

**NIUE POPULATION PROFILE
BASED ON 1997 CENSUS**

A guide for planners and policy-makers

**Population/Demography Programme
Secretariat of the Pacific Community**

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FOREWORD

For almost 15 years, the SPC's Population/Demography Programme has assisted Pacific Island countries and territories in the population sector. With generous support from UNFPA until the end of 1992, SPC was able to provide assistance over a broad range of demographic issues and activities to its 22 Pacific Island members. Most of its activities concentrated on population censuses and surveys, covering all aspects from design, data collection and processing, to analysis, including training and institutional capacity building in these areas. The SPC Population/Demography Programme established a tradition of providing quality advisory services throughout the region, in a technical discipline which most Pacific Island governments still find difficult to address due to a lack of suitably-qualified national staff.

From 1993 onwards, the main emphasis of the SPC Population/Demography Programme has shifted from data collection, processing and demographic analysis to data utilisation, paying greater attention to the interrelationship between population and development. This new and more applied emphasis is in response to demands from our member countries and territories, acknowledging that most planners have had no formal or first-hand experience with population matters; therefore they were neither in a position to incorporate population considerations into development planning processes, nor to appropriately digest highly technical demographic analyses.

To redress this situation was the main objective of the SPC *Integration of Population Issues into Development Planning* project (1994–1997), which was supported through a generous multi-year financial assistance arrangement with the Australian Agency for International Development (AusAID). One of the two key objectives of the project was to undertake more policy- and planning-relevant demographic analyses to assist member countries and territories in the formulation of their national development plans and strategy frameworks.

The continued importance of providing planning- and policy-relevant population information is acknowledged in our programme's current project focussed on *Population and Governance* (1998–2000), which is again funded by AusAID. The Niue Population Profile is the second report published in 1999, and the tenth since the inception of this series. Unlike more traditional demographic analyses, this profile is written for a non-technical audience, and pays more attention to specific implications for planners. Key points are summarised in 'boxes' at the end of each section to provide a basis for further discussion and utilisation of the data.

This profile is mainly based on the results of the 1997 Niue Census and data provided by the Niue Statistics Office. Unless otherwise stated, all tables and figures are derived from the 1997 Niue Census data.

This volume was prepared by Mr Andreas Demmke and Dr Gerald Haberkorn. It would have not been possible without the dedication and expertise of Mr Frank

Sioneholo, Niue's Government Statistician, who worked at SPC for 3 weeks on a short term attachment in July and August 1998.

Contributions were also made by other members of the SPC's Population/Demography Programme: Ms Gladys Beccalossi, Ms Christelle Lepers, Dr Chris M^cMurray and Ms Vilimaina Rakaseta.

We would also like to thank Mr Jim Thompson, Mr Jipé Le-Bars and Ms Patricia Martin, for their skills and contributions in editing, artwork, and layout respectively.

Chris M^cMurray
Demographer
Secretariat of the Pacific Community

ACKNOWLEDGEMENTS

It is my privilege to introduce this report, as it relates to the 1997 Census. The report is an addition to a series of census reports, which present the demographic, social and economic characteristics of Niue. It provides a measure of Niue's development at a particular point in its national history.

The report is a tribute to 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 to the Statistic Unit and its personnel for their dedication and hard work.

The Government and people of Niue also acknowledge the invaluable assistance of the Population/Demography Programme of the Secretariat of the Pacific Community, particularly the contribution of Mr Andreas Demmke. Its willingness, understanding and patience made it possible to produce this report.

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

Kia monuina.

Honourable Aokuso S. F. Pavihi
Minister of Finance, Economics & Statistics, Justice and Tourism

SUMMARY

1997 Census population	2,088
Population density, 1997	8.1 per km ²
Average annual rate of growth (1991–1997)	–1.2 %
Percentage younger than 15 years	33 %
Percentage 15–59 years	54 %
Percentage 60+ years	13 %
Median age, 1997	27.0 years
Sex ratio, 1997	102 males/females
Dependency ratio (15–59), 1997	84.5
Crude Birth Rate (CBR), 1991–1997	18.3 ‰
Crude Death Rate (CDR), 1991–1997	6.6 ‰
Net migration rate, 1991–1997	–24.0 ‰
Average annual number of births, 1991–1997	41
Average annual number of deaths, 1991–1997	15
Average annual number of net migrants, 1991–1997	–51
Average household size, 1997	3.8
Total Fertility Rate (TFR), 1991–1997	3.0
Life expectancy at birth, both sexes (1991–1997)	69.5 years
Infant Mortality Rate (IMR), 1991–1997	17.5 ‰

The aim of this profile is to provide an overview of some of the demographic features of the population of Niue. The emphasis is on identifying the key implications for planners and policy-makers of observed demographic levels and trends.

