 Niue Census Ordinance. This ordinance was later amended in 1978.

On 9 September 2006, the Census Office situated within the Niue Statistics Office conducted Niue's 8th national census since 1971. Modern technology used in census taking, data processing and analyses has made the reporting and dissemination component easier and quicker.

It is my privilege to introduce this report as it contains data and information relating to the 2006 census. The report presents the demographic, social and economic characteristics of Niue and provides a measure of Niue's development at a particular point in its national history.

This report represents Niue's continuous effort to develop its national capability and confidence to produce quality information for planning purposes. Census activities are an integral part of this broad and long-term focus.

My personal congratulations goes to the Statistic Unit, in particular Ms Margaret Hagen Siosikefu, for their dedication and hard work.

The Government and people of Niue also acknowledge the invaluable assistance of the Secretariat of the Pacific Community's Statistics and Demography Programme. We are particularly grateful to the assistance provided by Dr Gerald Haberkorn in collaborating with our Statistics Unit in producing this report, and to Ms Leilua Taulealo for her assistance with census data processing.

The report is like every other tool; it is only as good as what you make of it. The challenge for everyone, namely Niue's policy-makers and planners, is to use the report to sharpen our services to the people we serve. I am confident you will find statistics in this report user-friendly, as well as helpful in addressing the priority issues facing Niue.

Kia monuina

Hon Bill Motufoou

Minister for Economic, Planning, Development and Statistics

SUMMARY OF MAIN INDICATORS

2006 census population (*de facto*)	1,625	
2006 Niue residents only	1,538	
population density (1997)	6	/km^2
average annual rate of population growth, 2001–2006	-1.9	%
average annual rate of growth (residents), 2001–2006	-2.4	%
percentage younger than 15 years	26.7	%
percentage 15–59 years	58.5	%
percentage 60+ years	14.8	%
percentage youth (15–24 years)	16.4	%
median age, 2006	30.7	years
sex ratio, 2006	97	males/females
dependency ratio (15–59), 2006	71	
crude birth rate (CBR), 2001–2006	15.8	‰
crude death rate (CDR), 2001–2006	9.3	‰
net-migration rate, 2001–2006	-30.5	‰
average annual number of births, 2001–2006	26	
average annual number of deaths, 2001–2006	15	
average annual number of net migrants, 2001–2006	-50	
average household size, 1997	3.2	
total fertility rate (TFR), 2001–2006	2.6	
life expectancy at birth, males 2001–2006 [*]	67	males
life expectancy at birth, females 2001–2006	76	females
infant mortality rate (IMR), 2001–2006	1 death	(in five years)

[*] Much care is advised in interpreting these data, as they are based on only 76 reported deaths in Niue between 2001 and 2006. The large differential between males and females is also reflected in comparative figures pertaining to life expectancies of New Zealand residents of Niuean descent, based on deaths registered in New Zealand between 2002 and 2006, which yield figures of 71 years for males, and 79 years for females.

EXECUTIVE SUMMARY

The main purpose of this report is to make 2006 Niue census data and information accessible to as many users as possible, and to contribute to informed decision-making across government agencies, the private sector and civil society.

The Niue Population Profile highlights key findings pertaining to Niue's population composition and structure, describes and explains recent demographic developments, and provides an overview of education and labour market activities, as well as some important household and housing characteristics.

A copy of the 2006 Niue census questionnaire, which outlines the broad spectrum of thematic issues covered by the census, is included as Appendix 2. More specific and detailed information can be obtained, on request, from the Niue Statistics Office.

Niue's **population** at the time of the 2006 census (9 September) was 1,625 people, of whom 1,538 (95%) considered Niue to be their place of usual residence. This represents declines of 163 people in total and 198 usual residents from 2001, and a continuing population decline over the past four decades, from an all-time high of 5,194 people in 1966.

There were an average of 26 **births** and 15 **deaths** per year between 2001 and 2006, underlining a small natural increase of 11 people per annum (or 0.7% of the population). Niue's population decline over the past four decades is the result of sustained high net-emigration, averaging some 50 people per year since 2001.

Migration has become the main influence on Niuean population dynamics, with population losses usually involving the younger age groups. As a result, Niue currently has the second oldest population in the Pacific, with a **median age** of 30.7 years. (Only Palau has an older population with a median age of 33). Niue's median age means that half of the population is younger than 30.7 years, and half is older. This is depicted in the age pyramid on page 7, which also shows that there are fewer young children under 5 years of age (N=201) than people 60 years and older (N=227). This illustration also contains information on the relative number of males and females across various age groups, pointing to a **sex ratio** of 97 males for every 100 females.

In terms of major **socio-demographic features**, 81% of the resident population is Niuean, compared with 83% five years ago. The vast majority of people are Christians, with 62% of the population belonging to the Ekalesia Niue Church. Over half of Niue's population over the age of 15 years is married (52%) or living in a *de facto* union (5%); one in three is never-married (or single), 7% is widowed, and 3% is divorced. A feature worth noting is that widows (N=63) outnumber widowers (N=13) at a ratio of 5:1.

Niue has one of the highest (if not the highest) **educational enrolment** rates in the Pacific Islands, with every child under the age of 14 enrolled in school, and school enrolment rates only showing a modest decline at ages 15 (94%) and 16 (83%). Over half of the population (53%)

claims to have a secondary education as their highest level of education; 33% has a tertiary education, and this has steadily increased from 15% 10 years ago, and 25% in 2001.

Two in three residents aged 4 years and older consider Niuean to be their **first language learned**, with 86% claiming to speak it fluently, and 7% indicating some modest speaking proficiency; 72% claim to speak it all the time and 18% use it often. Only a small minority of the population does not speak (7%) or understand (2%) Niuean. At the household level, one out in three households claims to converse in Niuean only, with 43% stating they use both English and Niuean.

Given Niue's age structure, a very high **labour force participation** rate of 78% is not surprising, with 85% of all males, and 71% of all females participating in the labour force. What is surprising, however, is the slightly higher proportion of women (86.1%) than men (85.7%) working in paid employment, with most men (83%) and women (76%) working for pay or running a business. The Niuean government is the main employer (56%), followed by the private sector (22%), self-employment (17%) and non-governmental organisations (5%). The most striking features of Niue's occupational profile are the absence of any dominant occupation, and the fact that most occupational categories are dominated by either a male or female work force. Apart from there being a near gender parity in the technical/associated professional category and among service/shop/market sales workers, clerical office work is the domain of women (89%), with women (62%) also outnumbering men at a ratio of 2:1 among professionals. All other occupations appear as more predominantly male domains. Within industries, public administration (24%) and (public) health and education services (16%) are the biggest employers, in addition to primary industries (16%) and wholesale/retail trade and hotel and restaurant sectors (11%).

The 2006 census provides some basic information on **income**, with about one-third of Niueans earning less than NZ$10,000, one-third earning between NZ$10,000 and NZ$15,000, and one-third over NZ$15,000.

Niue's current **total fertility rate** (the average number of children Niuean women can expect to have during their lifetime at prevailing fertility rates) is estimated to be 2.6. The teenage fertility rate is about 30 (i.e. 30 births/1,000 females aged 15–19 years of age). **Life expectancy at birth** is estimated to be 67 years for men and 76 years for women, with corresponding values of 71 and 79 years, respectively, estimated for New Zealand residents of Niuean ancestry. **Infant mortality** is very low, with only a single infant death reported between 2001 and 2006. With 129 reported births, this yields an infant mortality rate of 7.8, one of the highest in the Pacific Islands region.

This report also provides a brief account of prevailing rates of smoking and alcohol consumption, with relevant questions included in the census at the request of Niue's **Health** Department.

The report concludes with a description of key **household** and **housing characteristics**, providing information on household size and composition, as well as a broad spectrum of housing characteristics, ranging from dwelling type, access to water and sanitation, energy use, and household access to a broad range of household goods and appliances.

Pitcairn
Polynésie française
Kiribati
Cook Islands
Niue
Tokelau
Samoa
Wallis & Futuna
American Samoa
Tonga
Kiribati
Tuvalu
Fiji Islands
Vanuatu
New Zealand
Marshall Islands
Nauru
Kiribati
Solomon Islands
Nouvelle-Calédonie
Northern Mariana Islands
Federated States of Micronesia
Papua New Guinea
Guam
Palau
Australia

1. Introduction

Throughout the various stages of their life, people have different needs for different services. Almost every aspect of life is somehow associated with age, and age "creates" very specific needs. For example:

- young children need special education and health care, such as early childhood education, nutrition and immunisation;
- children usually commence their formal education at around age six, and require adequate schools, teachers and materials;
- young people leave their parental homes, and thus need housing;
- school-leavers require education and training opportunities and employment;
- childbearing is usually confined to women aged 15–49, who need maternal and child health/family planning services; and
- elderly people have a number of special needs, such as health care, transport, housing and welfare.

In order for governments to effectively address the specific needs of different population groups, it is important that planners have a clear understanding of the demographic composition of the population. In other words, planners need to be aware of their country's population structure and population processes.

Population structure refers to population size, geographic distribution, age–sex structure, and socioeconomic characteristics, such as ethnicity, marital status, levels of educational attainment and labour market activities. *Population processes* refer to population growth, fertility, mortality and migration, including urbanisation.

A country's population structure and processes play an important role in shaping economic and social development, and can be the direct result of development. This is quite evident in situations where policies are incorporated into development plans with the aim of altering specific population variables. For example:

- greater budget allocation to a country's Ministry/Department of Health to expand its maternal and child health and family planning services can lead to fewer deaths of infants, children and women;
- promotion, provision and easy access of family planning services may lead to a reduced fertility rate and a lowering of the population's growth rate; and
- promotion of employment opportunities and accessibility of services may prevent people from emigrating.

Population factors are important components of development. Given that development is ultimately concerned with improving people's lives, it is clear that incorporating population considerations into the planning process lies at the heart of planning and development.

The principal aims of this population profile are to:

- present the major findings of the 2006 census results and, where possible, compare them to the 2001 Niue census results;

- present this information in clear language to make it easily accessible to a broad range of interested users in government, the private sector and civil society; and
- highlight some of the major policy implications of these results for policy and planning.

Our main objective is to provide a brief overview of some of the key implications of recent population developments and likely future developments for Niue's planners and policy-makers. More detailed analyses of specific sectoral issues and topics regarding, for example, labour market activities and housing, can be undertaken on demand. Considering that most planners and policy-makers have neither the time, desire, nor technical background to digest lengthy demographic analyses, we have attempted to be brief and use as little technical jargon as possible. However, because jargon is sometimes unavoidable, we have appended a detailed glossary.

This population profile draws on unpublished basic tables of the 2006 census results, published tables from the 2001 census report and 1997 Niue population profile, and unpublished birth and death registration data for 2000 to 2006 (September inclusive).

2. Population Structure

Population characteristic and processes relating to size and composition, distribution and dynamics (growth), all play a major role in shaping a country's overall development. Because people are both producers and consumers of goods and services, overall development policy and plans need to take population factors into consideration. Most countries' key sources of population information are periodic population and housing censuses, which are usually conducted every five or ten years; these data are supplemented by other administrative data sources, such as vital registration and international migration information. The different data sources allow analysts to prepare periodic demographic overviews and examine recent population developments. Together, these enable demographers to look at future population scenarios, which provide the very platform for evidence-based policy development and planning.

2.1 Population size and distribution

Niue's population, as enumerated on 9 September 2006, was 1,625 people; 1,538 people considered Niue to be their place of usual residence (95%), while 87 people (5%) visiting at the time of the census, usually resided elsewhere. The 2006 census, like previous censuses, is a *de facto* population count, therefore, all persons on Niue were included — residents and visitors alike. Residents away during this time were not included in the count even if they were away for a short time.

Figure 2.1: Niue's population from 1900 to 2006

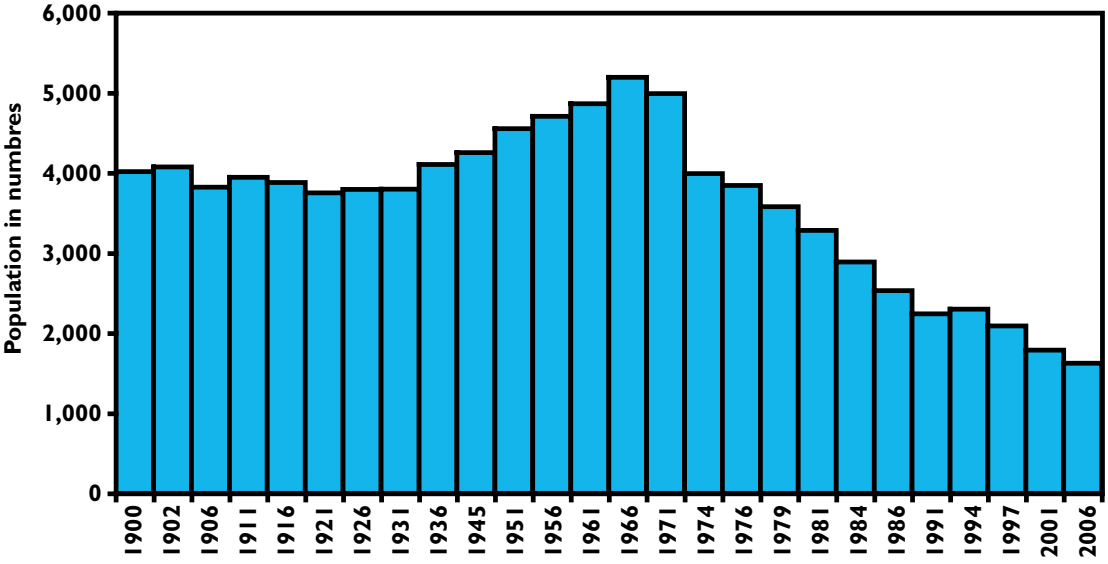


Figure 2.1 illustrates Niue's population development over the past 100 years, and highlights three distinct patterns: 1) a period of relative stability from 1900 up to mid-1930, with the population fluctuating between 3,800 and 4,000 residents; 2) a period of sustained population growth up to the mid-1960s, with Niue's resident population tipping the 5,000 mark in 1966;

3) an ongoing population decline over the past four decades, following a massive drop from 5,000 to 4,000 residents in just three years (1971–1974). The population since then has steadily declined to its current level of 1,538 residents.

Table 2.1 provides an account of Niue's current *de facto* population distribution by villages (including short-term visitors, tourists and short-term contractors), and highlights some interesting developments over the past five years.

Niue experienced an overall net loss of 163 people, or 9% of its 2001 population, during the intercensal period, and developments at the village level show considerable diversity.

- Seven villages had net population losses of around 15% or more, with Alofi North (-43%), Mutalau (-36%), Makefu (-29%) and Hakupu (-29%) recording the greatest losses.
- Four villages experienced only minor losses, such as Tuapa (-7%) and Vaiea (-5%), with Niue's smallest villages, Namukulu (N=14) and Toi (N=31) retaining their small population numbers.
- Avatele (31%), Alofi South (21%) and Tamakautoga (12%) all experienced population growth.

Table 2.1: Niue population by villages, 2001 and 2006

Village	Total Population		Population Change		Population Distribution	Average Annual Growth Rate
	2001	2006	Number	%	%	%
Total	**1,788**	**1,625**	**-163**	**-9.1**	**100.0**	**-1.9**
Makefu	87	62	-25	-28.7	3.8	-6.8
Tuapa	129	120	-9	-7.0	7.4	-1.4
Namukulu	14	14	0	0.0	0.9	0.0
Hikutavake	65	56	-9	-13.8	3.4	-3.0
Toi	31	31	0	0.0	1.9	0.0
Mutalau	133	85	-48	-36.1	5.2	-9.0
Lakepa	88	72	-16	-18.2	4.4	-4.0
Liku	73	62	-11	-15.1	3.8	-3.3
Hakupu	227	162	-65	-28.6	10.0	-6.7
Vaiea	62	59	-3	-4.8	3.6	-1.0
Avatele	125	164	39	31.2	10.1	5.4
Tamakautoga	140	157	17	12.1	9.7	2.3
Alofi South	358	434	76	21.2	26.7	3.9
Alofi North	256	147	-109	-42.6	9.0	-11.1

Most of these changes are due to differential levels of migration to and from New Zealand, often involving entire families rather than individuals. The most significant change though — Alofi North's net loss of 109 people (43%) between 2001 and 2006, and Alofi South's parallel gain of 76 people (21% of population) — had little to do with population dynamics per se, but resulted from re-drawn village boundary lines, to bring them in line with electoral divisions. The boundary has shifted from Utuko (going up Peta hill) to the actual boundary at Tukaiavi, which is the traditional boundary.

As the population declines, the population density has also decreased, from 7 people/km^2 in 2001, to 6 people/km^2 in 2006.

2.2 Population composition

Niue's total enumerated population of 1,625 people included 1,538 permanent residents and 87 visitors (non-residents). This report will mainly concentrate on Niue's resident population.

Table 2.2: Niue resident population, 2001 and 2006

Village	Resident Population 2001			Resident Population 2006			Resident Population Change	
	Total	Resident	Visitors	Total	Resident	Visitors	Number	%
Total	**1,788**	**1,736**	**52**	**1,625**	**1,538**	**87**	**-198**	**-11.4**
Makefu	87	84	3	62	57	5	-27	-32.1
Tuapa	129	129	0	120	98	22	-31	-24.0
Namukulu	14	12	2	14	14	0	2	16.7
Hikutavake	65	65	0	56	55	1	-10	-15.4
Toi	31	31	0	31	31	0	0	0.0
Mutalau	133	133	0	85	85	0	-48	-36.1
Lakepa	88	88	0	72	72	0	-16	-18.2
Liku	73	73	0	62	62	0	-11	-15.1
Hakupu	227	227	0	162	162	6	-65	-28.6
Vaiea	62	62	0	59	59	2	-3	-4.8
Avatele	125	125	0	164	164	4	39	31.2
Tamakautoga	140	125	15	157	157	20	32	25.6
Alofi South	358	358	0	434	411	23	76	21.2
Alofi North	256	224	32	147	143	4	-77	-34.4

Niue's resident population declined by 11.4% between 2001 and 2006, representing a net loss of 198 people. Developments across villages resemble the pattern observed earlier with regards to the *de facto* population, except for the villages of Tuapa and Namukulu.

- Eight villages show net resident population losses of between 15% and 36%, with Alofi North (36%), Mutalau (36%), Makefu (32%) and Hakupu (315) losing about one-third of their resident populations during 2001–2006.
- The small village of Vaiea recorded a small loss, with Toi village retaining the same number of people.
- Avatele (28%), Alofi South (15%) and Tamakautoga (10%) experienced increases in their resident populations.

The two exceptions to this development are Tuapa and Namukulu villages. Tuapa's modest overall population decline of 7% masks a considerably stronger decline in its resident population (24%), whereas small Namukulu increased its resident population from 12 to 14 people during this period.

2.3 Age and sex structure

As mentioned in the introduction, people have different needs and place different demands on services at various stages in their lives, according to their ages. There is a very strong relationship between people's needs and activities on one hand, and age on the other. To ensure the effectiveness and maximum impact of public policy and development activities in general, it is essential that policy analysts, planners and policy-makers have a good understanding of their population's age structure.

Furthermore, the number of males and females within a population, particularly the proportion of males and females in specific age groups, also has important social and developmental implications. A large number of women of childbearing age usually means high population growth rates; conversely, a more modest representation of women in their "peak" childbearing years (i.e. 25–34) means fewer births; a predominance of older women to older men usually suggests higher male mortality; and fewer men than women in early adult age groups (i.e. 20–34) is usually indicative of male labour mobility.

Taken together, a country's age and sex structure and distribution is of critical importance to development, reflecting both current and future needs.

Niue's 2006 resident population consisted of 756 males and 782 females, reflecting a sex ratio of 97; that is, 97 resident males for every 100 resident females. While such low sex ratios are normally indicative of more pronounced male than female migration, and possibly also higher male than female mortality, a much greater incidence of female (N=111) than male (N=78) births since 2000 illustrates a third contributing factor in Niue (Appendix Table 4).

Figure 2.2 shows the age and sex structure of Niue's resident population at the time of the 2006 census in the form a population pyramid, with 2001 census data over-laid for comparative purposes. A population pyramid shows the number of males and females in five-year age groups,

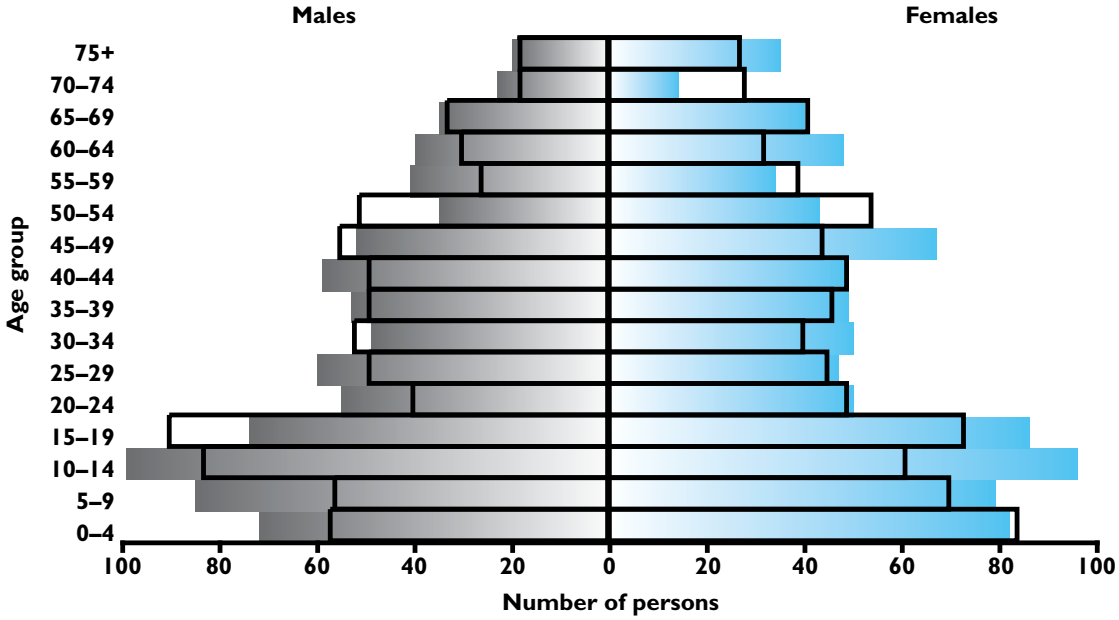
beginning with the youngest age group at the bottom, and increasing with age towards the top of the pyramid. The number of males is depicted on the left and the number of females on the right side of the pyramid's centre. Population pyramids usually have sides that taper gradually towards the top.