Niue, one of the largest coral islands in the world (259 km²) with a circumference of 64 km by road, extends 19 km from north to south. Niue is situated 480 km east of Tonga, 560 km south-east of Samoa and 2,400 km north-east of New Zealand, and is one of the world's smallest self-governing states (in association with New Zealand).

The 1997 Census counted the population of the country at 2,088 people, of which 35% (732) lived in Alofi, Niue's administrative centre.

Niueans are New Zealand citizens, and as such are permitted to travel freely to New Zealand and back. Today, almost nine times as many Niueans live in New Zealand as in Niue itself. The 1996 New Zealand Census counted 18,474 Niueans in New Zealand,

most of whom (77%) lived in the urban areas of Auckland. Almost 66% of the Niueans in New Zealand were born in New Zealand, and only 28% were born in Niue.

Migration has been the major component of population change in Niue. While there were an average 41 births and 15 deaths per year during the intercensal period 1991–1997, resulting in a net natural increase of 26 people per year, about 51 people left Niue annually. As a result, the population of Niue has had a negative population growth rate of –1.2% per annum. Without migration, natural increase of the Niuean population would be slightly more than +1% per annum.

Although Niue's population has a relatively young age structure with 33% under the age of 15 years, it also has a relatively large percentage of elderly people, with 13% older than 60 years. This is a result of the continued out-migration of its economically active population aged between 15 and 59 years, which comprises only 54% of the total population. It is mainly the 15–19 year-olds who have left Niue, with about 43% of all migrants belonging to this age-group.

The 1997 Census recorded about as many males as females, resulting in a sex ratio of 102 males per 100 females. The median age of the population was 27 years, and the age-dependency ratio (15–59) was 84.5.

Only a very small minority of the population over 15 years of age (2%) had never attended a school (mainly elderly people). Seventeen per cent had primary education, 61% had secondary education and 15% had tertiary education. Slightly more males than females had secondary education (63% compared with 59%) and tertiary education (17% and 13%).

School enrolment is compulsory from the ages of 5 to 16 (in order to complete primary and secondary education), and 98% of school age persons are enrolled in school.

Seventy-five per cent of Niue's population 15 years and older were economically active (in the labour force): 83% of all males and 66% of females. However, less than 50% of the population was employed in the cash economy: 57% of males and 41% of all females; 22% did unpaid or irregular paid work, which includes all kinds of subsistence activities like fishing, farming or selling handicrafts. Five per cent of the labour force were unemployed.

Not surprisingly, there are large differences in the employment structure of Niue and the Niueans living in New Zealand. Sixteen per cent of Niueans in the labour force in New Zealand were unemployed, and those with jobs tended to have jobs which were less prestigious than those in Niue.

With regard to fertility and mortality, the average number of children born per woman in Niue has been estimated at about 3.0 (Total Fertility Rate) for the intercensal period 1991–1997. This translates into an average of 41 births in Niue per year. The corresponding average Crude Birth Rate was 18.3 births per 1000 population.