The shaded area shows the resident population count of the 2001 census whereas the outlined area shows the resident population count of the 2006 census. It is important to note that those who were counted in the 2001 census are now five years older than they were in the 2006 census. This is only if they were present in Niue and enumerated in the two censuses.

Niue's 2006 age–sex distribution, as illustrated in the outlined areas in Figure 2.2, reveals some interesting patterns and highlights different demographic features and processes. The most prominent features are:

- young girls (aged 0–9) outnumbering young boys, with a reverse pattern emerging among adolescents (10–19);
- a clear "indent" in the distribution affecting the 20–39 age groups; and
- women (N=167) clearly outnumbering men (N=125) in the 55+ age group, as reflected in a sex ratio of 75 males to 100 females.

Figure 2.2: Population pyramid, resident population, 2001 and 2006



Note: Outlined areas describe the 2006 population, and shaded areas refer to the 2001 population.

While such marked contrasts and variations appear more prominent in small populations, the emergence of such distinct patterns nevertheless underlines the distinct impact that births, deaths and migration have on a country's population structure and dynamics. The greater number of young girls compared with boys appears largely the result of more baby girls (N=100) born in Niue than baby boys (N=71) in recent years, as reflected in reported births from 2000 to 2006.

The "under-representation" of young adults, both male and female, appears to be largely the result of sustained emigration to New Zealand. The larger number of women than men in the 55+ age group appears largely the result of higher male than female mortality; it could also mean more pronounced male than female migration, or longer absences abroad by men than women in this age group.

A rather "flat" age pyramid is also a sign of an ageing population, which in Niue's case is evident from the median age of 30.7 years, meaning that half of Niue's population is younger than 30.7 years, and half is older. Niue's population aged two years between 2001 and 2006, and there are small differences between the figures for men and women (Table 2.3).

Another way of describing a country's population structure is via the concept of age-dependency ratios, which relate the economically dependent component of a population (the young and old) to its productive component (Table 2.3). This is usually expressed as a ratio of a country's young (children under 15 years of age) and "old" population sub-groups (generally people over 60, or 65 years of age), to the population of working age (people aged between 15 and 59, or 64). In Niue's case, the cut-off point has been set at 60, as in 2001, which translates into a dependency ratio of 71, meaning there were 71 children and "old" people for every 100 people of working age. The higher this ratio, the greater the challenges for families and governments to ensure that the young and old are adequately looked after by the working-age population, of whom not all are actually employed (see section 4). Over the past 20 years, this ratio has decreased considerably, from 96 in 1986 to its current level of 71, largely the result of fertility decline (see section 5).

Table 2.3: Resident population by broad age groups, median age, dependency ratio and sex ratio, 2001 and 2006

Age Group	2001						2006					
	Total		Males		Females		Total		Males		Females	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0–1	63	*3.6*	26	*3.0*	37	*4.3*	60	*3.9*	31	*4.1*	29	*3.7*
1–4	119	*6.9*	57	*6.6*	62	*7.1*	141	*9.2*	27	*3.6*	84	*0.7*
0–14	528	*0.4*	271	*1.3*	257	*9.6*	411	*6.7*	196	*5.9*	215	*7.5*
15–24	265	*5.3*	129	*4.9*	136	*5.7*	252	*6.4*	130	*7.2*	122	*5.6*
15–59	953	*4.9*	478	*5.1*	475	*4.7*	900	*8.5*	461	*1.0*	439	*6.1*
60+	260	*5.0*	122	*4.1*	138	*5.9*	227	*4.8*	99	*3.1*	128	*6.4*
Median Age	28.5						30.7					
Dependency Ratio	82						71					
Sex Ratio	100						97					

2.4 Socio-demographic characteristics

2.4.1 Ethnicity

In 2006, 1,246 (81%) of the 1,538 residents were of Niuean descent. Only 292 people (19%) were from other ethnic groups. Pacific Islanders (11%, or 172) make up the single largest group comprising Tongans (54), Tuvaluans (35), Samoans (38), Fijians (31) and other Pacific Islanders (14). A further 3% of the resident population is of European descent, 2.6% is Asian, with the remaining 2.6% coming from other countries (Table 2.4).

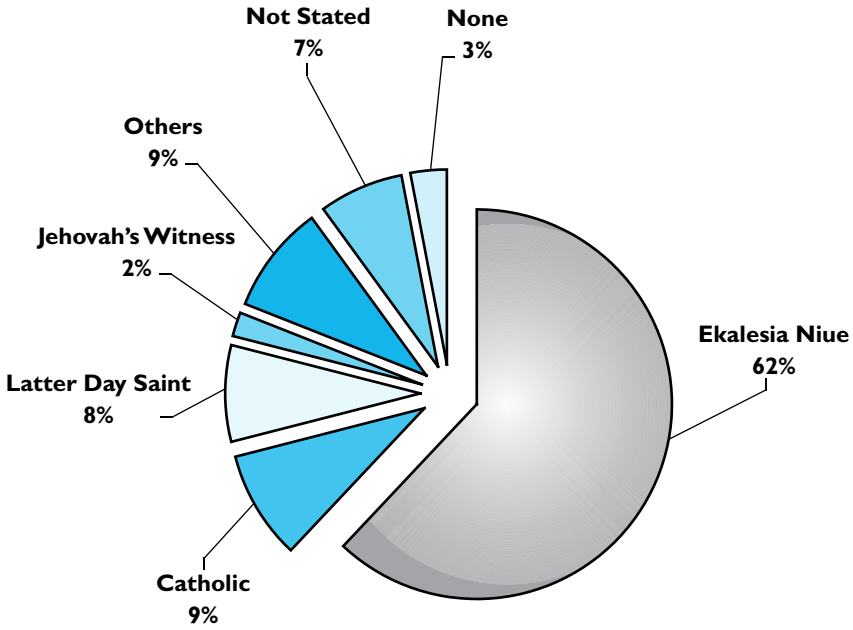
Table 2.4: Resident population by ethnicity and sex, 2001 and 2006

Ethnicity	2001						2006					
	Total	%	Males	%	Females	%	Total	%	Males	%	Females	%
Total	**1,736**	***100.0***	**867**	***100.0***	**869**	***100.0***	**1,538**	***100.0***	**756**	***100.0***	**782**	***100.0***
Niuean	1,469	*84.6*	718	*82.8*	751	*86.4*	1,246	*81.0*	588	*77.8*	658	*84.1*
Non-Niuean	267	*15.4*	149	*17.2*	118	*13.6*	292	*19.0*	168	*22.2*	124	*15.9*

2.4.2 Religion

Christianity is the dominant religion, with 62% of the resident population (956 people) affiliated with the Ekalesia Niue Church (Figure 2.3). The Catholic Church is next with 9% (138 people), followed by the Church of Latter Day Saints with 8% (127) and Jehovah's Witness with 2% (28). Other religious denominations combined into an "others" category (9%) include, Apostolic, Methodist, Church of God of Jerusalem, Baha'i, Pentecostal, Sikh, Hindu and Christian Fellowship, and the Seventh Day Adventist Church, which at the time of the 2006 census registered only 6 members (0%), compared with 2% in 2001. Three per cent of the resident population stated they had no religion, and 7% chose not to state their religion. Although not a compulsory question, only one person refused to respond.

Figure 2.3: Resident population by religious denomination, 2006



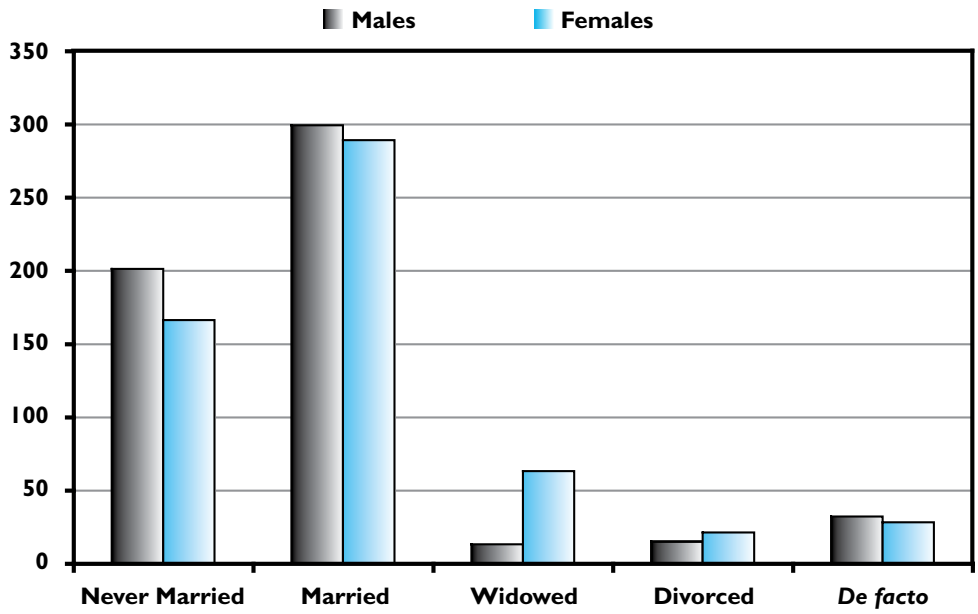
2.4.3 Marital status

All people aged 15 years and older were asked about their current marital status. The main reason this question is included in a census is that marriage (and de facto cohabitation) patterns can be important determinants of fertility, especially in societies where the use of modern contraceptives is limited, and marriage is regarded as entry into sexual union. The proportion of the population that is married, together with the incidence of widowhood and divorce, has an impact on the number of children born, with widowhood also seen as a useful indicator of mortality differences between males and females.

At the time of the 2006 census, 52% of the Niuean resident population was married, with a further 5% living in a *de facto* union/marriage, 33% never married, 7% widowed, and 3% divorced. A slightly greater proportion of men (59%) than women (56%) were married or living in a *de facto* union, and there was a slightly higher proportion of never-married men (36%) than never-married women (29%). But there was a marked difference in the number of widows and widowers, with five times more widows than widowers. While the latter might be an indication of differential male and female mortality — as already illustrated in the larger number of female (96) than male (69) residents over 65 years of age — a closer examination of marital status by age, however, suggests a greater propensity of men to re-marry after having lost their spouse, compared with women. This is illustrated in the relative proportions of men and women 65 years and older who are married (75% of males; 45% of females) or widowed (10% of males, compared with 44% of females).[1]

[1] More detailed information, as well as other demographic statistics disaggregated by age, is available in customised cross-tabulation upon request from the Niue Statistics Office.

Figure 2.4: Resident population 15 years and older by marital status, 2006



3. Education

The level of formal education attained is a key indicator of the degree of development and quality of life in a country. Education is linked to demographic, economic and social factors, and thus contributes to the development of well-being. There are close and complex inter-relationships between education, fertility, morbidity, mortality and mobility. For example, when mothers are better educated, they tend to have fewer children, their children's health status improves, and their survival rate tends to increase. Higher levels of education also contribute to a better qualified workforce, and better educated people also have improved chances of finding employment, both domestically and overseas.

School attendance in Niue is compulsory from ages 5 to 16 (i.e. through secondary school), although some children have left school at the age of 15. Niue has included Early Childhood Education into the curriculum at the primary level, and these children start at age 4. Children nearing age 4 get to attend the term just before they turn 4.

There are two government schools in Niue: the Niue Primary School and the Niue High School. The primary school offers early childhood classes prior to regular classes 1 to 6 or Years 1 to 6; and the high school offers classes from Form 1(Year 7) to Form 7 (Year 13). Despite the introduction of Form 7 studies at Niue High School, some parents still prefer to send their children to high schools in New Zealand.

Scholarships are available to qualified Form 7 students who attain at least 18 points in all subjects, to pursue tertiary studies at universities in New Zealand and within the region (mainly at the

University of the South Pacific–USP). A new scholarship policy was formulated in early 2005 to try to decrease the number of students going to New Zealand to study and not returning. The scholarship pays for a student's airfare and entitles them to obtain a student loan in New Zealand. If the student is successful and returns to Niue to work, the government will assist by paying for the school loan. If the student decides not to return to Niue, the student is responsible for repaying the loan. A number of students are returning from USP, often with partners, to settle in Niue.

The 2006 Niue census contained two questions on education: *What is your highest level of schooling completed?, and What is your highest school qualification achieved?* (Questions 9 and 10).

3.1 Current school enrolment

With school enrolment compulsory for ages 5 to 16, Niue's enrolment rate of 98% for this age group it is not surprising (Table 3.1). Enrolment is 100% for ages 5 to 14, with 2 out of 36 15-year-olds, and 6 out of 36 16-year-olds not attending school.

Enrolment drops quite markedly in older age groups, however, with only about one in two 17- and 18-year-olds attending high school or the Niue branch of the University of the South Pacific (which is also attended by a further four residents in their 20s). Whether this means that half of this age group has completed high school, or has dropped out of high school, cannot be ascertained from the census data. It is also possible that many more young Niueans in this age group and older are pursuing further/tertiary education on a part-time basis, but this option was not covered by the census.

There are no gender differentials in school enrolment, apart from a small differential in non-attendance among 15- and 16-year-old boys and girls.

Table 3.1: School attendance by age and sex, 2006

Age	Resident Population			Currently enrolled					
	Numbers			Numbers			%		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	**460**	**240**	**220**	**392**	**197**	**195**			
4	27	11	16	27	11	16	100.0	100.0	100.0
5	22	9	13	22	9	13	100.0	100.0	100.0
6	26	12	14	26	12	14	100.0	100.0	100.0
7	24	11	13	24	11	13	100.0	100.0	100.0
8	33	12	21	33	12	21	100.0	100.0	100.0
9	21	12	9	21	12	9	100.0	100.0	100.0
10	25	14	11	25	14	11	100.0	100.0	100.0
11	26	15	11	26	15	11	100.0	100.0	100.0
12	35	19	16	35	19	16	100.0	100.0	100.0
13	30	19	11	30	19	11	100.0	100.0	100.0
14	28	16	12	28	16	12	100.0	100.0	100.0
15	36	23	13	34	21	13	100.0	**91.3**	100.0
16	36	16	20	30	13	17	**83.3**	**81.3**	**85.0**
17	39	23	16	23	11	12	59.0	47.8	75.0
18	22	10	12	8	2	6	36.4	20.0	50.0
19	30	18	12	0	0	0	0.0	0.0	0.0

3.2 Level of educational attainment

Compulsory education in Niue over the years has resulted in a high level of educational attainment of the Niuean population, with 53% of the population aged 15 and older referring to secondary education as their highest level of completed education, with a further 33% having undertaken tertiary studies (Table 3.2).

Table 3.2: Highest level of educational attainment, 2006 (%)

	Total	%	Males	%	Females	%
Total	**1,028**	**100.0**	**513**	**100.0**	**515**	**100.0**
No education	27	2.6	15	2.9	12	2.3
Primary	106	10.3	41	8.0	65	12.6
Secondary	549	53.4	285	55.6	264	51.3
Tertiary	337	32.8	168	32.7	169	32.8
Not stated	*9*	*0.9*	*4*	*0.8*	*5*	*1.0*

Note: This table refers to Niue's resident population aged 15 and older who no longer attend an educational institution.

These high levels are virtually identical for men and women, except for a slightly smaller proportion of females (52%) than males (56%) who claim secondary education as their highest level of educational attainment. The situation is reversed for primary level education, which represents the highest level attained for 8% of males and 13% of females, respectively.

There have been some positive developments in the level of educational attainment within the Niuean population over the past decade (Table 3.2). Most impressive is the substantial increase in the proportion of residents 15 years and older having a tertiary education. This has doubled, from 15%–33%, with women's tertiary educational attainment nearly tripling (from 13% in 1997 to 33% in 2006). Niue has also experienced a decline in the number of people who have only a primary education; the proportion has fallen from 17% in 1997 and 19% in 2001, to just 10% in 2006.

Table 3.3: Highest level of educational attainment 1997, 2001 and 2006 (%)

	1997			2001			2006		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total				**1,169**	**575**	**594**	**1,028**	**513**	**515**
No education	2.3	2.0	2.5	2.8	1.7	3.9	2.6	2.9	2.3
Primary	16.8	13.2	20.4	19.4	16.5	22.2	10.3	8.0	12.6
Secondary	61.2	63.0	59.4	51.8	53.4	50.3	53.4	55.6	51.3
Tertiary	15.0	17.3	12.6	24.9	27.0	22.9	32.8	32.7	32.8
Not stated	*4.8*	*4.5*	*5.0*	*1.0*	*1.4*	*0.7*	*0.9*	*0.8*	*1.0*

Several factors may have assisted these developments: a growing perception of the value of education by parents and children, as well as improvements in educational policy and practice that have resulted in more children staying in school longer and pursuing higher levels of

education over the years. Good educational facilities and free education are conducive to allowing everyone to achieve at least secondary education, as are broader changes in society. Education has become very important to Niueans, as exemplified by the growing number of people with a tertiary education. Today, age and marital status no longer hinder the pursuit of tertiary education, and the ability to study via Distance Flexible Learning (DFL) has made it possible and convenient for adult students to continue their education, full time or part time.

While these hypotheses cannot be proven on the basis of census data alone, a simple breakdown of levels of educational attainment by broad age groups does lend some support to such reasoning (Table 3.4). There is a clear association between education and age (changes over time) among young adults (aged 25–39), people in their prime years of life (40–59), and people over the age of 60. For example, one in every two young adults has some sort of tertiary education, compared with one in three people in their 40s and 50s, and just one in five people aged 60 and older. The situation is completely reversed with residents that have no education, or have only a primary education, with one in three people in their 60s in that category, compared with 9.5% of 40–59-year-olds, and just 2.5% of all young adults.

Table 3.4: Highest level of educational attainment by age, 2006

Age Group	Primary Education	Secondary Education	Tertiary Education	No Education	*Not stated*	Total
15–24 (N)	10	114	30	0	*0*	154
%	**6.5**	***74.0***	**19.5**	**0.0**	**0.0**	
25–39 (N)	6	129	144	1	*0*	280
%	**2.1**	**46.1**	**51.4**	**0.4**	***0.0***	
40–59 (N)	22	203	123	13	*6*	367
%	**6.0**	**55.3**	**33.5**	**3.5**	***1.6***	
60+ (N)	68	103	40	13	*3*	227
%	**30.0**	**45.4**	**17.6**	**5.7**	***1.3***	
Total	106	549	337	27	*9*	1,028
%	**10.3**	**53.4**	**32.8**	**2.6**	***0.9***	

Changes in educational policy and migration also contribute to the increase in the number of people with tertiary educational qualifications. For example, the conditions placed on New Zealand scholarships and the increasing number of students pursuing studies at USP in Fiji have increased the number of students returning to Niue. Furthermore, the pursuit of such studies by more mature Niuean students means that when these students do return home, they often do so with a partner who also has a tertiary education. Although the total numbers are small — anecdotal evidence suggests around 10 people — they can have a significant impact when concentrated in specific categories, especially given Niue's small resident population. Another likely impact that migration could have had, is that the present situation could simply have resulted from a change in the Niuean migration profile, with more educated people returning to Niue in recent years, and less educated people migrating, thereby increasing and decreasing the respective numerators.

3.3 Level of educational qualifications

Almost 100% of school-age children in Niue are enrolled in school (Table 3.1), and very few Niueans claim to have had no formal education (2.6%; Table 3.2), but a significant number lack formal educational qualifications. While most residents have achieved some form of primary (10.3%), secondary (53.4%) or tertiary (32.8%) education (Table 3.4), 47% have not achieved any formal qualifications (Table 3.5); of those who have, 11% have Form 5 or 6 certificates, or university entrance certificates. A further 20% have certificates that were not further defined, and hence could cover a broad range of documents, from university foundation level to secretarial qualifications. People with trade certificates made up just 1% (N=10), confirming anecdotal evidence of a trade shortage on the island. University level qualifications account for 19%, with women (N=59) slightly ahead of men (N=52) in degree and post-graduate qualifications.

Table 3.5: Highest level of educational qualifications, 2006

Educational Qualification	Total	%	Males	%	Females	%
Total	**1,028**		**513**		**515**	
No Qualification	484	47.1	247	48.1	237	46.0
5th / 6th Form Certificate	99	9.6	41	8.0	58	11.3
University Entrance	15	1.5	8	1.6	7	1.4
Certificate	200	19.5	99	19.3	101	19.6
Trade Certificate	10	1.0	9	1.8	1	0.2
Diploma	83	8.1	44	8.6	39	7.6
University Degree	90	8.8	44	8.6	46	8.9
Masters / Post Grad / Doctorate	24	2.3	8	1.6	13	2.5
Not stated	*23*	*2.2*	*0*	*0.0*	*0*	*0.0*

As noted earlier with school enrolment and levels of educational attainment, there are no substantial differences in the level of educational qualifications between men and women in any of the major categories, except among the small group of people with trade qualifications (N=10), where only one woman reported to have such qualifications. This gender parity reflects the social changes previously referred to, with males and females treated equally, and the access to similar opportunities. Young females no longer stay at home to look after siblings, and their male counterparts no longer stay home to help in the plantations. Young men and women who decide to stay home and not take advantage of available educational opportunities, do so of their own accord, and not because they are forced to do so by economic or family circumstances. Tertiary level qualifications also lead to tangible salary differentials, which also accounts for recent increase in levels of tertiary education and qualifications.