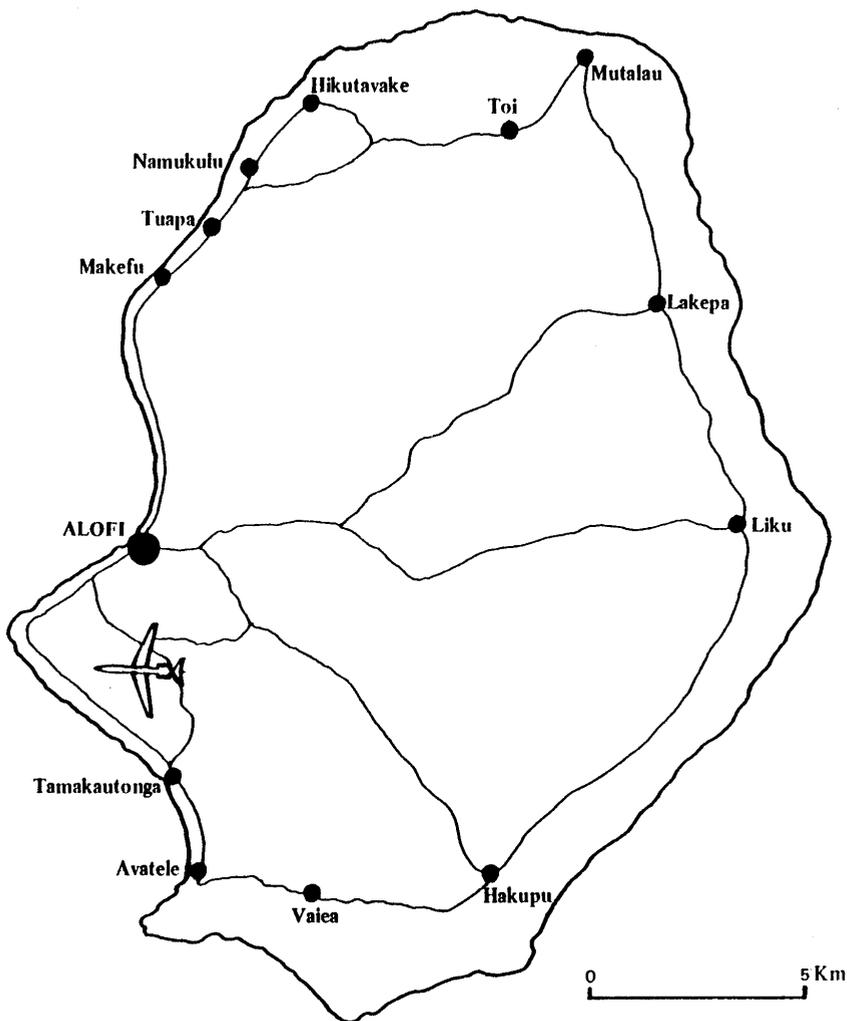
Life expectancy at birth for both sexes combined is estimated at about 69.5 years for the period 1991–1997, and Niue’s Infant Mortality Rate is estimated at 17.5 deaths per one thousand live births.

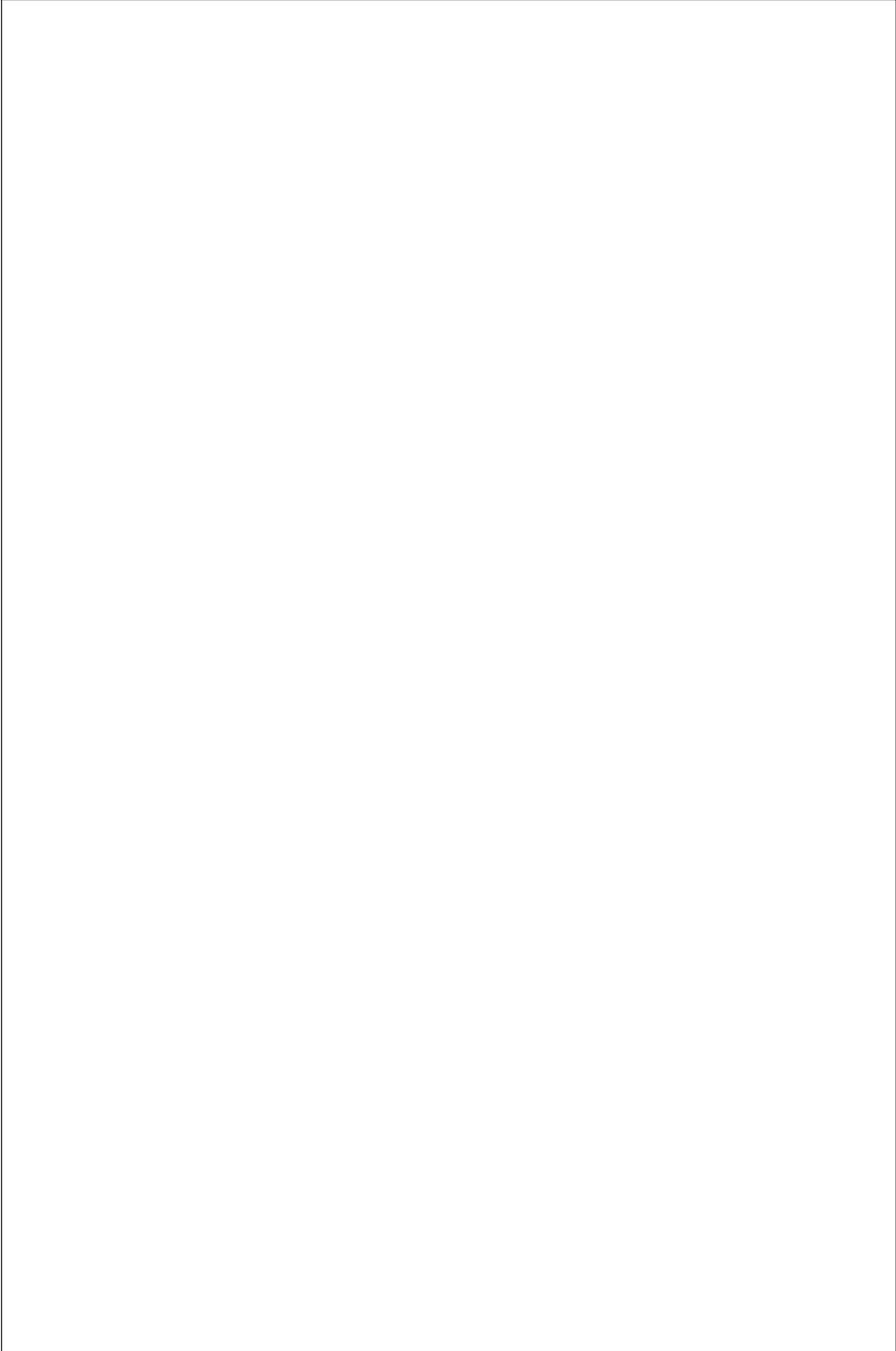
Niue’s population is far too small to compile different life tables for males and females, which we expect would show some marked difference in life expectancies. This is evident from the number of registered deaths, where 50% more male than female deaths were recorded during the last 10 years. Only 10% of all males 60 years and older were widowed compared to 37% of females of the same age. In addition, census questions on the incidence of smoking and drinking reveal that men are more likely to smoke and drink than are women.