Considering the same feature, the highest level of educational qualifications of people aged 25 years and older by age and sex, shows some interesting variations and contrasts (Table 3.6).

- There is a close relationship between age and qualifications, with only one in three residents over aged 60 having achieved some educational qualifications, compared with 70% of those aged 25–39, with this pattern more pronounced in women than in men;

- One in three people aged 25–39 have achieved a diploma, a university degree or post-graduate degree or at least degree level, with young women (36%) slightly ahead of men in the same age group (30%);
- Women aged 25–39 have the highest level of educational qualifications, with 8 out of 10 women having achieved some form of educational qualifications, compared with 6 out 10 men in the same age group.

Table 3.6: Highest level of educational qualifications, population aged 25 and older, 2006

Educational Qualification	Total	%	25-39	%	40-59	%	60+	%
Population 25 years and over	**874**		**280**		**367**		**227**	
No Qualification	391	44.7	86	30.7	152	41.4	153	67.4
5th/6th Form Certificate	82	9.4	31	11.1	42	11.4	9	4.0
University Entrance	13	1.5	4	1.4	7	1.9	2	0.9
Certificate	168	19.2	61	21.8	77	21.0	30	13.2
Trade Certificate	10	1.1	1	0.4	8	2.2	1	0.4
Diploma	79	9.0	32	11.4	30	8.2	17	7.5
University Degree	85	9.7	50	17.9	30	8.2	5	2.2
Post Grad Dip/Masters/Doctorate	24	2.7	10	3.6	11	3.0	3	1.3
Not stated	22	2.5	5	1.8	10	2.7	7	3.1
Males 25 years and over	**430**		**150**		**181**		**99**	
No Qualification	184	42.8	57	38.0	71	39.2	56	56.6
5th/6th Form Certificate	35	8.1	14	9.3	15	8.3	6	6.1
University Entrance	8	1.9	2	1.3	5	2.8	1	1.0
Certificate	87	20.2	28	18.7	42	23.2	17	17.2
Trade Certificate	9	2.1	1	0.7	7	3.9	1	1.0
Diploma	43	10.0	16	10.7	17	9.4	10	10.1
University Degree	44	10.2	25	16.7	15	8.3	4	4.0
Post Grad Dip/Masters/Doctorate	11	2.6	4	2.7	4	2.2	3	3.0
Not stated	9	2.1	3	2.0	5	2.8	1	1.0
Females 25 years and over	**444**		**130**		**186**		**128**	
No Qualification	207	46.6	29	22.3	81	43.5	97	75.8
5th/6th Form Certificate	47	10.6	17	13.1	27	14.5	3	2.3
University Entrance	5	1.1	2	1.5	2	1.1	1	0.8
Certificate	81	18.2	33	25.4	35	18.8	13	10.2
Trade Certificate	1	0.2	0	0.0	1	0.5	0	0.0
Diploma	36	8.1	16	12.3	13	7.0	7	5.5
University Degree	41	9.2	25	19.2	15	8.1	1	0.8
Masters/Post Grad/ Doctorate	13	2.9	6	4.6	7	3.8	0	0.0
Not stated	*13*	*2.9*	*2*	*1.5*	*5*	*2.7*	*6*	*4.7*

3.4 Language skills

There is a fear in Niue that the Niuean language is quickly disappearing. This is illustrated by anecdotal evidence from adults and children alike who use English more than Niuean in everyday conversations, and students who, in years past, were only allowed to converse in English at school. To obtain more definite evidence on the prevailing situation, several language skill questions pertaining to Niuean and English were included in the 2006 census, targeting Niue's resident population age 4 years and older.

This widespread perception that the Niuean language is disappearing is not substantiated by census data. The vast majority of Niuean residents (72%) claim to speak Niuean all the time, and a further 18% indicate they use it often. Only 3% claim to never use it at all (Table 3.7).

Table 3.7: Niuean language use, 2006

First language learned (N=1424)	Total	%
Niuean	**919**	64.5
English	131	9.2
Niuean and English	172	12.1
Other Languages	202	14.2
Speaking Niuean		
Yes	1,230	86.4
Just a little	97	6.8
No	97	6.8
Frequency of speaking Niuean		
All the time	951	71.7
Often	241	18.2
Not very often	99	7.5
Not at all	36	2.7

For two in three residents, Niuean is the first language learned as a child, with a further 12% reporting to have grown up learning Niuean along with English (Table 3.7), with only English (9%) or other languages (14%) representing the first language learned for approximately one in four residents.

Table 3.8: Proficiency in Niuean language among resident population age 4 and older, 2006 (%)

Proficiency	Yes	A little	Not at all
Understand	92.1	5.9	2.0
Speak	86.4	6.8	6.8
Read and write	88.3	6.3	5.4

Just over 86% of the population claim to speak Niuean fluently, with 7% indicating they speak it a little, and another 7% per cent reporting to not speak any Niuean at all (Table 3.8); 92% report understanding Niuean, with only 2% indicating they do not understand it at all. In terms of practicing these language skills, three in four residents claim to speak Niuean all the time, with a further 18% claiming frequent use, and only 10% claiming to use it rarely (7.5%) or not at all (2.7%). While most people in bilingual environments routinely switch between both languages, depending on situations and context (such as speaking English at work, regarding work matters, yet switch to Niuean for more social talk), the only population group using Niuean for reading, writing and speaking are children in early childhood and early primary education (ages 4–7), where all lessons are taught in Niuean.

This high proportion of verbal communication skills in Niuean is also reflected in reading and writing proficiencies, with 88% of the population claiming to be able to read and write in Niuean, with only 5% claiming not to be able to do so.

Most households in Niue tend to converse in both Niuean and English (43%) whereas only 37% speak Niuean only, 7% speak English only, 5% speak other languages, 4% speak both Niuean and another language, and the remaining 4% speak English and another language (Table 3.9).

Table 3.9: Language spoken in each household, 2006

Language spoken in Niuean households (N=474)	Total	(%)
Niuean only	175	36.9
English only	34	7.2
Other	22	4.6
Both Niuean and English	205	43.2
Niuean and other	18	3.8
English and other	20	4.2

4. Labour Market Activities

The everyday activities of the people of a country or community are closely interrelated with population change and patterns. Economic activity and employment are shaped not only by the size of the working-age population and the educational and skill level of the labour force, but also by the economic resources available to a country. Integrating population factors into economic and social development strategies is vital to achieving sustainable development outcomes and improving the quality of Niuean life.

To pursue such policy objectives, Niue's administrators, planners and policy-makers and their development partners require good data on economic and labour market activities, such as employment and unemployment. Such data are necessary to both ascertain the standard of living of the population, and to provide benchmarks and baseline information against which to monitor progress. To obtain these and related data, the 2006 census included several questions on labour market activities undertaken by people over 15 years of age (see Appendix 2, Questions 24–33). Because a more comprehensive analysis of labour market activities will appear in a separate report, this report provides a summary of 2006 labour market activities only, and includes a brief occupation and industry profile.

4.1 Labour force

Every person aged 15 and older was asked to indicate their main activity in the week proceeding the census, whether they were working for pay or running a business, working in agriculture or fishing for sale or their own consumption, making handicrafts for sale, or did no work at all (Q-24). People who indicated they had not done any work in the week prior to the census, were then asked if they did any unpaid work for the family, relatives or community (Q-25). Those who replied yes, were subsequently asked to indicate the type of unpaid work undertaken (Q-26), while those who replied no were asked if they were looking for paid employment (Q-27a). Those who indicated yes, were then asked if they were able and willing to start work if they were offered paid employment (Q-28); those who replied no, were asked why they didn't look for paid employment (Q-27b).

Such a sequence of filtered questions provides an accurate description of Niue's labour force, the state of employment and unemployment, specific activities people are undertaking, and the occupations and industries that people are employed in. It also allows for a description of the economically inactive population; that is, of the people not in the labour force.

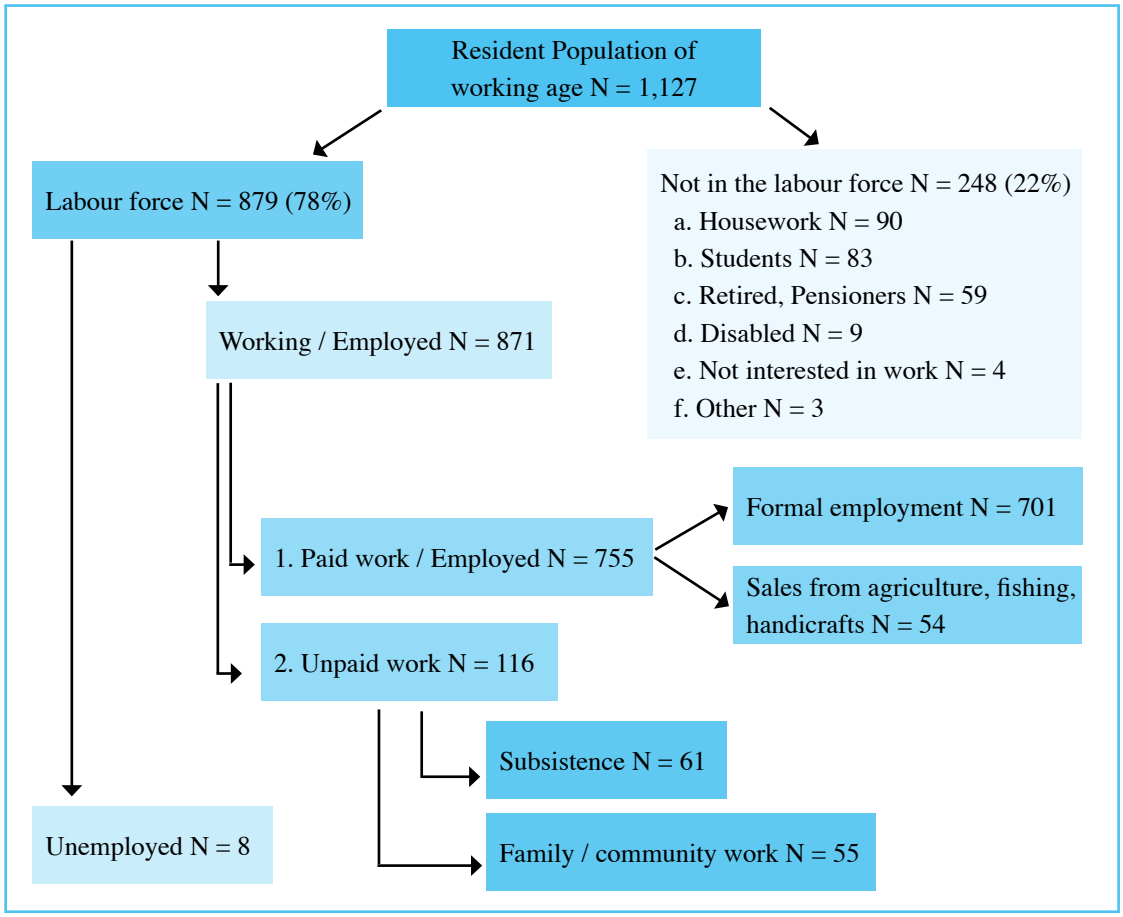
A summary of this assessment is presented in Figure 4.1. Niue's labour force includes 879 people, representing 78% of the population who are 15 years of age and older. Niue's labour force comprises people who were economically active in the week before the census; that is, people who worked for pay or ran a business, people working in agriculture or fishing for sale or their own consumption, people making handicrafts for sale, or those people who did not do any of these activities, but were actively looking for paid employment and were available for work during the week prior to the census. The rest of the population over 15 years of age, who did not undertake any of these activities (i.e. were not employed or unemployed and therefore were not economically active), are regarded as not being in the labour force. These are people engaged in

full-time housework, who attend school, who were retired or pensioners, with a disability, and those claiming no interest in working.

While these questions allow for a detailed description of the working population, that is the active or employed part of the labour force, the true extent of unemployment in Niue cannot be ascertained with these questions for various reasons.

- People who undertake unpaid family or community work (Q-25), or work in subsistence activities (Q-24/4), were not asked whether they were actively looking and available for paid employment in the week prior to the census (Q-27a, 27b and Q-28).
- The filter question specifically addressing unemployment (Q-27a/b) focussed exclusively on paid employment, and did not cater to people intending to start their own business, or planning to engage in other economic and subsistence activities.
- The question asking people why they did not look for paid employment (Q-27b) did not allow for the possibility of people not looking because they felt such work was not available, and hence was superfluous to actively look for it.

Figure 4.1: Niue labour market activities, 2006



In 2006, Niue's labour force participation rate amounted to 78%, with 85% of males and 71% of females working for pay or running a business (including agriculture and fishing and making handicrafts for sale), or who were engaged in unpaid work, with only a small number of people (N=8) classified as unemployed (Table 4.1), representing 1% of the labour force. Working for pay or running a business appeared as the most prominent labour force activity, accounting for the main work of 80% of the labour force (83% for males, and 76% for females), ahead of unpaid work (13%), such as subsistence activities (7%) and unpaid family/community work (6%). Those engaged in agricultural and fishing activities, and producing handicrafts for sale account for only 6%.

As discussed earlier, it is difficult to provide an accurate description of unemployment; the extent of true unemployment in Niue exceeds the census-based 1%. If, for example, all youth and Niueans in their 20s and 30s undertaking unpaid work (N=37) had been available and willing to take paid employment (had it been available to them), the rate of unemployment would have risen to 5%.

Table 4.1: Niue labour market activity, 2006

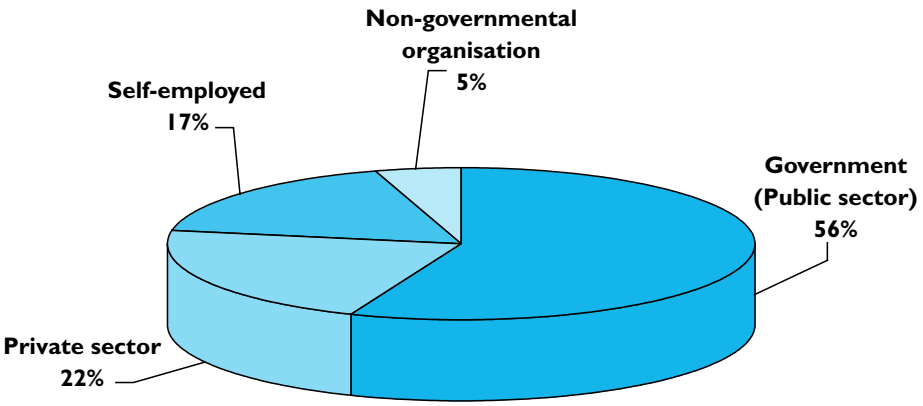
Labour Market Activity **Niue Resident Population aged 15 years and older**	**Total** **1,127**	**Males** **560**	**Females** **567**	**Total** **(%)**	**Males** **(%)**	**Females** **(%)**
Labour force	***879***	***476***	***403***	***78.0***	***85.0***	***71.1***
1. Working for pay	**755**	**408**	**347**	**85.9**	**85.7**	**86.1**
1.1 Working for pay/Running a business	701	394	307	79.7	82.8	76.2
1.2 Working in agriculture and fishing for sale	20	12	8	2.3	2.5	2.0
1.3 Working by making handicrafts for sale	34	2	32	3.9	0.4	7.9
2. Unpaid work	**116**	**65**	**51**	**13.2**	**13.7**	**12.7**
2.1 Working in agriculture and fishing / own consumption	61	40	21	6.9	8.4	5.2
2.2 Undertaking unpaid family community work	55	25	30	6.3	5.3	7.4
3. Unemployed (looking /available for paid employment)	**8**	**3**	**5**	**0.9**	**0.6**	**1.2**
Not in the labour force	***248***	***84***	***164***	***22.0***	***15.0***	***28.9***
1. Housework/Home duties	90	10	80	36.3	11.9	48.8
2. Students in full-time education	83	38	45	33.5	45.2	27.4
3. Retired / Pensioners	59	26	33	23.8	31.0	20.1
4. Disabled	9	5	4	3.6	6.0	2.4
5. Not interested in work	4	2	2	1.6	2.4	1.2
6. Unclear (not stated reasons why not working)	3	3	0	1.2	3.6	0.0

4.2 Occupation

Of those formally employed, 56% work for the government, 22% work in the private sector and 17% are self-employed (Figure 4.2). With near equal proportions of men (55%) and women (58%) working for the government, a greater proportion of males (26%) than females (17%) work in the private sector, with an inverse situation emerging among self-employed males (14%) and females (21%).

The most striking feature of Niue's occupational profile is the absence of any dominant occupational category as illustrated in near equal pie-slices in Figure 4.3, and the fact that most occupational categories are dominated by either a male or female labour force (Figure 4.4).

Figure 4.2: Employment status of population in formal employment, 2006



Craft and related trade work (15%) and elementary occupations (15%) top the list in providing employment to 30% of the Niuean labour force, closely followed by professionals (13%) and people working as technicians and in associated professional occupations (12%). With little differentiating the various occupational groupings, it is interesting to note that more people are working as legislators and senior officials (N=81, or 11%) than as clerks (N=73, or 10%).

Apart from near gender parity in the technical/associated professional category and among service/shop/market sales workers, all other occupations are either dominated by a male or female labour force (Figure 4.4): office work as clerks is clearly the domain of women (89%), with women (63%) also outnumbering men at a ratio of two to one among professionals. All other occupations appear as more predominantly male domains, such as plant and machinery operators and assemblers (91%), skilled agricultural/fisheries workers (71%), elementary occupations (68%), craft and related trade workers (64%) and legislators and senior officials (61%).

Figure 4.3: Occupational profile, 2006

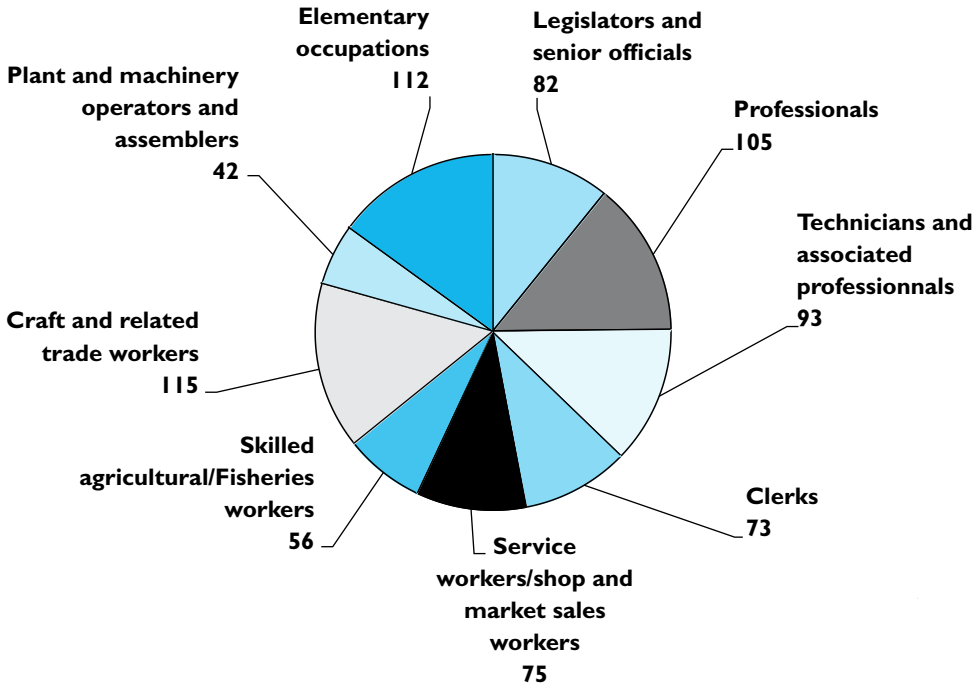
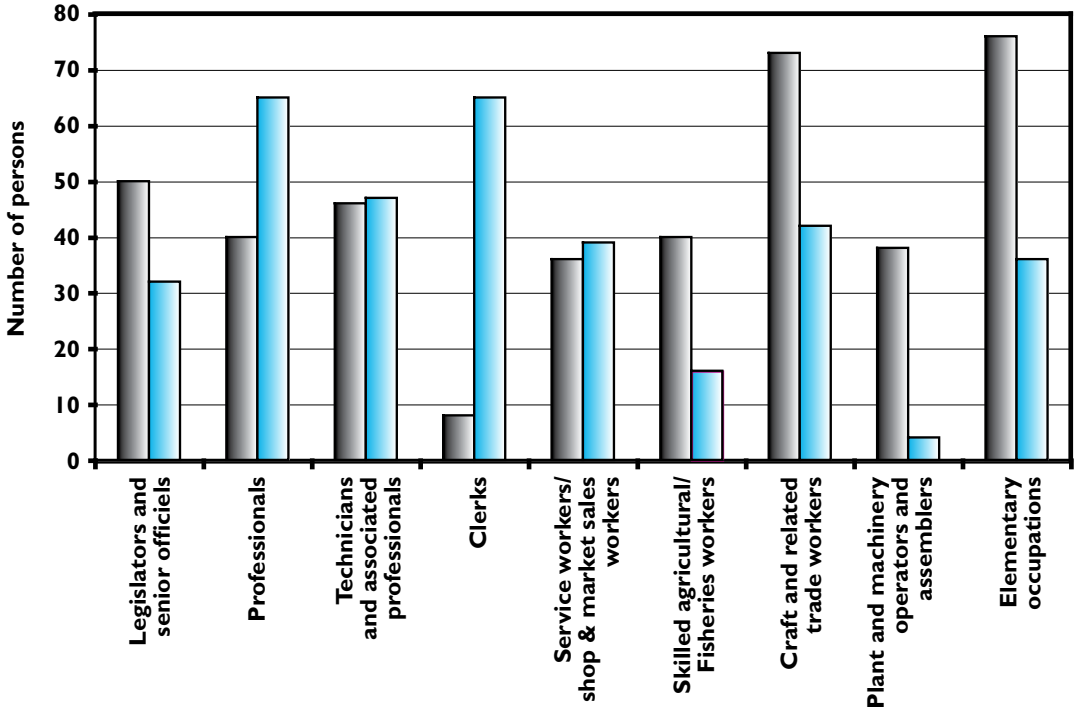


Figure 4.4: Occupational profile by gender, 2006



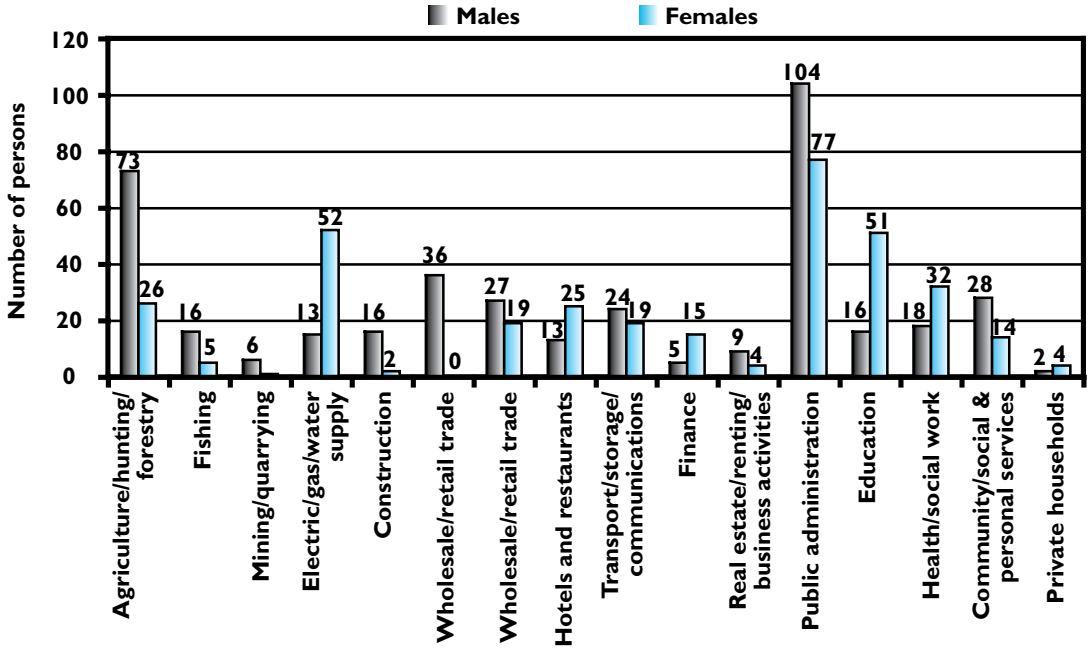
4.3 Industry

The dominance of the public sector providing employment in Niue is also clearly illustrated when examining labour force activities across sectors, with public administration (24%) and (public) health and education services (16%) emerging as the largest employers, alongside primary industries (16%), and wholesale/retail trade and hotel and restaurant sectors (11%). Not surprisingly, as with earlier observations regarding occupation, there are some marked contrasts in male and female employment across these sectors (Figure 4.5). The most pronounced contrasts emerge in manufacturing, and education and health services, where women clearly outnumber men. This is largely the result of more women engaged in handicraft production, and working as teachers and nurses compared with their male counterparts. Men, on the other hand, are dominant in primary industry and construction.

Table 4.2: Industrial profile by gender, 2006

Industries	Total Population			%		
	Total	Males	Females	Total	Males	Females
Total	**747**	**403**	**344**			
Agriculture, forestry, fisheries	119	88	31	15.9	21.8	9.0
Minig, electricity/gas, construction	61	58	3	8.2	14.4	0.9
Manufacturing	67	15	52	9.0	3.7	15.1
Wholesale, retail, hotels, restaurants	84	40	44	11.2	9.9	12.8
Transport / storage / communications	43	24	19	5.8	6.0	5.5
Finance, real estate, business activities	33	14	19	4.4	3.5	5.5
Public administration	180	103	77	24.1	25.6	22.4
Education and health	117	34	83	15.7	8.4	24.1
Community / social and personal services	43	27	16	5.8	6.7	4.7

Figure 4.5: Industrial profile by gender, 2006



4.4 Income

The census also provides some income information, with everyone in paid employment asked about their annual gross income, and all but 38 respondents providing this information.

- Two in three Niueans in paid employment earn less than $15,000/year,
- About one-third of all Niueans earn less than $10,000, one-third earn between $10,000 and $15,000, and one-third over $15,000;
- While there are no differences across the three broad income categories between male and female paid workers, women are slightly over-represented in the lowest income category, and clearly under-represented in the two top categories. This is not to say that women are paid less than men, but is merely an indication that fewer women than men are in higher paying positions.

Table 4.3: Annual gross income of people in paid employment, 2006

Income	Total	%	Males	%	Females	%
Total Responses	**717**		**385**		**333**	
<5,000	114	15.9	50	13.0	64	19.2
5,000 - 9,999	111	15.5	68	17.7	43	12.9
10,000 - 14,999	229	31.9	126	32.7	103	30.9
15,000 - 19,999	100	13.9	48	12.5	52	15.6
20,000 - 29,999	107	14.9	57	14.8	50	15.0
30,000 - 39,999	33	4.6	20	5.2	13	3.9
>40,000	23	3.2	16	4.2	8	2.4

5. Population Dynamics

This section describes Niue's population growth and its underlying dynamics, including fertility, mortality and migration.

5.1 Population growth

There are two ways to describe population growth. At the most basic level is natural increase, which defines population growth in terms of births and deaths, with growth occurring in a time period when births exceed the number of deaths. When deaths exceed the number of births, we speak of negative growth, or population decline. In other words:

Natural increase = births – deaths

In countries where international migration is significant, such as in Niue (and throughout Polynesia), population growth is shaped largely by emigration and immigration must also be considered.

Population growth defines the change in a country's population as the net result of natural increase and net-migration, which is illustrated by the "balancing equation":

Population growth = natural increase + net migration (immigration – emigration)

In Niue, 129 births and 76 deaths were registered in the five-year intercensal period between 2001 (September) and 2006 (August). These numbers include births and deaths of Niuean residents that occurred overseas, mainly in New Zealand. By subtracting the number of deaths from the number of births, the total natural increase is obtained:

129 – 76 = +53

This means that the population of Niue has shown a natural increase of 53 people between September 2001 and August 2006.

Despite this small positive rate of natural increase, the resident population has declined from 1,736 to 1,538 between the two census enumerations, resulting in a decrease of 198 people. The number of total net migrants during the intercensal period can be calculated by subtracting the natural growth of the population (+53) from the overall difference in population change between 2001 and 2006 (-198):

Total net migration = (-198) – (53) = -251

In other words, between 2001 and 2006, 251 more people left Niue than arrived, averaging about 50 people per year, which is nearly identical to the situation prevailing a decade ago, when the annual net migration averaged 51 people between 1991 and 1997.[2]

The most basic demographic measures of birth and death are the crude birth rate (CBR) and crude death rate (CDR). They refer to the number of births and deaths in a given year for every

[2] Comparable figures for the period 1997–2001 are not available.

1,000 people. They are normally calculated by simply dividing the number of births and/or deaths in a given year by the (mid-year) total population size of that year, multiplied by 1,000. But for small populations, such as Niue's, it is essential to use multi-year averages because the random fluctuations of annual events can be quite considerable using very small numbers. Therefore, all rates for Niue should be calculated as an average of several years, preferably the nearest intercensal period, in this case 2001–2006.

The CBR and CDR for Niue are calculated by dividing the average annual number of births and deaths of the intercensal period 2001–2006 by the mid-period population size of the intercensal period.

(1,736 + 1,538) / 2 = 1,637

For Niue, an average of 25.8 annual births during the intercensal period 2001–2006 translates into an average CBR of 15.8 (25.8/1,637 X 1,000), and an average of 15.2 deaths during the same period translates into an average CDR of 9.3 (15.2/1,637 X 1,000).

By subtracting the CDR from the CBR, the rate of natural increase is obtained as stated above.

CBR (15.8) – CDR (9.3) = 6.5 per 1,000, or expressed in the more frequently used percentage term, 0.65% per year.

Applying the corresponding rates in the intercensal period to the balancing equation outlined above, yields an annual (crude) net migration rate of -3.05% (Table 5.1).

Table 5.1: Balancing equation

Population growth	**=**	**Natural increase**	**+**	**Net-Migration**
- 2.4%	=	0.65%	+	Net-Migration
- 2.4% – 0.65%	=	Net-Migration		
- 3.05%	**=**	**Net Migration**		

5.2 Fertility

Fertility refers to the reproductive behaviour of a population, and is related to the number of live births a woman has had. The fertility of a population depends on various factors.

- Demographic composition of the population (this refers particularly to the number and age of women);
- Populations without many women, particularly women in childbearing ages, will have fewer births than a population with a large number of women in childbearing ages;
- Fecundity (biological/physiological ability to reproduce);
- Age at cohabitation/marriage (as childbearing, in most countries, is usually closely linked to marriage or cohabitation, the age when men and women begin to live together has an obvious bearing on fertility);

- Availability and use of family planning (populations that have access to, and regularly use, family planning methods have lower fertility rates than those where access is limited or denied, thus interfering with regular/efficient use);
- Psycho-social and cultural context (this includes practices such as post-partum abstinence and breastfeeding, as well as value/belief systems concerning concepts of ideal family size, and the perceived "value" of children);
- Economic development; and
- Status of women (place in society, level of education, work status; based on worldwide empirical evidence, we know that higher levels of female education, and access to economic opportunities outside the household, are related to lower fertility and smaller families).

Fertility is the vital process that has the greatest impact on a country's age–sex composition (unless there are high levels of migration), because the composition and size of different age groups depend largely on birth rates. Populations become older with falling birth rates, because these reduce the proportion of children.

All women older than 15 years of age were asked how many live births they had ever had, how many of those were still living at the time of the census, and the date of their last birth, in order to establish the number of births during the year prior to the census.

In the 2006 Niue census, 35 children less than 1 years old were counted. This contrasts with 28 births recorded during the 12 months preceding the census. The difference of seven infants is attributable to both migration, and resident Niuean women having given birth to their child overseas, without this birth (again) registered with the Justice Department in Niue.

During the five-year intercensal period 2001–2006, 129 births were registered in Niue, which compares to a 141 resident children under 6 years of age. With two children reported to have died in the five years preceding the census, and considering that some of those born in Niue would have emigrated with their parents, the number of registered births seems somewhat low, as one would expect it to be higher than the number of surviving and enumerated children. These missing registered births may well be "overseas births" that were not registered in Niue, or were registered only after the statistics for a certain year were published.

As was shown in section 5.1, the average CBR for Niue is 15.8 for the intercensal period 2001–2006, based on the registered number of births (including births of Niuean residents overseas).

The demographic indicator most commonly used to describe a country's fertility situation is called the total fertility rate (TFR). This measure is an indication of the average number of children a woman gives birth to during her reproductive life (15–49 years of age) if they would be subject to the present fertility level and pattern during their entire reproductive life. It is calculated from the number of live births by age of women in a given year, the age-specific fertility rates (ASFRs). The data needed to calculate ASFRs are the total number of births by age of women in a given time interval (usually a calendar year), and the total number of women in each age group. This information is usually supplied by civil registration offices. Where such information is not available or considered incomplete or untimely, data from censuses or specific surveys are used.

Registration data for the intercensal period 2001–2006, yields a multi-year average TFR of 2.61 (Table 5.2). This estimate is based on the average registered number of children born by age of mother during the intercensal period 2001–2006, and estimated mid-period number of women of childbearing age. This figure means that Niuean women currently have between two and three live births.

Table 5.2: Estimated age-specific fertility rates (ASFRs) and total fertility rate (TFR), 2001– 2006

Age of Women	Number of women (resident pop) 2006	2001	Average no. of women	No. of births 1/9/2001-30/8/06	Average annual no. of births	ASFR
15–19	73	86	79.5	11	2.2	0.028
20–24	49	50	49.5	35	7.0	0.141
25–29	45	47	46.0	31	6.2	0.135
30–34	40	50	45.0	30	6.0	0.133
35–39	46	49	47.5	19	3.8	0.080
40–44	49	49	49.0	1	0.2	0.004
45–49	44	67	55.5	0	0.0	0.000
TOTAL	**346**	**398**	372	**127**		**0.521**
TFR						**2.606**

Note: Total number of births was 129 for this period, with two reported births to females under 15 years of age.

Another way to derive current fertility estimates is via the parity/fertility (P/F) ratio method; that is, by looking at the total number of children ever born by all current women of childbearing age (Table 5.3). This method, as well as the own-children method, is usually employed in the absence of vital registration data; if the latter exists, it serves as a useful way to cross-validate the completeness of vital registration.

The total number of children born alive to women aged 15 and older was 1,732 (Table 5.3), with the average number of children born alive to all women (also called average parity) standing at 3.1 children per woman.

Table 5.3: Females aged 15 and older by number of children ever born, 2006

Age Group	No. of women	No. of women having given birth	No. of children ever born	Average no. of children ever born
15–19	73	*4*	4	0.055
20–24	49	*20*	35	0.714
25–29	45	*30*	50	1.111
30–34	40	*26*	82	2.050
35–39	46	*39*	129	2.804
40–44	49	*46*	178	3.633
45–49	44	*36*	149	3.386
50–54	54	*50*	218	4.037
55–59	39	*36*	164	4.205
60–64	32	*26*	127	3.969
65+	96	*90*	596	6.208
Total 15+	**567**		1,732	3.055

Average parity increases with the age of women, from a low average of 0.05 children among women aged 15–19, to 3.4 children among women aged 45–49 (considered to be the end of a woman's childbearing years), to over 6 children among those older than 65. The normal gradual progression in average parity with age is absent in Niue, largely because of the small population size and the overall impact migration has on Niue's population structure.

Applying Trussell's P/F ratio method to children ever born data, yields TFR estimates varying between 2.3 and 3.4 (Table 5.4), with age group adjusted ASFRs (P3/F3 and P4/F4) yielding an estimate of 2.54, which matches the registry-based TFR calculation of 2.61 live births. Applying a third estimate of fertility, based on the Arriaga method (US Census Bureau, PAS/ARFE-2 program), which considers both parity and ASFRs at two points in time, 2001 and 2006, and yields an age group adjusted (25–34 age group) TFR of 2.7 for 2006 (Table 5.5).

Table 5.4: Estimated Niuean fertility based on children ever born and registration data (Trussell variant of Brass P/F ratio method, PFRATIO, US Census Bureau PAS program).

Age of women	Reported ASFR f(i)	Average CEB P(i)	Cumulative Fertility Phi (i)	F (i)	P / F Ratio	Adjusted ASFRs P2/F2 1.302	P3/F3 0.896	P4/F4 1.056	Avg (P3/F3,P4/F4 0.976
15–19	0.028	0.055	0.139	0.050	1.105	0.0474	0.0326	0.0384	0.0355
20–24	0.141	0.714	0.846	0.548	1.302	0.1921	0.1322	0.1559	0.1440
25–29	0.135	1.111	1.520	1.240	0.896	0.1748	0.1203	0.1418	0.1310
30–34	0.133	2.050	2.186	1.941	1.056	0.1686	0.1161	0.1368	0.1264
35–39	0.080	2.804	2.586	2.466	1.137	0.0916	0.0630	0.0743	0.0687
40–44	0.004	3.633	2.607	2.602	1.396	0.0042	0.0029	0.0034	0.0032
45–49	0.000	3.386	2.607	2.606	1.299	0.0000	0.0000	0.0000	0.0000
TOTAL	**2.607**					**3.3935**	**2.3356**	**2.7531**	**2.5444**

Table 5.5: Estimated Niuean fertility based on children ever born and registration data (Arriaga method, ARFE-2, US Census Bureau PAS program).

Age of women	ASFR from CEB f(i)	ASFR cumulative P(i)	ASFR Pattern (reported)	ASFR cumulative	Adjusting Factors	Adjusted ASFRs based on age groups 20-29	25-29	25-34	30-34
15–19	0.062	0.062	0.028	0.028	2.222	0.0311	0.0275	0.0287	0.0299
20–24	0.150	0.212	0.141	0.169	1.254	0.1588	0.1403	0.1465	0.1526
25–29	0.089	0.302	0.135	0.304	0.992	0.1514	0.1338	0.1396	0.1455
30–34	0.170	0.472	0.133	0.437	1.079	0.1497	0.1323	0.1381	0.1439
35–39	0.029	0.501	0.080	0.517	0.969	0.0898	0.0794	0.0829	0.0863
40–44	0.011	0.512	0.004	0.512	0.982	0.0046	0.0041	0.0042	0.0044
45–49	0.004	0.515	0.000	0.512	0.989	0.0000	0.0000	0.0000	0.0000
TOTAL	**2.577**		**2.607**			**2.9270**	**2.586**	**2.7000**	**2.8130**

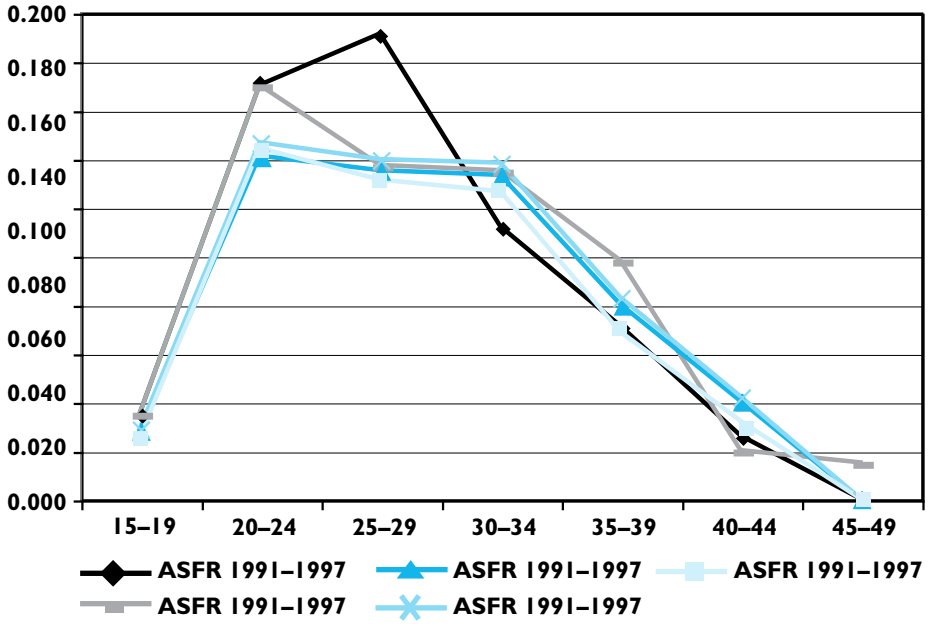
Applying three different methods, a direct calculation of fertility and two commonly used indirect methods, provides a reliable TFR estimate of 2.6.

Both parity values and ASFRs show that fertility has been, and probably still is, declining. The calculated TFR is based on the number of births as reported during a specific reference period, a year, or a group of years; the reported TFR for 1985 was 4.8, the corresponding figure for 1991 was 3.5, and multi-year average for the period 1991–1997 and 1997–2001 was 3.0.

Figure 5.1 describes the underlying ASFRs for 1991–1997 and 1997–2001. Compared with the three estimates for 2002–2006, this graph illustrates how and where Niuean fertility changed over the past 15 years, with declining fertility clearly the result of changing fertility patterns among 20–29-year-old women.

- With fertility levels peaking among 25–29-year-olds during the early 1990s, the ASFR of this age group stabilised at around 0.13–0.14 over the past 10 years.
- During the late 1990s, fertility peaked among 20–24-year-olds, which declined further in recent years.
- Throughout the past 15 years, no major fertility change has taken place among women over 30, with childbearing declining quite markedly, and ASFRs quite similar across the various age groups over time.

Figure 5.1: Comparing three different estimates of fertility for the period 2002–2006, with estimates for 1997–2002 and 1991–1997



5.3 Mortality

The mortality of a population depends on various factors, including:

- demographic composition of the population (age and sex distribution);
- health and medical services (immunisation programmes, maternal and child health care, primary health care);
- environmental conditions and availability of infrastructure such as housing, water supply, sanitation, waste disposal;
- exposure to risk factors, such as substance abuse (e.g. alcohol, tobacco);
- work-related dangers;
- exposure to events outside individual control (natural disasters, war); and
- social class.

The incidence of death reveals a lot about a population's standard of living and its general state of health. Indicators such as infant mortality and life expectancy at birth are widely used to describe the overall development status of a country.

The only question related to mortality in the 2006 census was the question regarding the number of children ever born and still alive. However, the very small size of this single data set would be insufficient to calculate reliable infant and child mortality estimates. Consequently, as in previous demographic analyses, mortality estimates must rely on Niue's vital registration system, which records deaths by age and sex. Fortunately, Niue's registration of vital events such as births

and deaths is considered fairly complete, and can be used to directly calculate a life table from data of deaths by five-year age groups. Because the possibility of random fluctuations is very high when dealing with very small numbers, as is the case with the Niue data, determination of meaningful indicators requires working with multi-year averages.

But even when applying five-year averages, for example, to span the exact five-year intercensal period, reported numbers of death are very low, as one would expect in a small population (Table 5.6), with some age groups not recording a single death in five years. These figures yield a CDR of 9.3/1000 for the period 2001–2006, meaning there were 9 reported deaths per year per 1,000 people. The CDR for males (10.8/1,000) was higher than for females (7.7).

While some demographers would question the validity of calculating life tables or applying indirect estimation techniques using model life tables under these circumstances, we prefer to take a more pragmatic approach: to provide Niue government officials and civil society with feedback regarding the overall health status of the population, while advising to use these estimates with caution and regard them as "the best estimates" that can be provided under given circumstances.

The potential difficulty of deriving a meaningful assessment of infant mortality is illustrated with just one death reported in five years. Set against 129 reported births during the same period, this yields an IMR of 7.8/1,000, which is comparable with other countries with low infant mortality rates. While good maternal and child health care provision on the island make such a low figure quite plausible, it is advisable not to over-interpret this figure, as only five years ago, Niue's IMR was 29.4/1,000 (the result of four infant deaths recorded between 1997 and 2001),[3] up from 17.5/1,000 between 1991 and 1997 (five reported deaths over 286 births during this period).