In response to Niue’s continuous depopulation, the Niuean Government has established a National Population & Development Committee (formerly called the ‘Repopulation Programme Committee’), charged with formulating a Population and Development policy to encourage Niueans currently residing in Niue to remain there. In addition, by identifying financial and economic incentives, the Committee aims to encourage Niueans residing in New Zealand to return and resettle in Niue. Niue recently has also tried to attract people from other countries to settle in Niue, mainly from Tuvalu and Tonga.

The 1994 and 1997 Censuses included questions to determine whether the people of Niue were in favour of accepting the re-populating policy. In 1997, almost 52% were in favour, and 33% against encouraging people living overseas to settle in Niue. This was more acceptance than in 1994 when only 46% were in favour and 28% were against such a policy. However, the acceptance of this policy only favours the re-population of overseas Niueans, whereas the vast majority (about 80%) of people in 1997 rejected the idea of attracting citizens of other countries to Niue.

NIUE





1. INTRODUCTION

Throughout their lives, people make changing demands on different services. Almost every aspect of life is somehow associated with age, and age 'creates' very specific demands. For example:

- young children need special health care (immunisation);
- children usually commence their formal education at around age six (schools, teachers, materials);
- young people leave their parents' houses (housing);
- school leavers search for work (employment opportunities);
- child-bearing is usually confined to women aged 15–49 (demand for maternal and child health and family planning services); and
- elderly people make special demands on health care, transport, housing, pension entitlements, etc.

For governments to effectively cater for the specific needs of different population groups, it is important that planners have a clear picture of the demographic make-up 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 socio-economic characteristics (economic activity, educational attainment of population). Population processes refer to population growth, fertility, mortality and migration (including urbanisation).

Apart from playing an important role in shaping a country's economic and social development, population structure and processes can also be the direct result of development. This is evident in situations where policies are incorporated into development plans specifically to alter population variables:

- greater budget allocation to a country's ministry or department of health to expand its maternal and child health and family planning services can lead to fewer deaths of infants, children, and women;
- incorporating family health education in school curricula may lead to lower fertility and a healthier lifestyle for future generations;

It should be kept in mind that population policies, even when well implemented, do not usually produce results for quite some time.

As population factors are important components of development, and as development is ultimately about people (specifically, about improving people's lives), it is clear that incorporating population considerations into the planning process is at the very heart of planning and development.

The aim of this population profile is:

- 1) to present the major findings of the 1997 Census results and where possible compare them to earlier Niue censuses, and to major findings of the 1996 New Zealand Census on Niueans living in New Zealand;
- 2) to do so in a way which will familiarise planners and policy-makers with some of the key features of the socio-demographic situation of Niue; and
- 3) to discuss some of the key implications for development planning and policy.