[3] The cause of these four deaths between 1997 and 2001 were three cases of severe premature birth, and one case of severe abnormality at birth.

Table 5.6: Death registration data by age and sex, 2001–2006

Age Groups	Reported deaths (September 2001 - August 2006)			Intercensal reference population		
	Males	Females	Total	Males	Females	Total
Under 1	0	1	1	12	18	30
1–4	1	0	1	53	65	118
5–9	0	0	0	70	75	145
10–14	0	0	0	99	78	177
15–19	0	0	0	82	80	162
20–24	2	0	2	47	49	96
25–29	2	1	3	55	46	101
30–34	1	0	1	50	45	95
35–39	0	0	0	51	48	99
40–44	0	0	0	54	49	103
45–49	0	0	0	54	55	109
50–54	2	1	3	43	49	92
55–59	5	0	5	33	36	69
60–64	1	4	5	35	40	75
65–69	7	3	10	34	41	75
70–74	4	3	7	21	21	42
75+	19	19	38	19	31	50
TOTAL	**44**	**32**	**76**	**812**	**826**	**1,638**

Note: To calculate the CDRs, the respective number of deaths have to be divided by five, to yield an annual figure (or the population totals must be multiplied by five, to give a "period total").

To provide a best-estimate for Niuean life expectancy — the average number of years men and women are excepted to live at birth — three indirect estimation techniques were applied. Two of these used the US Census Bureau's PAS software: one method (LTWST) selects a model life table (Coale-Demeny West) that reproduces a given CDR for a given population structure; data required for this method are CDRs for males and females, and a population distribution for Niue. The second method (LTPOPDTH), constructs a life table for both sexes, or one sex at a time; data requirements are ASDRs by sex, for intercensal reference year. The third method uses the United Nations Mortpak4 software program (LIFTB), which requires ASDRs for males and females as entry data.

These three different methods yield similar life expectancies, as outlined in Table 5.7 below, pointing to an average of around 67 years for men, and 76 years for women. Adopting an even longer timeframe, and considering all deaths reported for the years 1997 until 2006, yields CDRs of 9.8 for males and 7.9 for females, providing life expectancy values of 68 years for males and 76 for females. In 2001, the census report provided figures of 69.8 years for males, and 71.2 years for females.[4]

[4] It is unclear from the 2001 report if these figures are truly comparable, in that they were also based on five-year averages (1996–2001), or whether they merely referred to the prevailing situation in 2001.

Table 5.7: Niue life expectancies at birth, males and females, 2001–2006

Method used [5]	Male life expectancy	Female life expectancy
***LTWST* (model West)** Data entry: CDR(m): 10.8, CDR(f): 7.7	66.1 years	76.6 years
***LTPOPDTH* (model West)** Data entry: age-specific death rates, by sex for intercensal reference year	67.3 years	76.5 years
***LIFT* (Mortpak.4)** Data entry: age-specific death rates, by sex for intercensal reference year	66.9 years	74.7 years

Considering differences in the number of reported male (44) and female (32) deaths between 2001 and 2006, the magnitude of male and female life expectancy is not surprising. Even allowing for similar proportions of underreported deaths as was the case between 1987 and 1997 (11% for males and 4% for females), does not significantly alter the overall situation.

Much care should be applied when interpreting these figures, as they are based on only a small number of deaths (N=76) over a five-year period. This, combined with considerable ongoing movement of Niueans between Niue and New Zealand, would have affected these estimates.

To provide some context for these assessments, we requested Statistics New Zealand[6] to produce some life tables for us based on deaths of New Zealand residents of Niuean descent between 2002 and 2006. According to these figures, life expectancy at birth for New Zealand residents of Niuean descent is somewhat higher than for those reported for their Niuean counterparts: 71.3 years for males, and 79.2 years for females. This contrasts with values of 70.7 for males and 75.7 for females of New Zealand residents of Samoan, Tongan, Cook Island and Niuean descent.

5.4 Migration

Migration is the movement of people across a certain boundary. When this boundary is a national border, we refer to the movement as international migration; otherwise we refer to it as internal migration. The people involved are referred to as migrants. We speak of immigration if people are moving into a country, and emigration if they are moving out of a country. When we refer to internal migration (e.g. movement within a country, between districts and municipalities), we speak of in-migrants and out-migrants.

[5] A third method was employed to indirectly estimate life expectancy: The United Nations COMPARE (Mortpak4); this method, however, could not handle the many empty cells in the empirical age-specific death rates reported in Table Mort-1.
[6] We are much indebted to Statistics New Zealand for assisting us with this request, in particular to Ms Denise McGregor, Manager of Population Statistics, and to Mr Kim Dunstan, for producing the calculations.

Apart from this spatial consideration, time plays a major role in the analysis of migration. Someone coming for a short visit can hardly be termed a migrant because they are a visitor. Apart from time, intent is also of crucial importance, because a visitor can turn into a migrant if confronted with sudden job opportunities, for example. Along the same lines, a person intending to migrate may turn into a visitor if, for example, the expected job opportunities do not materialise.

This highlights one of the key problems concerning migration. Whether or not a particular person qualifies as a migrant or not can only be established *post facto* (after the fact). Planners need to base their decisions on past and projected movements of people.

5.4.1 International migration

With most countries assessing the importance of international migration across their borders through an analysis of passenger arrival and departure cards, population censuses can also provide some meaningful information, via questions on current previous residence.

Table 5.8 shows that 259 Niuean residents, or 23% of the Niuean population aged 15 and older,[7] did not live in Niue at the time of the 2001 census, suggesting at first sight, a substantial extent of immigration to Niue in recent years. However, considering an earlier reference to a negative intercensal net-migration of -251 people between 2001 and 2006 (section 5.1), highlights that the number of Niueans who left Niue during this period amounts to over 500 people:[8] the sum total of Niuean residents 15 years and older (re)establishing residence since 2001 (N=259), plus the 251 net migrants having left between 2001 and 2006. These figures highlight three important features, with considerable implications for the future of Niue: the continued significant impact international migration has on Niuean population dynamics; and the parallel operation of two distinct migration streams, featuring a high incidence of intercensal immigration (23% of the resident population aged 15 years and older in 2006) and emigration (29%, or 510 emigrants from the 2001 resident population of 1,736). These highlight the continued significance of bi-locality and ongoing movement of Niu,eans between Niue and (mainly) New Zealand, and also underlines the continuous intercensal net-loss of Niuean residents since 1966.

Table 5.8: Population aged 15 and older in 2006, by place of residence in 2001

Residence 2001	Total	Males	Females	Total	Males	Females
	Number			%		
Total	1,127	560	567	100.0	100.0	100.0
This village	804	391	413	71.3	69.8	72.8
Another village	64	25	39	5.7	4.5	6.9
Overseas	259	144	119	23.0	25.7	21.0

[7] The census only asked previous residency questions of people aged 15 years and older.
[8] A more precise number of people having left Niue cannot be established from these data, as the 2006 census only asked previous residency information of residents aged 15 and older.

Disaggregating the number of residents by ethnicity and age highlights two further important aspects pertaining to Niuean population dynamics.

- Most recent arrivals are non-Niueans (N=140), half of which originate from elsewhere in the Pacific, followed by residents of Asian (N=29) and European (N=25) descent. Asian mobility is a relatively recent feature, as indicated by the fact that 29 of a total of 33 residents only moved to Niue within the last five years (Table 5.9).
- The age of these recent arrivals shows that contrary to some popular anecdotes, Niue is by no means simply a retirement destination: 41% of all arrivals are aged 15–29, and a further 32% are in their 30s and early 40s (Table 5.10).

Table 5.9: Population by ethnicity, 2006

Residence, September 2001	Total	Niuean	Pacific Islander	European	Asian	Others
Population 15+	**1,127**	**881**	**142**	**42**	**33**	**29**
This village	804	709	66	15	2	12
Another village	64	53	5	2	2	2
Overseas	259	119	71	25	29	15
Males 15+	**560**	**411**	**81**	**24**	**24**	**20**
This village	391	344	32	8	0	7
Another village	25	19	4	1	0	1
Overseas	144	48	45	15	24	12
Females 15+	**567**	**470**	**61**	**18**	**9**	**9**
This village	413	365	34	7	2	5
Another village	39	34	1	1	2	1
Overseas	115	71	26	10	5	3

Table 5.10: Population aged 15 and older by age and place of residence, 2006

Residence, September 2001	Total	15-29	30-43	44-57	58+
Population 15+	**1,127**	**346**	**269**	**261**	**251**
In Niue	868	239	186	221	222
Overseas	259	107	83	40	29
Males 15+	**560**	**179**	**141**	**129**	**111**
In Niue	416	116	92	121	97
Overseas	144	63	49	18	14
Females 15+	**567**	**167**	**128**	**132**	**140**
In Niue	452	123	94	110	125
Overseas	115	44	34	22	15

Given the continued importance of migration in shaping Niuean population dynamic, the census asked two further questions regarding likely and preferred residence at the time of the next census in 2011. Just over half the population (55.8%) anticipated to be living on Niue at that time, with 7.5% anticipating to be living in New Zealand, and 31.8 declaring to be unsure (Table 5.11). Regarding residential preference, the vast majority of current residents expressed a preference for living in Niue in 2011, with the rest expressing a preference for living in Niue and New Zealand (which underlines an earlier observation about the importance of bi-locality), or moving to New Zealand or elsewhere (Table 5.12).

Table 5.11: Population aged 15 and older, and likely residence in 2011

Where in 2011	Total	Males	Females	Total	Males	Females
	Number			%		
Total	**1,127**	**560**	**567**	**100.0**	**100.0**	**100.0**
Niue	629	318	311	55.8	56.8	54.9
New Zealand	84	48	36	7.5	8.6	6.3
Don't know	358	162	196	31.8	28.9	34.6
Other	53	31	22	4.7	5.5	3.9
Not stated	*3*	*1*	*2*	*0.3*	*0.2*	*0.4*

Table 5.12: Population aged 15 and older, and preferred residence in 2011

Where prefer to live	Total	Males	Females	Total	Males	Females
	Number			%		
Total	**1,125**	**559**	**566**	**100.0**	**100.0**	**100.0**
Niue	823	400	423	73.2	71.6	74.7
New Zealand	46	26	20	4.1	4.7	3.5
Both Niue and New Zealand	162	78	84	14.4	14.0	14.8
Other	85	52	33	7.6	9.3	5.8
Not stated	*9*	*3*	*6*	*0.8*	*0.5*	*1.1*

5.4.2 Internal migration

In terms of internal migration or mobility within Niue, the resident population appears rather stable: only 64 residents (5.7%) established their residence in another village between 2001 and 2006, with the vast majority having lived at their current residence in both 2001 and 2006 (71.3%); the remaining 23% have moved to their current residence since 2001 from overseas (Table 5.8). However, looking at this type of mobility in a broader historical context, as evident from a cross-classification between place of current residence by place of birth (Table 5.13), provides a more dynamic picture, underlining the overall importance of ongoing international migration and of a more internal life-cycle related mobility, associated with household formation, including marriage, and elderly people, particularly widows and widowers, co-locating with their children.

- In the case of all but two villages (Tuapa and Namukulu), the majority of current residents born in these villages, still live in their respective villages of birth.
- Yet in half of all villages, the majority of residents were born elsewhere. But the sizeable number of those residents born overseas could be indicative of "return migration" to one's "home village", rather than of migration (of outsiders) per se, underlining the complex nature of Niuean population dynamics.

Table 5.13: Population by place of birth, 2006

Place of Birth	Total	Makefu	Tuapa	Namukulu	Hikutavake	Toi	Mutalau	Lakepa	Liku	Hakupu	Vaea	Avatele	Tamakautoga	Alofi South	Alofi North
Total	1,538	57	98	14	55	31	85	72	62	156	57	160	137	411	143
Makefu	41	24	5	0	1	0	0	0	0	1	0	3	1	4	2
Tuapa	94	8	44	5	8	2	0	3	0	6	0	4	9	4	1
Namukulu	9	0	3	2	0	0	1	0	0	0	0	1	2	0	0
Hikutavake	55	2	2	2	40	2	0	2	0	0	0	0	1	2	2
Toi	18	0	0	0	2	15	1	0	0	0	0	0	0	0	0
Mutalau	72	2	1	0	1	5	49	2	0	1	0	4	2	3	2
Lakepa	58	1	0	0	0	0	1	38	4	2	0	3	1	7	1
Liku	55	1	3	0	0	0	1	1	42	2	0	2	1	2	0
Hakupu	139	4	3	0	0	0	2	3	2	94	0	9	1	10	11
Liku	19	0	0	0	1	0	0	0	0	0	14	0	0	3	1
Avatele	106	0	0	0	0	0	1	0	0	5	3	81	5	10	1
Tamakautoga	88	0	2	0	0	0	0	1	0	1	1	1	78	4	0
Alofi South	156	0	0	0	0	0	3	1	0	4	0	3	6	134	5
Alofi North	102	1	4	0	0	1	2	0	0	1	0	1	3	24	65
Overseas	526	14	31	5	2	6	24	21	14	39	39	48	27	204	52

6. Health: Prevalence of Smoking and Drinking

In response to a request from the Niue Department of Health, people were asked whether they smoked cigarettes or drank alcohol. If they answered yes, they were then asked how many cigarettes they smoke per day or per occasion and how many alcoholic drinks they consume per day or per occasion. People were also asked to state at what age they started smoking and drinking.

However reliable these data are, it shows that men smoke and drink more than women, or at least men admit more openly than women to their smoking and drinking habits (Table 6.1).

Among the resident population aged 15 and older, 23% of the population said they smoked, with smoking twice as prevalent among men (31%) than women (16%). Of the 264 people who indicated that they smoked, 189 people (72%) smoke every day; 19% smoke more than 20 cigarettes a day, 47% smoke between 10 and 20 cigarettes a day, and 35% smoke less than 10 cigarettes a day. Of the 28% claiming to be only occasional smokers, the vast majority (76%) smoke less than 10 cigarettes each time, with only 4% smoking more than 20 cigarettes on occasions.

Table 6.1: Prevalence of smoking, 2006

Response	Total	%	Males	%	Females	%
Total	**1,127**	**100.0**	**560**	**100.0**	**567**	100.0
Yes	264	23.4	172	30.7	92	16.2
No	863	76.6	388	69.3	475	83.8
Number of tobacco or cigarettes smoked per day						
Total	**189**	**100.0**	**132**	**69.8**	**57**	**30.2**
Less than 10	66	34.9	42	63.6	24	36.4
Between 10–20	88	46.6	63	71.6	25	28.4
More than 20	35	18.5	27	77.1	8	22.9
Number of tobacco or cigarettes smoked per occasion						
Total	**75**	**100.0**	**40**	**53.3**	**35**	**46.7**
Less than 10	57	7.0	26	45.6	31	88.6
Between 10–20	15	20.0	11	73.3	4	11.4
More than 20	3	4.0	3	100.0	0	0.0

Figure 6.1 illustrates males started to smoke earlier than females; 11% of male smokers started smoking when they were between 10 and 14 years of age, compared with 6% of female smokers; 51% had their first smoke between ages 15 and 19, compared with 44% of female smokers.

The 2006 census also asked respondents over 15 years of age to indicate if they consumed alcohol, how many glasses or cans they consumed per day or per occasion, and at what age they started doing so. Unfortunately, not having made provisions to differentiate between types of alcohol consumed, limits any ensuing analysis.

Figure 6.1: Age when first started to smoke, 2006 (figures in %)

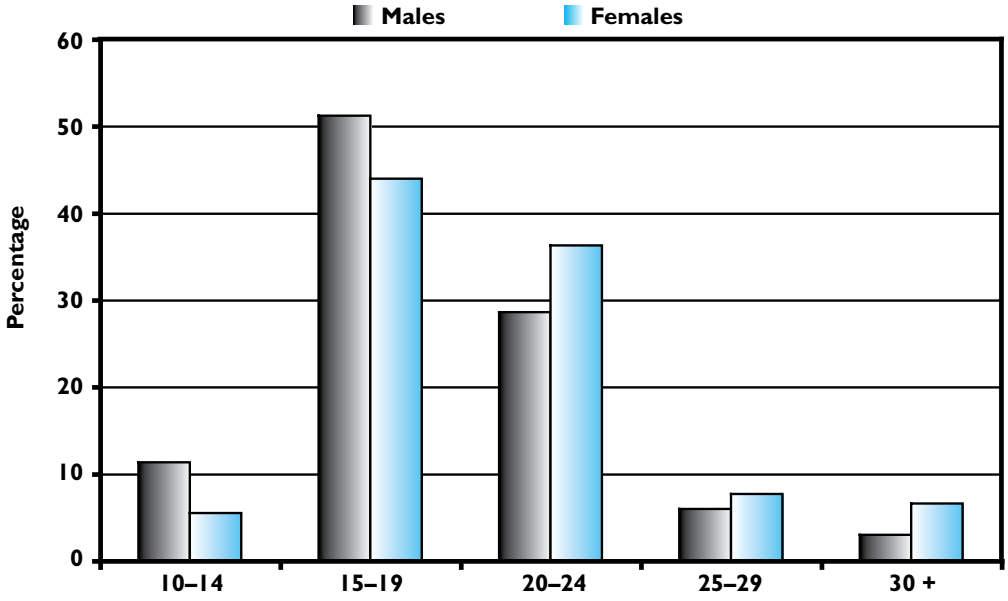


Table 6.2: Prevalence of alcohol consumption, 2006

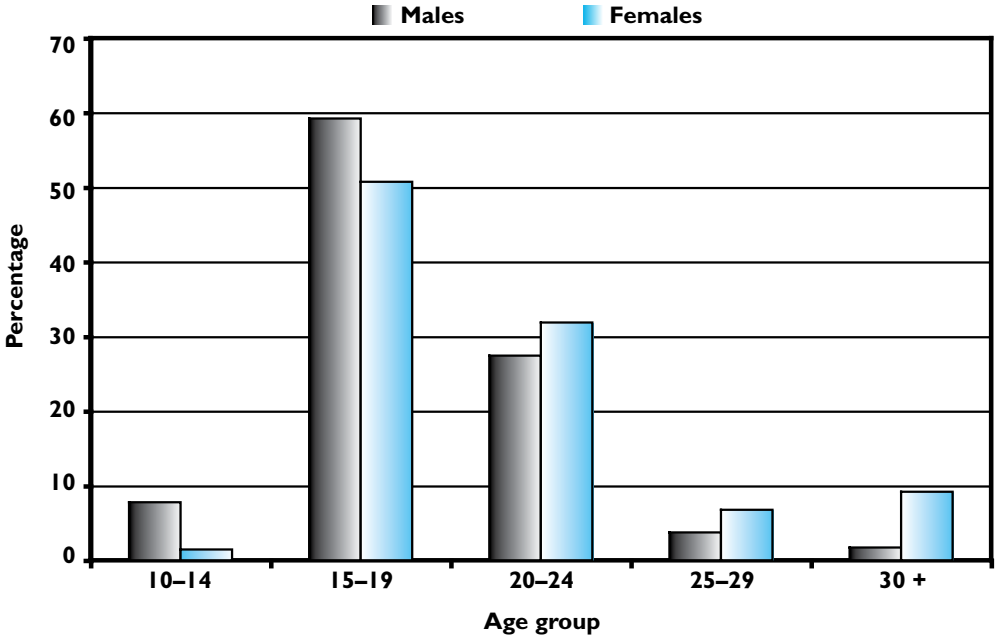
Response	Total	%	Males	%	Females	%
Total	**1,127**	**100.0**	**560**	**100.0**	**567**	**100.0**
Yes	563	50.0	351	62.7	212	37.4
No	564	50.0	209	37.3	355	62.6
Number of alcoholic drinks per day						
Total	**55**	**100.0**	**43**	**100.0**	**12**	**100.0**
1 drink	21	38.2	16	37.2	5	41.7
2–3	17	30.9	11	25.6	6	50.0
4–5	6	10.9	6	14.0	0	0.0
6–9	6	10.9	5	11.6	1	8.3
10 or more	5	9.1	5	11.6	0	0.0
Number of alcoholic drinks per occasion						
Total	**508**	**100.0**	**308**	**100.0**	**200**	**100.0**
1 drink	22	4.3	9	2.9	13	6.5
2–3	137	27.0	63	20.5	74	37.0
4–5	76	15.0	34	11.0	42	21.0
6–9	109	21.5	75	24.4	34	17.0
10 or more	164	32.3	127	41.2	37	18.5

With the number of those drinking and not drinking alcohol evenly split, alcohol consumption, like smoking, is more prevalent among males than females, with two in three males, and one in three females reporting to occasionally drink. But unlike smoking, alcohol consumption is more clearly an occasional event, with 90% of those claiming to consume alcohol doing so only occasionally, with one in ten consuming alcohol each day. As with smoking, more males indicate they consume alcohol on a daily basis (N=43) than females (N=12), with 12% of all males, and 6% of all females indicating they consume alcohol daily.

Table 6.2 also provides some interesting findings on drinking habits, with moderation more prevalent among females than males; among those drinking occasionally, three drinks is the limit for 43% of females compared with 23% of males. At the other end of the spectrum, 10 drinks or more are reported by 41% of males compared with 19% of females.

As with smoking, males begin consuming alcohol earlier than females, with 8% claiming to have had their first drink before the age of 15, and a further 59% before turning 20. Drinking under the age of 15 was virtually non-existent among women (1%), yet half of those reporting to consume alcohol, had their first drink before turning 20. While only 2% of males claim to have had their first drink after their 30th birthday, 9% of women did.

Figure 6.2: Age at first alcohol consumption, 2006 (figures in %)



7. Household and Housing Characteristics

7.1 Household characteristics

Knowledge about household characteristics is of fundamental importance for planning and policy purposes, to help establish, for example, demands for housing and the different types of housing, quantities and qualities of dwellings and accommodation needed. Data on housing are needed to assess related requirements for land allocation, energy and water consumption, waste disposal and sewage connections, telephones and general infrastructure.

The size and composition of a household depend mainly on a country's socioeconomic and cultural factors. Household size and composition are shaped mainly by the family structure (whether nuclear or extended), but also by the age at which young people leave their parents' home in order to form their own household, and whether they do this with or without family (single household, couples with/without children). The housing market (availability and costs of suitable housing) and the availability of land to build upon also have a significant impact on household composition.

7.1.1 Household size

The 2006 census counted 474 private households, which were 34 less than in 2001 (Table 7.1). The average number of people per household in Niue was 3.2, just slightly below the 2001 figure. Table 7.1 indicates that household size has not changed since 2001.

Table 7.1: Average household size, 2001 and 2006

Household Size	Number	%	Number	%
	2001		2006	
Total	**508**	**100.0**	**474**	**100.0**
1 Person	102	20.1	90	19.0
2 Persons	108	21.3	109	23.0
3 Persons	82	16.1	75	15.8
4 Persons	71	14.0	80	16.9
5 Persons	57	11.2	49	10.3
6 Persons	46	9.0	38	8.0
7 + Persons	42	8.3	33	7.0

In contrast to this overall apparent stability, differences remain in average household size between villages, ranging from a low of 2.7 people per household in Makefu and Mutalau, to a high of 5.2 in Vaiae; Table 7.2 also highlights some changes in household size over time between villages, such as Makefu and Alofi North, which have been experiencing contracting household numbers, with small Namukulu village showing the opposite.

Table 7.2: Total number of private occupied households and average household size by village, 2001 and 2006

Village	2001 Number of HH	2001 Resident Population	2001 Average HH Size	2006 Number of HH	2006 Resident Population	2006 Average HH Size
Total	**508**	**1,736**	**3.4**	**474**	**1,538**	**3.2**
Makefu	24	84	3.5	21	57	2.7
Tuapa	39	129	3.3	30	98	3.3
Namukulu	8	12	1.5	5	14	2.8
Hikutavake	21	65	3.1	20	55	2.8
Toi	10	31	3.1	11	31	2.8
Mutalau	39	133	3.4	31	85	2.7
Lakepa	24	88	3.7	24	72	3.0
Liku	22	73	3.3	18	62	3.4
Hakupu	55	227	4.1	45	156	3.5
Vaiea	12	62	5.2	11	57	5.2
Avatele	38	125	3.3	44	160	3.6
Tamakautoga	38	125	3.3	37	137	3.7
Alofi South	115	358	3.1	131	411	3.1
Alofi North	63	224	3.6	46	143	3.1

Declining household numbers between censuses go hand in hand with an increase in the number of unoccupied dwellings due to migration. A housing survey conducted at the same time of the census identified 465 houses as unoccupied, of which 18% were used for storage by families, 12% were still intact and available for occupation (or in need of just minor renovations), with the remainder in various states of disrepair.

7.1.2 Household composition

Information on household composition was established by identifying a head of household who serves as a reference person to whom all other persons in the household, in terms of family membership, can be related. Niueans refer to the head of household as the oldest male person living in the household, regardless of his ability to support household members economically. Female heads of households seemed to be either never-married, widowed or divorced, or heads of single-person households. Men constituted 70% of all heads of households, with women making up the remaining 30% (Table 7.3).

About 79% of all household members belonged to the so-called nuclear family (i.e. husband, wife and their children). Nine per cent of all household members were grandchildren of the household head; in such cases a young couple usually lives with their children in their parent's house. Non-relatives accounted for 5% of household members.

Table 7.3: Household composition, 2006

Relationship	Total	%	Males	%	Females	%
Total	**1,538**	**100.0**	**756**	**49.2**	**782**	**50.8**
Head of household	474	30.8	333	21.7	141	9.2
Spouse	244	15.9	16	1.0	228	14.8
Son/Daughter	504	32.8	243	15.8	261	17.0
Son/Daughter in laws	29	1.9	12	0.8	17	1.1
Grand / Great grandchild	145	9.4	70	4.6	75	4.9
Other relation	59	3.8	27	1.8	32	2.1
Not related	*83*	*5.4*	*55*	*3.6*	*28*	*1.8*

7.2 Housing characteristics

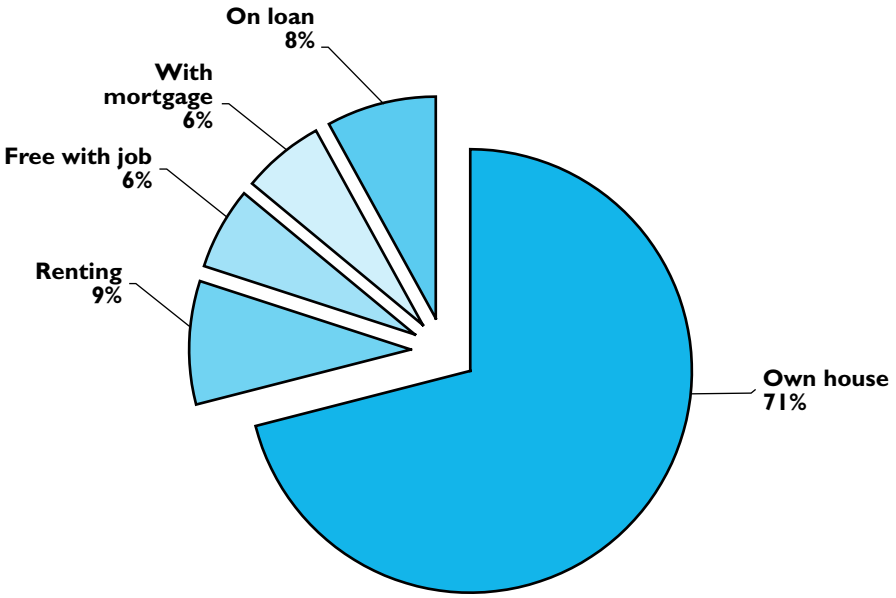
7.2.1 Dwelling type

Niuean houses are typically of two types: the hurricane house and the modern house. Hurricane houses were constructed in the early 1960s as part of New Zealand aid to Niue, which specifically aimed at providing hurricane resistant houses to Niuean families. Most hurricane houses have concrete walls and fibrolite roofing, although most were replaced by iron roofing after Cyclone Heta. Hurricane houses usually have three bedrooms and a sitting room, but most have no built-in toilet, although most families have extended their houses and have added toilets and kitchens. Of the 474 private households, 447 (94%) have an average of five rooms per house. The remaining 6% of Niuean private households lived in flats, kitset houses or other dwellings.

Modern houses were built in the early 1970s under the housing programme of the Niue Housing Authority (now operating under the Niue Development Bank). The Niue Development Bank loaned money to families who wanted to build houses, and the structures were mainly made out of timber and sometimes concrete. The average number of bedrooms was also three, but in contrast to hurricane houses, they included a kitchen and bathroom facilities. The Niue Development Bank also loans money to families or individuals for renovations of their hurricane houses, which includes extending the house to include a kitchen and bathroom facilities.

Of the 474 private households in Niue, 71% per cent of all dwellings (houses) are owned by their occupants, 9% are rented, 8% are on loan without payment, and 6% each are either mortgaged or provided as part of an employment package.

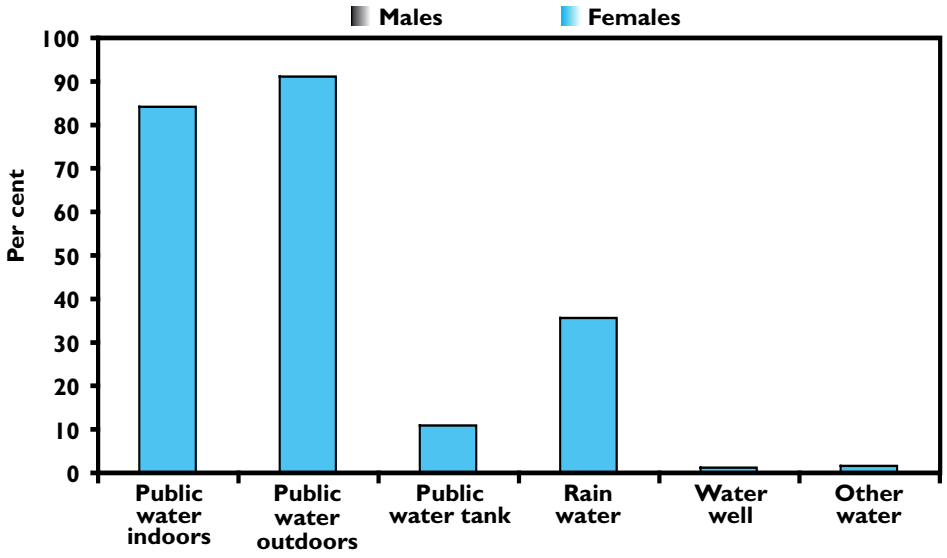
Figure 7.1: Tenure of residence in Niue, 2006



7.2.2 Water

Virtually all Niuean households (99%) had access to piped water in 2006: 91% had access to piped public water supply outside their homes, 84% had running water inside their homes, 35% had access to a water tank fed by rainwater, 11% also had water tanks but with water coming from public supply, and 2% obtained their water from a well or other sources (Figure 7.2). These percentages do not add up to 100% because households were connected to the public water supply system in multiple ways.

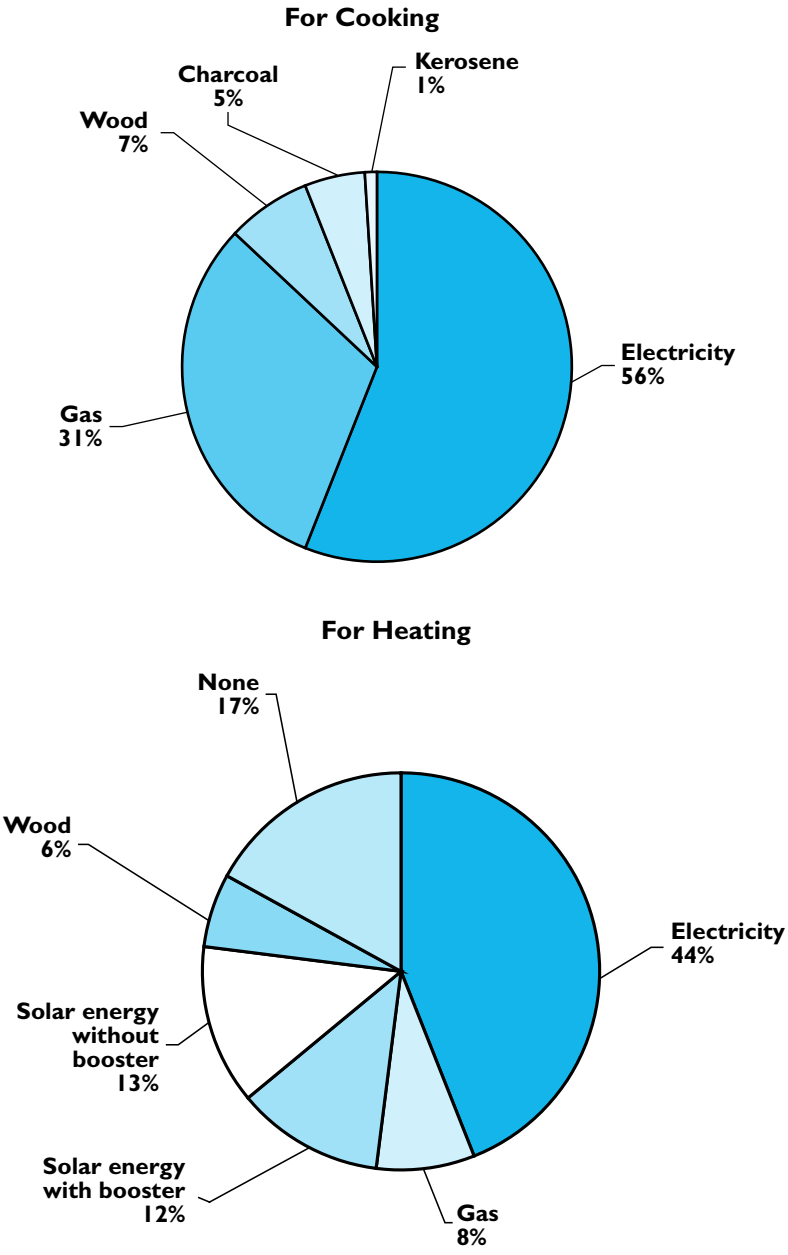
Figure 7.2: Household access to potable water, 2006



7.2.3 Energy

Almost all Niuean households (99%) were connected to the public electricity supply grid, with electricity representing their main source of energy for cooking (56%) and for heating water (44%). Other energy sources used for cooking include gas (31%), wood (7%), charcoal (5%) and kerosene (1%). Other energy sources used for water heating include solar energy without booster (13%), solar energy with booster (12%), gas (8%) and wood (6%), with 17% of all households not having access to heated water.

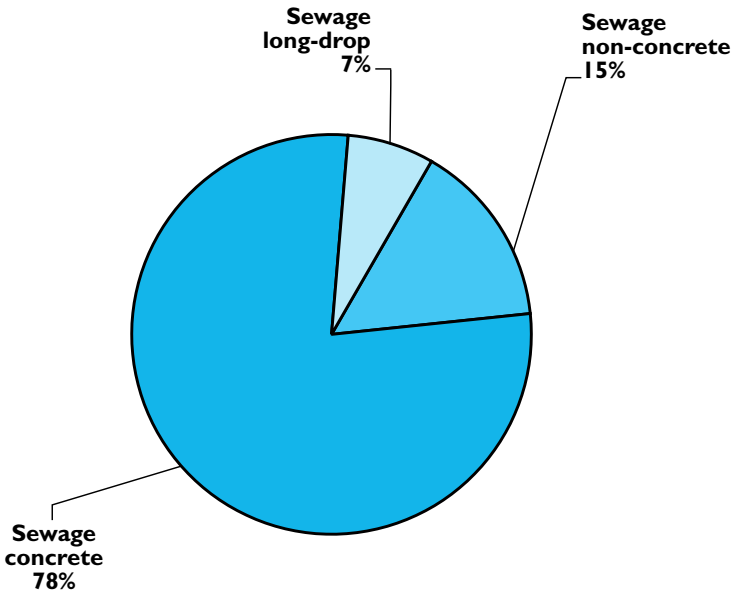
Figure 7.3: Household utilisation of energy, 2006



7.2.4 Sanitation and hygiene

Of the 474 households, 90% had a flush toilet, 19% had a water seal toilet, and 5% had a long-drop toilet. Almost all long-drop toilets are kept and used during power black outs, because power is needed to generate water for flushing. Overall, 78% of households had a fully concrete septic tank, 15% had a non-concrete septic tank, which is a tank with concreted sides and an open bottom, and 7% had a sewage long-drop.

Figure 7.4: Household access to sanitation, 2006



Ninety-one per cent of all households had showers, and 14% had bathtubs. The percentages of the availability of hand basins, washing tubs and kitchen sinks were 78%, 41% and 83%, respectively.

7.2.5 Household goods and appliances

The number of household appliances is often used as an indicator of the standard of living, as people have to have the financial means to purchase them, particularly electrical appliances, which are also costly to run.

It appears that expensive and energy consuming appliances such as televisions and DVD players, refrigerators, deep freezers, fans, washing machines, stereos, rice cookers, sandwich makers were widely used in 2006 (Table 7.4), with more old fashion appliances, such as hand sewing machines, water pumps, video decks, still cameras, kerosene stoves, being slowly phased out.

Table 7.4: Household appliances, 2006

Refrigerator	415	Portable fan	668	Stereo	373
Cooler	110	Ceiling fan	112	Television	519
Deep freezer	315	Air condition	17	DVD player	407
Phase stove	110	Hand sewing machine	47	Video player	228
Single phase stove	118	Treadle sewing machine	9	Video camera	46
Electric cooktop	70	Electric sewing machine	161	Still camera	76
Microwave	290	Automatic washing machine	308	Digital camera	175
Electric frying pan	360	Wringer	117	Keyboard	55
Rice cooker	162	Hoovermatic	141	Guitar	183
Electric toaster	388	Iron	511	Playstation/Xbox	134
Electric jug	489	Woodrange stove	35		
Deep fryer	54	Kerosene stove	19		
Breadmaker	57	Electric water pump	26		
Sandwich maker	258	Solar water heater	111		
Food processor	134	Food safe	174		
Crockpot	56	Gas BBQ	197		
Coffeemaker	55				
Gas element	193				
Gas stove	116				
Electric egg beater	113				

8. Implications for Planners and Policy-makers

8.1 Population growth

Since the mid-1960s — when Niue's resident population was 5,194 — the population has been gradually declining to its present population of 1,538 in 2006. This decline was brought about by two counterbalancing forces: a moderate positive rate of natural increase and a high rate of out-migration.

8.1.1 Natural increase

Subtracting the annual CDR (9.3/1,000) from the annual CBR (15.8/1,000) provides an annual rate of natural increase of 0.65%, which would represent Niue's overall population growth were it not for migration. This rate of natural increase also halved over the past decade, from 1.2% per annum between 1991 and 1997, when the CBR was 18.3/1,000, and the CDR was 6.6/1,000, indicating an interesting trend for policy-makers: a modest decline in births, as discussed in section 5.1, and an increase in deaths since the period 1991–1997.

8.1.2 Sustained net emigration

Between September 2001 and September 2006, net migration amounted to -251 people, or -50 more people leaving than arriving in Niue each year (section 5.1). Applying the balancing equation underlines the continued importance of migration in shaping Niue's population dynamics, highlighting an annual net migration rate of -3.05%.

8.1.3 Future outlook

If these trends continue into the immediate future, Niue's September 2007 resident population will be 1,501 people, declining to 1,364 at the time of the next planned census in 2011.

8.2 Population dynamics

Births, deaths and migration are the primary factors affecting population growth. Therefore, any government policy intervention wishing to influence this process must appreciate and acknowledge key underlying demographic facts and processes.

8.2.1 Fertility

Niue's current TFR of 2.6 means that women bear on average between two and three children during their reproductive life. This represents a gradual decline from between three and four live births experienced by Niuean women during the early 1990s.

Although the decline in fertility is related to Niue's continuing population decline, fertility does not lend itself to meaningful or desirable policy interventions. Apart from the sheer folly of pursuing such an option, in practical terms this would require between six and seven live births per woman (i.e. a TFR of 6.7) to merely counteract the population loss due to net-migration alone, without achieving any growth at all.

8.2.2 Mortality

A near 50% increase in overall mortality over the past five years, as evident from an increase in the CDR from 6.6/1,000 to 9.3/1,000, has a more modest impact on population growth, relative to migration and fertility. But considering little increase in male life expectancies during the past 10 years (from 68.8 years during 1997–2001, to an estimated 67 at present) relative to a sizeable improvement by women (from 71.2 years, during 1997–2001, to an estimated 76 years at present), this has obvious health policy implications, particularly for male health.

Combating non-communicable diseases, particularly diabetes, heart and related lifestyle diseases, should attract more prominent attention, especially in light of some of the information presented in section 6 on alcohol consumption and smoking. Policy measures should include more concerted efforts with regards to the promotion of healthy eating habits and nutrition programmes, regular exercise, and maintaining a hygienic and safe living environment.

A very low IMR, as reflected in one infant death during the past five years, reflects well on general infant and child health programmes (including immunisation), underlining the importance of maintaining achievements and standards.

While not having been referred to as a major issue on Niue, HIV/AIDS prevention programmes need to be accorded high priority, and should particularly target young men and women, given both the prevalence in neighbouring countries — including New Zealand and Australia, which are home to about 25,000 Niueans[10] — and the high level of mobility of Niueans between these countries.

8.2.3 Migration

With migration dominating Niuean population dynamics — not only shaping its age structure and overall population composition, but also having a huge overall impact on Niue society and its economy, more so than in any other Pacific Island nation (other than Tokelau) — migration deserves top public policy recognition; not merely for demographic consideration, but as the nation's number one development challenge. If not addressed as a matter of utmost urgency, continuing levels of emigration could threaten the very political survival of Niue as a nation state.

Irrespective of resource allocation and political support, the best intentioned and designed social, economic and infrastructure policies and plans require a sustainable population.

Essential and quality services, such as specialised education and health services, cannot be effectively provided to a dwindling population; the resulting inattention to such matters fuels continued emigration. A small and well-managed tourism industry, small-scale manufacturing (including processing of some agricultural products), and any kind of business investment cannot succeed without a qualified and experienced labour force in place. Such a labour force cannot easily be attracted and retained without a quality general environment (e.g. services, infrastructure/facilities, working and living conditions), and the latter cannot be provided and sustained without a sustainable population.

[10] During the 2006 census in New Zealand and Australia, 22,500 and 2,200 residents, respectively, claimed to be of Niuean descent.

Against this population backdrop, the formulation of migration and development policy, based on a comprehensive policy/situation analysis and involving widespread community consultations in Niue and New Zealand, clearly emerges as a matter of critical importance and a development priority for Niue.

8.3 Education and training

Compulsory schooling from the ages of 5 to 16 translates into a near 100% enrolment rate, high literacy rates in English and Niuean and high levels of educational attainment. Considering, however, that not everyone enrolled in secondary or tertiary education actually completes their respective education, is a matter of concern to educationalists, requiring urgent policy attention.

During the 2006 census data user workshop conducted in Niue in August 2007, reference was made to inadequate staffing levels and inexperience at the Niue High school, which does not lend itself to the provision of a broad-based curriculum. These factors could lead to general disinterest in education and some students dropping out. Suggestions were made to proactively target and involve retirees from the public sector as mentors, thus broadening the availability of subject matter courses offered, particularly in applied science and technology. To facilitate this process, it was suggested to develop a professional skills and experience directory of the 60+ age group for mentoring and advisory roles, extending this function also to new public service recruits, which are usually education-rich but experience-poor, and who could greatly benefit from such regular professional mentoring.