The 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 further analyses of specific sectoral issues and topics, for example housing and occupation, can be undertaken as needed. Efforts have been made to keep this report as brief and free of demographic jargon as possible, so that it can be read quickly and easily. A glossary is appended to explain unavoidable technical terms.

This population profile draws on the following source material:

- unpublished basic tables of the 1997 Niue Census results,
- unpublished basic tables of the 1994 Niue Mini Census,
- the 1986 and 1991 Niue Census reports, and
- the 1996 New Zealand Census (Niueans living in New Zealand).

Except where stated otherwise, tables and figures are derived from the 1997 Niue Census data.

2. POPULATION STRUCTURE

Population factors such as size and growth have major roles in determining overall development objectives. As people both produce and consume goods, plans regarding production, consumption, investment, distribution, education, health, housing and other needs should take population factors into consideration.

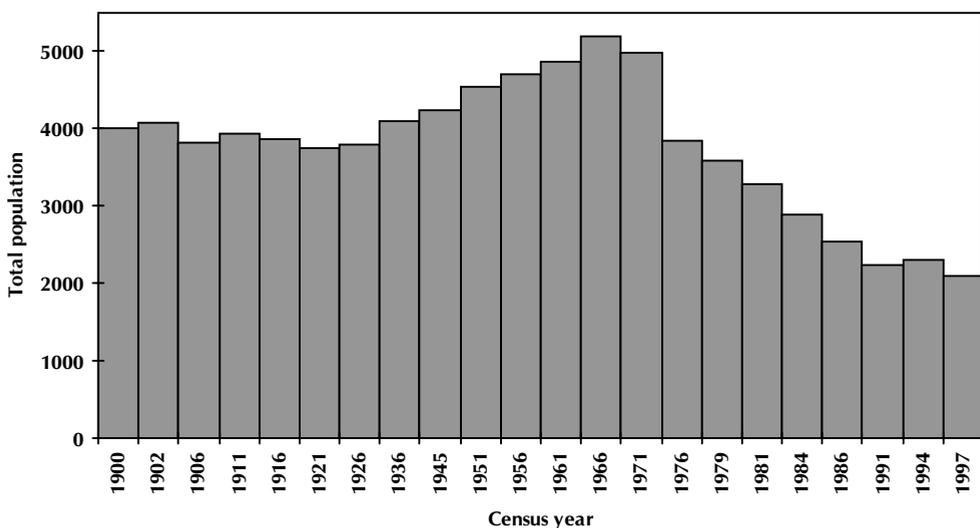
2.1 Population size, growth, distribution and density

The population of Niue, as enumerated on 17 August 1997, stood at 2,088 people: 1,053 men and 1,035 women (Appendix Table 1). As the 1997 Census was a *de facto* count, like all censuses before, this number included all persons on the island, residents and visitors, and excluded residents away from the island at the time of the census, even if they intended to be away only for a short time. This population count reflects a decrease of 151 compared to the 1991 Census (2,239), and a decrease of 212 compared to the 1994 Census.

As about 70 males and 72 females were temporarily absent during the census, the *de jure* population of Niue amounted to 2,230 people in August 1997.

Figure 1 shows Niue's population change from 1900 to 1997. Following a period of stability up until the 1930s, Niue's population increased to an all-time high of 5,194 people in 1966. From then on, it dropped quite dramatically until the late 1980s (as a result of the opening of Niue's Hanan International Airport in 1970, when many people took the opportunity to migrate to New Zealand). Since 1991 the population of Niue has been reasonably stable. Its first population increase for 30 years in 1994 was followed by a further decrease to reach its lowest level ever in 1997.

Figure 1: Niue population from 1900 to 1997



Thirty-five per cent of the population of Niue lived in Alofi, the administrative centre of Niue (Table 1). The only other village with more than 200 inhabitants was Hakupu. While the overall population of Niue has declined (–151) during the intercensal period 1991–1997, Alofi has grown by 50 people. All other villages, except Lakepa, Vaiea and Hakupu, experienced a population decline.

Table 1: Population size by village, 1986, 1991 and 1997

Village	Total population			Population change	
	1986	1991	1997	1986–1991	1991–1997
Makefu	124	117	95	– 7	– 22
Tuapa	235	197	168	– 38	– 29
Namukulu	53	45	28	– 8	– 17
Hikutavake	117	83	68	– 34	– 15
Toi	91	41	35	– 50	– 6
Mutalau	188	166	148	– 22	– 18
Lakepa	139	115	125	– 24	10
Liku	116	126	92	10	– 34
Hakupu	244	258	258	14	0
Vaiea	36	40	46	4	6
Avatele	195	185	143	– 10	– 42
Tamakautonga	182	184	150	2	– 34
Alofi	811	682	732	– 129	50
Alofi South	477	412	443	– 65	31
Alofi North	334	270	289	– 64	19
Total	2,531	2,239	2,088	– 292	– 151

As population numbers have declined, the population density has also decreased, from almost 10 people per square kilometre in 1986, to 8.6 in 1991 and only 8.1 in 1997. The 1996 New Zealand Census showed that 18,474 people of Niuean descent were enumerated in New Zealand. This is almost nine times as many as in Niue itself, and comprises an increase of more than 4,000 people during the intercensal period 1991–1996 (Table 2).

Seventy-eight per cent (12,000) lived in metropolitan Auckland, about 1,000 in the Wellington area, another 850 in other urbanised areas of the North Island, about 500 in the South Island, and around 1,200 in rural and minor urban areas (Appendix Figure 1).

Table 2: Niueans living in New Zealand by sex, New Zealand, 1986, 1991 and 1996

	1986	1991	1996
Males	6,267	7,173	9,183
Females	6,234	7,254	9,291
Total	12,501	14,427	18,474

IMPLICATIONS FOR PLANNING

- The small size, remoteness and isolation of Niue makes the establishment of services expensive and cost-ineffective. The provision of tertiary and professional education and training, competitive medical service, and a broad range of employment opportunities will probably never be possible in Niue, and may remain a reason for the continued departure of local people.
- The decline in the population of Alofi has been relatively smaller than that in the rest of Niue. There has even been slight growth since 1991. As Niue’s administrative centre, Alofi offers better services. All major medical, educational and financial institutions, and communication and entertainment facilities, and most importantly employment opportunities are located in Alofi. The availability of better services and facilities of various kinds in Alofi may be seen by some people as an advantage which attracts people, and a disadvantage for the other villages of Niue. However, depending on the availability of transport, the small size of Niue generally means that people living in other villages can reach Alofi in a relatively short time.

2.2 Age and sex

As indicated in Section 1, people pursue different activities and make different demands on services throughout their lives according to their ages, with infants, children, adolescents, students, workers, elderly people, and women in their reproductive ages all having different needs. 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 programmes, it helps planners and policy-makers to have a good understanding of their population's age-structure.

The gender make-up of a population, particularly in the proportion of males and females in specific age-groups, also has important implications for societies and development. A large number of women of child-bearing age usually means high population growth rates.

A country's age and sex distribution is thus of critical importance to development, in that it reflects both current and future needs.

Figure 2 shows the age and sex structure of Niue's population at the time of the 1997 Census, in the form of a population pyramid. Population pyramids usually have sides which taper gradually towards the top.

Niue's population distribution, however, looks quite different; a distinct feature is the indent of the 20–29 year age-group, a sign of out-migration. As will be shown in Section 4.4, it is especially the 15–19 year-olds who migrate. The pyramid also shows, that the base of the pyramid (the 0–4 year-olds) is shrinking too. This usually is a sign of decreasing fertility rates.

In contrast, the population pyramid of the Niueans living in New Zealand (Appendix Figure 2) has a typical shape with a wide base at younger ages gradually decreasing through successive age-groups. Only in the 25 to 40 year-old age-groups, especially females, is the pyramid a little wider than expected, probably due to past high immigration rates.

Another interesting feature of Niue's population pyramid (Figure 2) is the much greater number of women than men amongst Niueans over 60 years of age, which is due to gender differentials in mortality, because women usually have a higher life expectancy at birth than men (see Section 4.3).

Two key demographic indicators providing a quick insight into a country's age distribution are the median age, and the age-dependency ratio. The median age of Niue's population was 27, which means that half of the population was younger, and the other half was older than 27 years of age. Table 3 points to recent aging of Niue's population, as indicated by increasing median ages from 20.9 years in 1986, to 22.8 in 1991 and 27.0 in 1997.

A second quick way to describe a country's population structure is with the age-dependency ratio, which describes the proportion of the economically-dependent component of a country's population to its productive component (Table 3). This is

conventionally expressed as the ratio of the young (0–14) plus the old (60+), to the population in the working ages (15–59). Niue’s age-dependency ratio in 1997 was 84: this means that for every 100 persons of working age, there were 84 persons in the dependent ages. The higher the age-dependency ratio, the higher the number of people who need to be cared for by the working-age population, of whom not all are actually employed. The age-dependency ratio has continuously decreased from 96 in 1986 and 87 in 1991, largely because of a fertility decline.