8.4 Labour market activities

With no tangible unemployment to speak of, Niue's two main challenges are to recruit and retain specialised technical and professional skills, and increase the relative share of the private sector, including self-employment from its current 39% share of employment provision.

In response to a need to recruit and retain specialised technical and professional skills, there was a recent influx of (largely) Pacific Island and Asian migrants, who filled jobs in the public and private sector. In terms of public policy, any systematic labour recruitment strategy should be closely aligned with an overall migration and development policy. While several participants of the August 2007 census data user workshop referred to the current practice of importing specific skills on an as-needed basis as a preferable option to long-term migration, it is clear that while such temporary policy measures can effectively address temporary labour shortages, these measures do not help establish a sustainable labour force and a viable population.

Such temporary stopgap measures also achieve little in terms of building a more vibrant and sustainable economy, in which private sector-led initiatives and growth overtake the public sector as the primary economic force and employer. Longer-term economic development strategies need to be based on the concept of a viable population and urgently address key structural impediments to such developments, such as access to land and security of tenure.

8.5 Environmental management

To protect Niue's environment and natural resources, pollution of its land and surrounding waters should be avoided by all means. Sewage, particularly non-concrete and long-drop sewage systems, and careless waste management, pose serious health problems, particularly in terms of ground-water contamination, as has been shown in other Pacific Island countries. Because marine and terrestrial natural resources form the basis of a sustainable and healthy life for all Niueans, maintaining a healthy living environment should be a top policy priority.

Growing environmental pollution not only impacts human health, but can have severe down-stream impacts Niue's national economy, and its current efforts to rebuild its tourism industry after Cyclone Heta in 2004. Household waste management appears to be under control, at least relative to most other Pacific Island countries and territories, but the many abandoned, sometimes dilapidated houses, as well as the ruins from Cyclone Heta, are both an eyesore for locals and tourists and serve as a breeding space for vermin and associated public health problems.

8.6 Good governance: informed decision-making

Good governance and effective policy-making should provide the framework for sustainable development that acknowledges the interdependence between viable populations and sustainable environmental and economic resources management.

To this effect, politicians and policy-makers, policy analysts and planners, community leaders, the private sector and civil society at large need to be in tune with the needs and aspirations of the Niuean population at large, and those specific to different population sub-groups, such as children and youth, women and men, and the elderly. To facilitate this process government, community and business leaders need to have a good understanding of Niue's population structure, its population dynamics, and the socioeconomic characteristics of its population, in order to plan for an adequate standard of living, and for a proper provision and distribution of goods and services.

It is the hope of the authors that this small volume can make a contribution to this process.

APPENDICES

Appendix 1: Statistical Tables

Appendix Table 1: Population by five-year age group, sex, and sex ratio Niue, 2006

Age Groups	Total	Males	Females	Sex Ratio
Total	**1,538**	**756**	**781**	**97**
0–4	141	57	84	68
5–9	126	56	70	80
10–14	144	83	61	136
15–19	163	90	73	123
20–24	89	40	49	82
25–29	94	49	45	109
30–34	92	52	40	130
35–39	95	49	46	107
40–44	98	49	49	100
45–49	99	55	44	125
50–54	105	51	54	94
55–59	65	26	39	67
60–64	62	30	32	94
65–69	74	33	41	80
70–74	46	18	28	64
75+	45	18	27	67

Appendix Table 2: Religion

Religion	1986	1991	1997	2001	2006
Total	**2,531**	**2,239**	**2,088**	**1,736**	**1,538**
Ekalesia Niue	1,749	1,588	1,330	1,093	956
Latter Day Saints	307	237	206	158	127
Roman Catholic	170	139	133	128	138
Jehovah's Witness	33	47	46	43	28
Seventh Day Adventist	77	46	51	25	6
Others	135	111	76	151	139
None	48	68	77	34	43
Not stated	*12*	*3*	*169*	*104*	**101*

(*) includes 1 refusal response

Appendix Table 3: Marital status by five-year age group and gender, 2006

Age Groups	Males						Females					
	Total	Never Married	Married	Widowed	Divorced	*De facto*	Total	Never Married	Married	Widowed	Divorced	*De facto*
Total	**561**	**201**	**300**	**13**	**15**	**32**	**567**	**166**	**289**	**63**	**21**	**28**
15–19	90	88	0	0	0	2	73	69	2	0	0	2
20–24	40	30	6	0	1	3	49	27	15	0	1	6
25–29	49	16	23	0	0	10	45	21	17	0	0	7
30–34	52	16	34	0	0	2	40	12	25	0	0	3
35–39	49	13	30	1	0	5	46	7	34	0	3	2
40–44	49	13	30	0	5	1	49	3	36	2	3	5
45–49	56	9	42	0	1	4	44	4	35	2	2	1
50–54	51	7	39	1	3	1	54	3	42	5	3	1
55–59	26	1	24	0	1	0	39	5	24	8	2	0
60–64	30	0	23	4	1	2	32	8	16	4	3	1
65 and over	69	8	49	7	3	2	96	7	43	42	4	0

Appendix Table 4: Registered births and deaths, 1997–2006

Year	Births			Deaths		
	Total	Males	Females	Total	Males	Females
1997	33	17	16	18	9	9
1998	30	14	16	20	8	12
1999	20	9	11	15	11	4
2000	26	11	15	12	5	7
2001	25	12	13	14	9	5
2002	26	9	17	10	7	3
2003	29	6	23	17	11	6
2004	22	11	11	16	7	9
2005	33	20	13	11	6	5
2006	28	9	19	14	7	7

New Zealand Abridged Life Table, 2002-2006
Population of Niuean Ethnicity
Using deaths and live births registered in New Zealand in 2002-2006 and mean Census Usually Resident Population Count in 2001-2006

Exact Age (Years) x	Out of 100,000 People Born: Number Alive at exact Age l	Average Number Alive in the Age Interval L	Number Dying in the Age Interval d	Probability that a Person who Reaches this Age: Alive at End of the Age Interval p	Dies the Age Interval a	Central Annual Death Rate for the Age Interval m	Proportion of Age Group x to x+5 Surviving Another Five Years s	Expected Number of Years of Life Remaining at Age x e
Males								
0	100,000	99,322	797	0.99203	0.00797	0.00803	0.99785	71.3
1	99,203	396,409	201	0.99797	0.00203	0.00051	…	70.9
5	99,002	494,666	137	0.99861	0.00139	0.00028	0.99894	67.0
10	98,865	494,141	73	0.99926	0.00074	0.00015	0.99963	62.1
15	98,792	493,959	0	1.00000	0.00000	0.00000	0.99770	57.1
20	98,792	492,822	455	0.99539	0.00461	0.00092	0.99340	52.1
25	98,337	489,570	846	0.99140	0.00860	0.00173	0.99044	47.4
30	97,491	484,887	1,027	0.98947	0.01053	0.00212	0.99082	42.8
35	96,464	480,436	754	0.99219	0.00781	0.00157	0.98495	38.2
40	95,710	473,207	2,138	0.97766	0.02234	0.00452	0.97430	33.5
45	93,572	461,047	2,726	0.97086	0.02914	0.00591	0.96894	29.2
50	90,846	446,728	3,001	0.96697	0.03303	0.00672	0.93996	25.0
55	87,845	419,908	7,727	0.91204	0.08796	0.01840	0.92044	20.7
60	80,118	386,499	5,636	0.92965	0.07035	0.01458	0.87746	17.5
65	74,482	339,138	13,308	0.82133	0.17867	0.03924	0.79624	13.6
70	61,174	270,034	14,334	0.76569	0.23431	0.05308	0.71879	11.1
75	46,840	194,098	16,041	0.65753	0.34247	0.08264	0.61708	8.7
80	30,799	119,774	13,688	0.55556	0.44444	0.11429	0.51020	6.9
85	17,111	61,109	9,777	0.42857	0.57143	0.16000	0.33962	5.4
90	7,333	31,428	7,333	0.00000	1.00000	0.23333	…	4.3

New Zealand Abridged Life Table, 2002-2006
Population of Niuean Ethnicity
Using deaths and live births registered in New Zealand in 2002-2006 and mean Census Usually Resident Population Count in 2001-2006

Exact Age (Years) x	Out of 100,000 People Born: Number Alive at Exact Age l	Average Number Alive in the Age Interval L	Number Dying the Age Interval d	Probability that a Person who Reaches this Age: Alive at End of the Age Interval p	Dies in the Age Interval a	Central Annual Death Rate for the Age Interval m	Proportion of Age Group x to x+5 Surviving Another Five Years s	Expected Number of Years of Life Remaining at Age x e
				Females				
0	100,000	99,608	461	0.99539	0.00461	0.00463	0.99872	79.2
1	99,539	397,895	131	0.99869	0.00131	0.00033	…	78.6
5	99,409	496,865	71	0.99928	0.00072	0.00014	0.99964	74.7
10	99,337	496,687	0	1.00000	0.00000	0.00000	0.99864	69.7
15	99,337	496,009	271	0.99727	0.00273	0.00055	0.99751	64.7
20	99,066	494,774	223	0.99775	0.00225	0.00045	0.99888	59.9
25	98,844	494,218	0	1.00000	0.00000	0.00000	0.99860	55.0
30	98,844	493,528	276	0.99721	0.00279	0.00056	0.99789	50.0
35	98,567	492,487	140	0.99858	0.00142	0.00028	0.99690	45.1
40	98,427	490,962	470	0.99522	0.00478	0.00096	0.99559	40.2
45	97,957	488,799	395	0.99597	0.00403	0.00081	0.98423	35.4
50	97,562	481,092	2,688	0.97245	0.02755	0.00559	0.96251	30.5
55	94,875	463,056	4,527	0.95229	0.04771	0.00978	0.94629	26.3
60	90,348	438,187	5,421	0.94000	0.06000	0.01237	0.93149	22.5
65	84,927	408,167	6,587	0.92244	0.07756	0.01614	0.89180	18.8
70	78,340	364,003	11,078	0.85859	0.14141	0.03043	0.85598	15.2
75	67,261	311,579	9,891	0.85294	0.14706	0.03175	0.80867	12.2
80	57,370	251,963	13,955	0.75676	0.24324	0.05538	0.61970	8.9
85	43,415	156,142	24,373	0.43860	0.56140	0.15610	0.39947	6.0
90	19,042	103,864	19,042	0.00000	1.00000	0.18333	…	5.5

Appendix 2: 2006 Niue Census Questionnaire

Niue Census 2006
Personal Schedule

Confidential when completed!

This Census is conducted under the legal authority of the Niue Census Ordinance 1971.
WARNING: Divuling of any information collected from the census and ddefacement of the schedule is prohibited according to section (16) Census Ordinance 1971.

Area Number	Household Number	Person Number	(1) Name (First Name, Surname)	(2) Gender	1. Male 2. Female	
						(Write code)

(3) Relationship to Head of Household		
(4) Date of Birth: Day / Month / Year	(5) Age	(6) What is your place of birth? (usual residence of mother at the time of birth)

(7) RESIDENCE	1. Do you usually reside in this village?	1. Yes *(Go to Q8)* 2. No	
	2. If no, where do you usually reside?	(Village / country if outside of Niue)	
(8)What is your ethnic origin?	1. Niuean 2. Part Niuean 3. European 4. Tongan 5. Fijian 6. Samoan 7. Tuvaluan 8. Cook Islander 9. Other Pacific Islander 10. Asian 11. Other		(Write code)
(9) What is your religion? *(State religion)*			

ASK Qs 10 – 19 ONLY TO THOSE 4 YEARS OF AGE AND OVER

(10) Are you currently attending an educational institution?	1. Yes *(Complete Q11 then go to Q14)* 2. No *(Go to Q12)*	(Write code)
(11) Which level of education are you currently attending?	1. ECE 2. Primary 3. Secondary (Yr 7 – Yr 11) 4. Secondary (yr 12 – Yr 13) 5. Tertiary 6. Other *(specify)*	(Write code)
(12) What is your highest level of schooling completed?	1. Primary 2. Secondary 3. Tertiary 4. No Formal Education	**(Write code)**
(13) What is your highest school qualification achieved?		*(E.g. certificate, diploma, BA, MA, etc)*

(14) What is the first language you learnt as a child and still understand?	1. Niuean 2. English 3. Niuean & English 4. Other *(specify)*				(Write code)
(15a) Can you speak Niuean?	1. Yes *(Go to Q. 15b)* 2. No 3. Just a little *(Go to Q. 15b)*	(Write code)	**15b) And how often do you speak it?**	1. Never 2. Not very often 3. Often 4. All the time	**(Write code)**
(16) Can you understand Niuean?	1.Yes *(Go to Q. 17a)* 2. No (Go to Q.18a) 3. Don't Know *(Go to Q. 17a)*				**(Write code)**

(17a) Can you read and write a simple sentence in Niuean?	1.Yes *(Go to Q. 17b)* 2. Just a little *(Go to Q.17b)* 3. No	**(Write code)**	**17b) And how often do you use it?**	1. Never 2. Not very often 3. Often 4. All the time	(Write code)
(18a) Can you read and write a simple sentence in English? ***(Complete and go to Q. 20)***	1.Yes 2. Just a little 3. No	**(Write code)**	**18b) And how often do you use it?**	1. Never 2. Not very often 3. Often 4. All the time	(Write code)
(19) Are you willing to try to learn the Niuean language? *(Answer only if you answered either 2 or 3 to Qs. 15a, 16a & 17)*			1. Yes 2 .No		(Write code)

ALL THOSE 14 YEARS OF AGE AND UNDER - END INTERVIEW HERE.

THIS SECTION IS TO BE COMPLETED BY THOSE 15 YEARS OF AGE AND OVER.

(20) Marital status	1. Never married 2. Married 3. Widowed 4. Divorced / Separated 5. Defacto	*(Write code)*	**(21a) Where did you reside in September 2001?**	1. This village 2. Another village 3. Overseas	*(Write t code)*

(21b) If you answered "overseas" in Q. 21a, what was your main reason for coming to Niue?		
(22a) Where do you think you will be living in 2011?	1. Niue 2. NZ 3. Don't Know 4. Other *(specify)*_____	*(Write code)*
(22b) Referring to Q22a, why is this your choice?		
(23a) Where do you prefer to live?	1. Niue 2. NZ 3. Both Niue and NZ 4. Other *(specify)* _____	*(Write code)*
(23b) Referring to Q. 23a, why is this your choice?		

(24) What was your <u>main</u> activity last week?	*1.* Work for pay / running a business *(Go to Q. 31)* 2. Working in agriculture and fishing for sale *(Go to Q. 29)* *3.* Working by making handicraft for sale *(Go to 31)* *4.* Working in agriculture and fishing for own consumption *(Go to Q. 35)* 5. Did not work at all *(Go to the next question)* 6. *Other (Specify)*				*(Write code)*
(25) Did you do any unpaid work for the family, relatives or community?	*1.* Yes *(Go to the next question)* 2. 2. No *(Go to Q.27)*				*(Write code)*
(26) What type of unpaid work did you do? *(Complete this question then GO TO Q.35)*	1. Housework including child care 2. Housework including working in the bush garden, fishing, making handicrafts 3. Assisting with family, relatives, etc 4. Assisting within the community 5. Other *(specify)* _____				*(Write code)*
(27a) Did you look for paid employment last week?	1. Yes 2. No *(Go to Q.27b)*		**(27b) Why didn't you look for paid employment?**	1. Not interested in finding work 2. Attended school 3. Full time housework 4. Retired, pensioner 5. Disable 6. Other *(specify)* _____	*(Write code)*
(28) If you were offered paid employment, were you able to / willing to start work last week? *(Complete this question then GO TO Q.35)*	1. Yes 2. No				*(Write code)*

(29a) Do you sell any of the following? *(Write 1 if Yes, 2 if No)*	1. Taro		**(29b) How much do you usually get from selling the following?**	1. Taro	$
	2. Vanilla			2. Vanilla	$
	3. Nonu			3. Nonu	$
(30a) Where did you go fishing? *(Write 1 if Yes, 2 if No)*	1. Reef		**(30b) How much do you usually get from selling your fish?**	1. Reef	$
	2. Deep sea			2. Deep sea	$
(31) What is your principal occupation?					
(32) Industry – What is the main activity of your employer?					
(33) Employment Status – In which sector are you employed in?	1. Government (Public Sector) 2. Private Sector		3. Self Employed 4. Non Government Organization		*(Write code)*
(34) What is your Annual Gross Income?	1. 0 – 4999 2. 5000 – 9999 3. 10,000 – 14, 999 4. 15, 000 – 19,999 5. 20, 000 – 24, 999		6. 25,000 – 29, 999 7. 30, 000 – 34, 999 8. 35,000 – 39,999 9. 40, 000 – 44, 999 10. 45,000 – 49,999 11. 50,000+		*(Write code)*

(35) Do you smoke tobacco or cigarettes?	1. Yes	1. Daily *(State how many is smoked per day)*	
		2. Occasionally *(State how many is smoked per occasion)*	
	2. No *(Go to Q. 37)*		
(36) At what age did you first start smoking daily or occasionally?			
(37) Do you consume alcohol?	1. Yes	1. Daily *(State how many glasses / cans per day)*	
		2. Occasionally *(State how many drinks per occasion)*	
	2. No *(Go to Q. 39)*		
(38) At what age did you first started drinking alcohol daily or occasionally?			

Q. 39 – Q. 43 TO BE COMPLETED ONLY BY NIUEANS or THOSE OF NIUEAN ETHNICITY

(39) Are you currently an appointed Leveki Magafaoa?	1. Yes 2. No *(Go to Q. 42)* 3. Don't Know		*(Write code)*
(40) How many parcels of land are titled to you in total?	1. 1 – 5 2. 6 – 10	3. More than 10 4. Don't Know	*(Write code)*
(41) Referring to Q. 40, are you willing to lease any available family land?	1. Yes 2. No 3. Don't Know		*(Write code)*
(42) How much do you know about Niue's current land laws and land tenure system?	1. Don't know anything 2. Very little	3. Enough 4. A great deal	*(Write code)*
(43) How much do you know about your genealogy?	1. Don't know anything 2. Very little	3. Enough 4. A great deal	*(Write code)*

TO BE COMPLETED BY ALL FEMALES 15 YEARS AND OVER

(44) Have you ever given birth? *(even if child died later?)*	1. Yes 2. No *(End interview here)*				*(Write code)*
(45) How many of your children are still alive and are:	1. Living in the same household	**1. Males**		**TOTAL**	
		2. Females			
	2. Living somewhere else in Niue	**1. Males**		**TOTAL**	
		2. Females			
	3. Living overseas	**1. Males**		**TOTAL**	
		2. Females			
(46) How many of your children alive at birth and is/are now deceased?	1. Males			**TOTAL**	
	2. Females				
(47) How many children have ever been born to this female?		**1. Males**		**TOTAL**	
		2. Females			
(48) What is the date of birth of your last child *(even if child died later)?*		**Day**	**Month**	**Year**	

Niue Census 2006
Household Schedule

Confidential when completed!

This Census is conducted under the legal authority of the Niue Census Ordinance 1971.
WARNING: Divuling of any information collected from the census and ddefacement of the schedule is prohibited according to section (16) Census Ordinance 1971.

Area Number	Household Number	(1) Name of Head of Household

(2) Total Number of Males		**(3) Total Number of Females**	
(4) Total Number of persons in the household		**(5) Number of Family Units**	
(6) Type of Dwelling	1. Hurricane house 2. Hurricane with extension 3. Modern House 4. Flat 5. Other (tourist accom. / prison / hospital, etc)		
(7) Tenure of House	1. Own 2. Rent / Lease 3. Free with Job 4. Buying on loan / mortgage 5. On loan without payment		
(8) How many rooms in the house?	→		
(9) Land Tenure: is the land this house is built on, titled?	1. Yes 2. No 3. Don't Know		

(10) Do you or anyone living in this household plan to renovate or build a new house in the next 5 years?	1. Yes 2. No 3. Don't Know	

(11) What languages are spoken in this household?	1. Niuean only 2. English only 3. Both Niuean and English 4. Niuean and other 5. English and other 6. Other	

(12) How many pigs does this household own in total?	1. Males	
	2. Females	
(13) How many pigpens does the household own in total?		
Over the last 12 months: **(14a) How many plantations did the household have in total?**		
(14b) How many plantations were eaten by pigs?		

(15) How many fishing vessels of each type does this household own in total? (Write actual number)	1. Canoe	
	2. Aluminium Dinghy	
	3. Inflatable Dinghy	
	4. Boat	
	5. Outboard Motor	
	6. None	
(16) Is anyone in this household aware of Niue's Domestic Fishing Regulation 1996?	1. Yes 2. No	
(17) How many vehicles does this household own? *(Write actual number)*	1. Motor Bikes (include scooters)	
	2. Vehicles (cars, vans, 4WD, etc)	

Remember to check your questionnaire before leaving the house.

(18a) How many of each type use petrol? *(Write actual number)*	1. Motor Bikes		**(18b) How many of each type use diesel?** *(Write actual number)*	1. Vehicles	
	2. Vehicles				

(19) Which of the following amenities exist in this household? *(Mark appropriate answers with the number 1)*	1. Long Drop Toilet		8. Kitchen sink	
	2. Water Seal Toilet		9. Sewage long drop	
	3. Flush toilet		10. Sewage non-concrete	
	4. Bath tub		11. Sewage concrete	
	5. Shower		12. Electricity – Public supply	
	6. Hand Basin		13. Electricity – Own generator	
	7. Washing Tub			

(20) What is the main form of energy used in this household for cooking? *(ONLY 1 answer.)*	1. Electricity 3. Wood 4. Kerosene	2. Gas 4. Charcoal

(21) What is the main means of hot water supply in this household? *(ONLY 1 answer.)*	1. Electricity 2. Gas 3. Solar energy with booster 4. Solar energy without booster	5. Wood 6. None 7. Other (Specify) _____

(22) What water supply sources are used in this household? *(Mark with the number 1 the appropriate answers)*	1. Public Water (indoors)		4. Rain water in tank	
	2. Public Water (outdoors)		5. Water well	
	3. Public water to tank		6. Other	

(23) Is your household willing to pay for water supply?	1. Yes 2. No 3. Don't Know	*(Explain your answer below)*

(24) Which of the functioning kitchen appliances are in the household? *(Write actual number)*	1. Refrigerator		11. Electric Jug	
	2. Cooler		12. Deep Fryer	
	3. Deep Freezer		13. Bread maker	
	4. 3 phase stove		14. Sandwich maker	
	5. Single phase stove		15. Food processor	
	6. Electric Cooktop		16. Crock pot	
	7. Microwave		17. Coffeemaker	
	8. Electric frying pan		18. Gas element	
	9. Rice cooker		19. Gas Stove	
	10. Electric toaster		20. Electric egg beater	

Remember to check your questionnaire before leaving the house.