The distribution of males and females in Niue’s population was fairly even. This is indicated by a sex ratio of 102, which means there were 102 males for every 100 females on Niue. Sex ratios tend to decline with age, as is also evident in Niue (Figure 2, Appendix Table 1). As already suggested previously, this is the result of gender differentials in mortality and migration.

Figure 2: Population pyramid, Niue, 1997

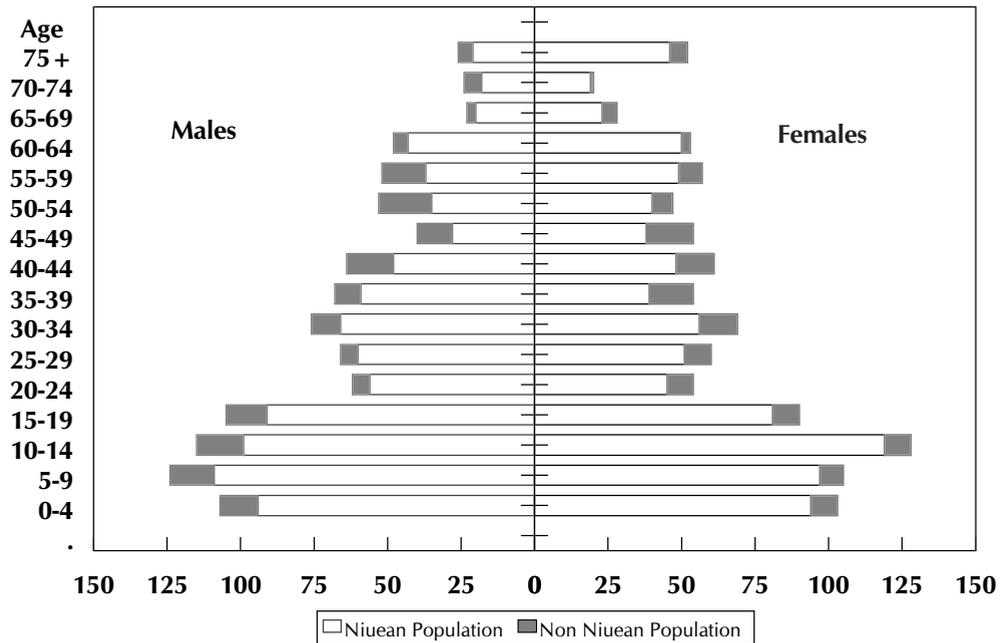


Table 3: Distribution of people by broad age-groups (per cent), median age, age-dependency ratio and sex ratio, Niue, 1986, 1991 and 1997

Age-group	1986	1991	1997
0–14	38.4%	36.7%	32.7%
15–59	51.1%	53.6%	54.2%
60+	10.4%	9.7%	13.1%
Median age	20.9	22.8	27.0
Dependency ratio	95.6	86.6	84.5
Sex ratio	101.0	103.0	102.0

IMPLICATIONS FOR PLANNING

A country's age structure has important implications for all its development policies and programmes, as people make different demands on different services, and fulfil different roles and functions throughout their lives, for example:

- * the number of young children and infants determines child health programme requirements, including immunisation;
- * the size of the school-age population determines the demand for primary education (schools, classrooms, teachers, materials);
- * the number of women of childbearing ages has a big impact on population growth;
- * the presence of young adults, the most dynamic and innovative part of a population, is important for maintaining a harmonious and lively community;
- * expenditure on pension entitlements depends on the number of elderly people;
- * the need for manpower planning depends on the size of the working-age population.

2.3 Household characteristics

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

Household size and composition depend mainly on socio-economic and cultural factors, the age at which young people leave their parents' houses to form their own households and whether they do this alone or with a family. The availability and costs of suitable housing (housing market) and the availability of land to build upon also have a big impact on household formation and composition.

2.3.1 Household size

The 1997 Census counted 543 private households, which represents 22 more than in 1991. The average number of persons per household in Niue was 3.8 people, which is less than in 1986 and 1991 (Table 4). About 140 people usually residing in Niue were temporarily absent during the census. Including these people would increase the average household size to 4.1 members.

There are marked differences in household size by village, ranging from 5.8 in Vaiea to only 2.8 persons per household in Namukulu.

There are a large number of unoccupied habitable dwellings in Niue, due to its high rate of emigration. In 1997, 393 empty houses were counted, of which 95 % were still intact (whether or not they needed repairs). Seventy-six houses were in a state ready to be occupied immediately.