(25) Which of the following functioning household appliances are in the household? *(Write actual number)*	1. Portable fan		10. Hoovermatic	
	2. Ceiling fan		11. Iron	
	3. Air condition		12. Wood range stove	
	5. Hand sewing machine		13. Kerosene stove	
	6. Treadle sewing machine		14. Electric water pump	
	7. Electric sewing machine		15. Solar water heater	
	8. Automatic washing machine		16. Food safe	
	9. Wringer		17. Gas BBQ	

(26) Which of the functioning leisure appliances in the household? *(Write actual number)*	1. Stereo		6. Still camera	
	2. Television		7. Digital Camera	
	3. DVD Player		8. Keyboard	
	4. Video Player		9. Guitar	
	5. Video camera		10. Playstation / XBox	

(27) Which of the functioning telecommunication services / equipments are in the household?	1. Automatic telephone		6. Internet (wifi)	
	2. Cordless telephone		7. Desktop Computer	
	3. Cellular telephone		8. Laptop Computer	
	4. Mobile		9. Fax Machine	
	5. Internet (Dial up)		10. Satellite dish	

(28) Which of the functioning agricultural tools are in the household? *(Write actual number)*	1. Knapsack sprayer			4. Motor mower	
	2. Firearm			5. Brush cutter	
	3. Chainsaw				
(29a) Do you or anyone in the household use herbicides?	1. Yes *(Go to Q.29b)* 2. No 3. Don't Know		**(29b) What type of herbicide is used?**	1. Organic 2. Synthetic	
(30b) Do you or anyone in the household use pesticides?	1. Yes *(Go to Q. 30b)* 2. No 3. Don't Know		**(30b) What type of pesticide is used?**	1. Organic 2. Synthetic	
(31) Do you or anyone in this household use any kind of fertilizers?	1. Yes	2. No	3. Don't Know		

(32) List below names, gender, date of birth, reason of absence, date of departure and expected length of absence of those who usually reside in this household but are temporarily overseas? *(Record only those absent for 12 months and less)*

1. Name	2. Gender	3. Date of Birth			4. Reason of absence	5. Date of Departure			6. Expected length of absence

Remember to check your questionnaire before leaving the house.

Appendix 3: 2006 Niue Census

Introduction

This section provides a brief description of the methods used and steps taken during the census operation — from the planning to the dissemination stages. Niue has conducted various censuses in the past, the 2006 Niue Census of Population and Dwellings, is therefore a routine undertaking.

The 2006 Niue Census of Population and Dwellings, like the censuses before, were conducted to provide the government administration, planners and policy-makers, with up-to-date statistical information on demographic and socioeconomic developments. These data are needed for planning purposes and for evaluating and monitoring the success and failure of programmes and projects.

The 2006 census was conducted in accordance with the requirements set out in the Census Ordinance of 1976. Every census undertaking provides an opportunity and a challenge to fine-tune statistical methodologies. Every census it is a challenge for the Niue Statistics Office and its local staff to undertake all the tasks involved. Niue has developed and enhanced its capability in census data processing since 1986. The only remaining area in which Niue continues to seek assistance is in the field of data processing and analysis. Niue officials requested that the final census report, the "Niue Population Profile", be consistent with other population profiles written by the Secretariat of the Pacific Community's Population/Demography Programme. Niue also requested that the profile include special sections on implications for planning for each research topic. These sections underline the possible policy implications that census results could have for planners and policy-makers.

Questionnaire design

The design of the questionnaire for the 2006 census differed slightly from the design of questionnaires used in previous censuses. As usual, government departments were asked to submit a list of questions on any specific topic they would like to add. Responses were not forthcoming in this census, although new questions were included on use of the Niuean language, literacy, genealogy awareness, titled land, number of pigs and pig pens and people's views on paying for water. SPC also assisted with formulating the questions.

There were two types of questionnaires used in the census: the household questionnaire and the individual questionnaire. An enumerator manual was prepared to assist enumerators in their duties.

The questionnaire was pre-tested by staff members of the Niue Statistics Office, and typesetting for printing was done in Microsoft Word.

Publicity

Generally, Niue residents are well aware of census activities, and most of the older population has been enumerated in at least six census undertakings in the past. Therefore, most people are quite aware of their involvement in a census enumeration. The publicity for the 2006 census was minimal as it was only aired on the radio for two weeks prior to the enumeration.

Preliminary field work

Updated maps from the Department of Justice Lands and Survey were used. The maps are attached to a form that the enumerator uses to record information about houses, whether a house is occupied or not. The enumerator also records whether the house is unoccupied, what state it is in (i.e. whether it is beyond repair or needs minor renovations or its ready for someone to move in). Enumerators were also required to note new houses or buildings in their enumeration area.

Recruitment and training of enumerators

The 19 enumerators and 2 supervisors employed for the 2006 census were employees of the Niue Public Service, and most of them had experience with previous census projects. A staff member from the Statistics New Zealand Census Team was able to join the Statistics Niue team as another supervisor/enumerator.

In addition, consideration was given to the need for a geographically dispersed enumeration team, ensuring that enumerators could work in their home villages.

Enumerator training was carried out in one day of the week of the census. Enumerators were divided into two groups: enumerators who will work on the southern side of the island, and those who will work on the northern side. The group working on the northern side was trained in the morning and the others in the afternoon.

Enumeration

Enumeration began on 8 September 2006 and ended 11 September 2006. The census reference point is 2400 hours on 8 September 2006. Schedules were submitted to the Census Office on Monday, 11–13 September 2006.

Data processing

Census processing began as soon as questionnaires were checked and coded. Forms were checked, edited and coded before being entered into the computer database.

Data processing was assisted by the Secretariat of the Pacific Community (SPC) using the computer software program CSPRO for data entry and for generating the tables. Tables were then exported to Excel for analysis.

Occupation and Industry were coded using the United Nations International Standard Classification of Occupation and International Standard Industrial Classification.

Budget

The 2006 census operation was funded by the Government of Niue, with technical assistance in data processing and analysis provided by SPC, which also funded a two-week professional attachment at SPC (Noumea) of Niue's demographer, to facilitate compilation of this report.

Legislation

The census is conducted under the authority of the Niue Assembly Census Ordinance 1971, No. 68 and the Amendment Act 1976. Under the terms of Clause 17 of the Ordinance cited above, it is an offence for any person to divulge or wrongly use any information obtained from the census.

Clause 19(4) requires that a principle to be followed in the publication of statistics is to arrange, wherever possible, statistical tables in such a manner as to prevent any information published in the tables from making any person or household identifiable.

Census outputs

Tabulation was completed straight after the data processing phase, and work on compiling this report began in November 2006, when Niue's demographer was attached to the Secretariat of the Pacific Community's Demography/Population Programme in Noumea, New Caledonia.

Apart from this Niue Population Profile, a complete set of census tables is available from the Niue Statistics Office, and more comprehensive thematic profiles (e.g. of Niue labour market activities) will be forthcoming.

Appendix 4: Key Concepts and Definitions
(compiled and used by the Niue Statistics Office during the 2006 census)

A full list of definitions and terms used for the 2006 Niue Census of Population and Dwellings is also contained in the Manual of Instructions for Census Enumerators.

Area Definitions

Enumeration area
This is a unit that may form part of a village or may consist of a whole village, depending on the number of inhabitants or the geographical layout of a village. A total of 24 enumeration areas were used with an average size of about 26 households.

Village
A village may consist of one enumeration area or consist of several enumeration areas (see reasons given above). The traditional unit of a village and its pre-defined boundaries always remain the same and has never changed.

Niue
All terms relate solely to geographic Niue, and include persons enumerated onboard vessels anchored in port on census night.

Population Definitions

Relationship to head of household
This refers to the relationship of occupants to the head of the household. In a *de facto* marital arrangement, relationships are treated in the same way as legal marriages.

Place of birth
The mother's village of residence at the time of birth, regardless of whether the birth occurred in the Lord Liverpool Hospital, at home or elsewhere.

Descent or ethnic origin
Refers to the blood mixture of races within a person, and is defined by adding one half of the mother's racial origin to one half of the father's racial origin. Half or more of one origin is the general criterion for inclusion in a racial group.

Total population
The basis of total population statistics is the *de facto* population present at the place of enumeration on census night. Visitors from overseas in Niue on census night are included in the count.

Resident population
This refers to everyone who is a resident of Niue at the time of the census disregarding their ethnicity.

Niuean population
This comprises all people who specified themselves as having at least half or more than half of the Niuean blood stock; in cases where there is an equivalent fraction of different racial origins, the person's preference race is used.

Home village
Refers only to people of Niuean descent and commonly defines a person's village of upbringing. Where a person's birthplace is other than Niue, the originating village of the parents is used. Where the parents originate from different villages, the village where the most time has been spent is chosen. The father's origin usually outweighs the mother's origin in difficult cases.

Religion
This is the religious denomination a person identifies with. This is the only question in the census that people have the statutory right not to answer. This does not show how many religious denominations a person follows because it is also possible to participate in more than one denomination.

Marital status
Refers to a person's marital status. Married – Legally married. Divorced is when legally divorced by the Court. *De facto* refers to a couple living together but are not legally married.

Currently attending an educational institution
This inquires whether a person is still attending school or not.

Level of education attending
Refers to all who are still attending primary, secondary and tertiary education. It does not include part time tertiary students who work full time.

Educational attainment
Defined as the highest level of education acquired in the New Zealand school system during the person's entire lifespan, irrespective of whether or not he or she is currently attending school. Where it is not possible to determine the New Zealand equivalent, a broad category is used.

Qualification attained
The highest qualification gained at/or since leaving school, including completed and conferred certificates, degrees or diplomas obtained regardless of the nature of the qualification (i.e. educational, vocational or personal interest). A partially completed qualification was not recorded as attained.

First language as a child and still understands
Refers to the language a person learned as a child and can still understand.

Speaking using the Niuean
Aims to find out how many people can speak Niuean.

Understanding the Niuean language
Aims to find out how many people can understand the Niuean language.

Read and write a simple sentence in Niuean
Aims to determine the population that is able to read and write using the Niuean language.

Read and write a simple sentence in English
Aims to determine the literacy rate in Niue.

Willingness to learn the Niuean language
Refers to those who answered "No" to the questions on the ability to understand, read and write using the Niuean language.

Likely place residence in five years' time
Refers to a person's expectation of where their future permanent residence will be.

Preferred place of residence in five years' time
Refers to a person's preference regarding future permanent residence.

Main activity
Refers to the person's own description of his or her main activity, during the week preceding the census, for persons aged 15 and over.

Labour force
People employed and unemployed; excludes those not seeking employment, housewives and students.

Labour force participation rate
The number of people in the labour force divided by the participation rate the corresponding total number of people (usually those aged 15 and older).

Paid labour force
A person was included in the paid labour force if he or she said they worked for pay or profit or in a family business the week before the census. Also includes people working in agriculture and fishing for sale, and those working by making handicrafts for sale.

Unpaid labour force
People working in agriculture and fishing for their own consumption. Also includes people undertaking unpaid family or community work.

Unemployed

These are people who are not in the paid or unpaid labour force, and who neither looked for work or were available to work in the week prior to the census. The unemployed are people not in the above categories, and who did not work, were not looking for work, and were not available to work in the week before the census.

Not in the labour force

Includes those people in the following categories: housework/home duties; students in full-time education; retired/pensioners; disabled people; people not interested in working.

Employed

Refers to whether a person is working for the government, in the private sector, or is self-employed.

Employment status

Refers to sectors in which a person is employed, such as in government (public sector), private sector, self employed, non-governmental organisations

Industry

Refers to the type of activity undertaken by the organisation, enterprise, business or unit of economic activity or production within which a person is employed. The industry classification used is based on the United Nations International Standard Industrial Classification (ISIC) Rev. 3.

Occupation

The principal job, trade, profession or type of work in which a person is employed full time or part time for monetary gain, or in subsistence activities for sale or consumption. The occupation is classified based on the International Labour Organization (ILO) International Standard Classification for Occupation 1988.

Annual gross income

Refers to the amount of a person's salary/wage in a 12-month period. Also includes an estimated amount of how much the person earns for selling their produce, fish or handicrafts for the same period.

Smoking

Refers to the person's smoking habits: never smokes at all, heavy smoker (smokes regularly every day), and casual smoker (smokes only on certain occasions).

Age when started smoking

Refers to the age when person began smoking. It does not refer to when person was experimenting with smoking.

Drinking

Refers to drinking habits: never drinks at all, heavy drinker (drinks regularly every day), and casual drinker (drinks only on certain occasions). A "can" refers to a can of beer with contents of 340 ml; a "glass" refers to a standard glass of mixed alcohol, such as whisky and Coke.

Age when started drinking
Refers to how old the person was when he/she first started drinking. It does not refer to those who were tasting or experimenting with alcohol.

Given birth
Asks whether the woman has given birth or not in her lifetime.

Number of children born alive who are still living
Refers to the number of natural children born alive who are still living.

Number of children born alive who have died
Refers to the number of natural children born alive, but who are now deceased; adopted and fostered children are counted by their natural mothers.

Household Definitions

Household
Defined as a unit consisting of one or more people who have a common arrangement for providing themselves with food (i.e. preparing meals and eating together). A household may consist of one person, but usually comprises a number of people who are often, but not always, related to each other. It is also possible to have households temporarily without occupants, if the occupants are away overseas.

Family unit
Defined as a husband and wife with or without unmarried children. A married couple staying with their daughter and her husband on census night would constitute a two-family household.

Private household
Those dwellings intended for habitation either by a single person or a small group of individuals such as a family, who normally (although not always) form a durable social and economic unit, cooperating to provide themselves with the necessities of living.

Non-private households or establishments
Communal institutions intended for use by large groups of individuals or several families, usually on a semi-temporary basis, bound together by a common purpose or similar interests, and sharing the same facilities (including in many cases communal dormitories and recreation areas). This category includes hotels, motels, prisons, hospitals, etc.

Tenure of house
Refers to the nature of occupancy of a private dwelling.

Land tenure
Refers to whether the land the dwelling is built on is land titled to him or anyone else. It does not matter who it is titled to as long as it has been titled legally in court.

Plans on renovating or building a house in the next five years
Refers to anyone living in the household who is planning to either renovate an existing house or build a new house.

Languages spoken in the household
Refers only to the main language used in the household irrespective of the households ethnicity.

Number of pigs the household owns
Refers to the number of pigs a household own in total including those that are situated in the bush

Number of pigpens a household owns
Refers to the number of pigpens a household owns including those situated in the bush.

Number of plantations a household has
Refers to the number of plantations a household had or have in the last 12 months.

Number of fishing vessels
The number of vessels owned by private households, which are available for use and in useable order on census night.

Number of vehicles
Refers to the number of vehicles the household owns.

Ownership of domestic appliances
Refers to the ownership of household items that are in working order, by each private household.

Household members overseas
Refers to the members of the household temporarily absent overseas, which includes those on training, business or on holiday.

Dwelling Definitions

Dwelling
Defined as living quarters (e.g. a room or a set of rooms) intended for habitation by a household. Thus, a dwelling may be a single building (e.g. a house); or it may consist of several buildings (a main building with a separate cooking or sleeping house, for instance). There may be several dwellings in a building (e.g. a block of flats). A dwelling may be a building not erected for the purpose of habitation (e.g. warehouse or community hall). It may consist of more than one household, in which case there would be separate arrangements for cooking and eating.

Type of dwelling
Refers to the different categories of the occupied private dwellings based structure (permanent or temporary), which are used wholly or partly for human habitation by one or more households. The categories include house, assembly unit (*fale fuakau*), flat, kitset house and others, including those not intended for habitation, but occupied by a household at the time of the census. For dwellings consisting of more than one structure, the main structure is taken as the main dwelling.

Number of rooms
Refers to the number of rooms in the dwelling, and includes bedrooms, sitting rooms and kitchens, but does not include pantries, laundries, bathrooms, toilets, passageways, or open verandas or porches not wholly enclosed.

Amenities of dwelling
Defines the habitability status of the dwelling with regard to the provision of sanitation, electricity and sewage disposal.

Source of water supply
Refers to all the possible sources of water supply for the household.

Willing to pay for water
Refers to how the person feels if the water is paid for.

Main means of cooking
Refers to the main method of cooking most often used by a household; this means that out of all the methods of cooking used by the household, the one selected is used nearly every day.

Main means of hot water
Refers to the source of hot water most often used by the household.

Demographic terms

Age-dependency ratio
The ratio of people in the ages defined as dependent (under 15 and over 60 years) to people in the ages defined as economically productive (15–59 years).

Age-sex composition
Distribution of population by age and sex

Age-specific fertility rates (ASFRs)
Relates the number of births to women of a particular age-group, in a specific calendar year, to the mid-year population of women in that same age-group

Average household size
Total population living in private households divided by total number of private households.

Balancing equation
Population growth = Births deaths + net migration.

Birth cohorts
A group of people born in the same reference period.

Child mortality
Mortality of children between 1 and 4 years of age.

Child mortality rate
Total number of deaths of children aged 1–4 during a year X divided by the mid-year population of children aged 1–4

Childbearing age (for women)
Women aged 15–49 (the reproductive age-span of women).

Children population
The population of children under 15 years of age.

Crude birth rate (CBR)
The total number of live births per 1,000 population in a given year.

Crude death rate (CDR)
The total number of deaths in a given year per 1,000 population.

Direction of migration
Destination of migrants.

Economically active
People aged 15 and older who were employed or looking for work; also referred to as the labour force.

Educational attainment
Proportion of the population aged 15–25 years and over by age groups and level of education.

Elderly persons
Persons aged 60 years and over.

Emigrants
People who move out of a country for the purpose of establishing a new residence.

Extended family household
Household consisting of couples living with their children and others related by blood or through marriage.

Family
A group of two or more people related by birth, marriage or adoption and living together.

Fecundity
The biological/physiological ability to reproduce.

Fertility
Actual reproductive performance of a population; the number of live births occurring in a population.

Household
A single person living alone or a group voluntarily living together, having common housekeeping arrangements for supplying basic living needs, such as principal meals; the group may consist of related or unrelated people.

Immigrants
People who move into a country for the purpose of establishing a new residence.

Infant mortality
Mortality of children under one year.

Infant mortality rate (IMR)
Total number of deaths of children aged less than one year per 1,000 live births in a year

In-migrants
People who move into a different area of a country for the purpose of establishing a new residence.

Internal migration
The movement of people within a country for the purpose of establishing a new residence.

International migration
The movement of people between countries for the purpose of establishing a new residence.

Life expectancy at birth (E (o))
The average number of years a newborn child would live if current mortality trends were to continue.

Marital status
Married status of a person: includes not married (single), currently married, divorced/separated, *de facto*, widowed.

Median age
The age that divides a population into two numerically equal groups; that is, half the people are younger than this age, and half are older.

Migrant
A person who moves for the purpose of establishing a new residence.

Migration
Movement of people across a specified boundary for the purpose of establishing a new residence.

Mortality
Deaths as a component of population change.

Natural increase
Population increase that is the result of births and deaths. Growth occurs when the number of births in a given time period (e.g. a calendar year) exceeds the number of deaths; negative growth, or population decline, occurs when the number of deaths exceeds the number of births.

Net migration rate
The net effect of immigration and emigration on a country's population, expressed as increase/decrease per 1000 population in a given year.

Nuclear family
A couple and their unmarried children residing together.

Out-migrants
People who move out of an area within a country for the purpose of establishing a new residence in a different area of the country.

Population census
The total count of a population usually taken at 5- or 10-year intervals.

Population density
Number of people per square mile or square kilometre of land area.

Population dynamics
Development of population through time.

Population momentum
Continued population growth even after birth rates have fallen due to a large number of women of childbearing age because of past high fertility.

Population policies
Measures devised by governments to influence population size, growth or distribution.

Population processes
Vital events or migratory movements: fertility, mortality and migration (including urbanisation).

Population projections
Scenarios of what future populations may look like under given assumptions.

Population structure
Refers to population size, geographic distribution, age, sex structure and socioeconomic characteristics.

Rate of natural increase
Rate at which population grows (increase/decrease) during a given year, as the result of a surplus/deficit of births over deaths; expressed as a percentage of the base population.

Rate of population
Rate at which population grows (increase/decrease) during a given year, as the result of natural increase plus net migration; expressed as a percentage of the base population.

School-age population
Depends on the education systems of various countries, but usually ages 6–16.

School enrolment
Proportion of population, by age groups or single years of age, currently enrolled in school.

Sex ratio
Number of men per 100 women. Sex ratios over 100 indicate that there are more males than females, and sex ratios under 100 indicate more females than males.

Socioeconomic characteristics of population
Ethnicity, marital status, religious denomination, economic activity and educational attainment of population.

Total fertility rate (TFR)
The average number of children a woman would give birth to, during her lifetime, if she were to pass through her childbearing years conforming to the age-specific fertility rates (ASFRs) of a given year.

Vital events
Births, deaths, marriages and divorces.

Vital processes
Population processes: fertility, mortality and migration (including urbanisation).

Vital statistics
Information on vital events.

Volume of migration
Number of migrants.

Working-age population
Normally defined as population aged 15–59 (or 15–64).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