Not only has the average household size decreased since 1991, the distribution of households by size has also changed considerably (Appendix Table 2). In 1997 there was a noticeable increase of the number of households with 1 or just 2–3 occupants compared to 1991; 10 more single person households were recorded and 46 more households with 2–3 persons per household. On the other hand, there were 19 fewer households with more than 8 occupants in 1997 than in 1991. Overall fewer people lived together per household in 1997 than in 1991, and probably fewer than ever before in Niue's history.

Table 4: Total number of private occupied households and average household size by village, 1986, 1991 and 1997

	1986		1991		1997	
	Number of HH	Average HH size	Number of HH	Average HH size	Number of HH	Average HH size
Makefu	23	5.4	27	4.3	26	3.7
Tuapa	45	5.2	45	4.4	41	4.1
Namukulu	9	5.9	10	4.5	10	2.8
Hikutavake	30	3.9	22	3.8	21	3.2
Toi	16	5.7	9	4.6	10	3.5
Mutalau	38	4.9	38	4.4	38	3.9
Lakepa	28	5.0	25	4.6	30	4.2
Liku	31	3.7	28	4.5	22	4.2
Hakupu	51	4.8	52	5.0	54	4.8
Vaiea	5	7.2	6	6.7	8	5.8
Avatele	51	3.8	46	4.0	44	3.3
Tamakautonga	35	5.2	38	4.8	38	3.9
Alofi	187	4.1	175	3.8	201	3.6
Alofi South	113	3.9	109	3.7	126	3.5
Alofi North	74	4.4	66	4.1	75	3.9
Total	549	4.5	521	4.3	543	3.8

2.3.2 Household composition

Data on household composition was established by identifying a head of household who serves as a reference person to whom all other persons in the household, in terms of family membership, can be related. Seventy-seven per cent of all heads of households in Niue were men and 23 % were women (Table 5).

Niueans referred to the oldest male person living in the household as the head of household, regardless of his ability to support the household members. The female heads of households were often either never married, widowed or divorced, or the heads of single-person households.

About 80 % of all household members belonged to nuclear families: husband, wife and their children. Eleven per cent were grandchildren of the household head (usually the result of young couples living with their children in their parents' house). Only 7 % of all household members were other relatives, and a further 1.5 % were non-relatives.

Table 5: Household composition (relationship to head of household), Niue, 1997

Relationship	Male	Female	Both	Male	Female	Both
	Total numbers			%		
Head of Household	405	120	525	19.7	5.8	25.6
Spouse	11	323	334	0.5	15.7	16.3
Child (incl. adopted children)	407	383	790	19.8	18.7	38.5
Grandchild	121	111	232	5.9	5.4	11.3
Other relations	63	78	141	3.1	3.8	6.9
Non relations	14	16	30	0.7	0.8	1.5
Total	1,021	1,031	2,052	49.8	50.2	100

Note: 36 people were not part of a household. They lived in 'institutions' such as hotels, etc.

IMPLICATIONS FOR PLANNING

- The Niue Government needs to be aware of any changes in household size and composition, because of their impact on different demands for housing and dwellings. The different demands for housing are closely linked to demands for land allocation and services such as energy and water consumption, waste disposal and sewerage. At present however, there does not seem to be any pressure on housing, considering the large number of empty dwellings.
- Despite a decrease of Niue's overall population size since 1991, the total number of households has increased. This increase in the number of households is due to changes in household structure and has increased the demand for services.
- Households and families that cannot afford an acceptable, healthy lifestyle may need extra attention from the Government or community, since unhealthy living environments will affect the whole community in the long run. In particular, the following minimum housing conditions should be in place: availability of and access to safe and clean water, public electricity, hygienic waste disposal and a safe housing structure which is capable of withstanding cyclones of average strength.

3. SOCIO-ECONOMIC PROFILE OF THE POPULATION

3.1 Ethnicity

The 1997 Census asked about ethnic origin, and half or more of one origin was the general criterion for inclusion in an ethnic group.

In 1997, 1,779 persons were of Niuean descent, which amounts to 85 % of the total population (Table 6). Only 309 persons (15%) were from other ethnic groups, mainly Palagi (Europeans), who numbered 115 people or 5.5 % of the population. The others were Pacific Islanders including Tongans (68), Tuvaluans (35), Fijians (22), Samoans (19) or Cook Islanders (10). The remaining 40 were from other countries.

The percentage of Non-Niueans has increased slightly since 1991, from 12.4 % in 1991 to almost 15 % in 1997.

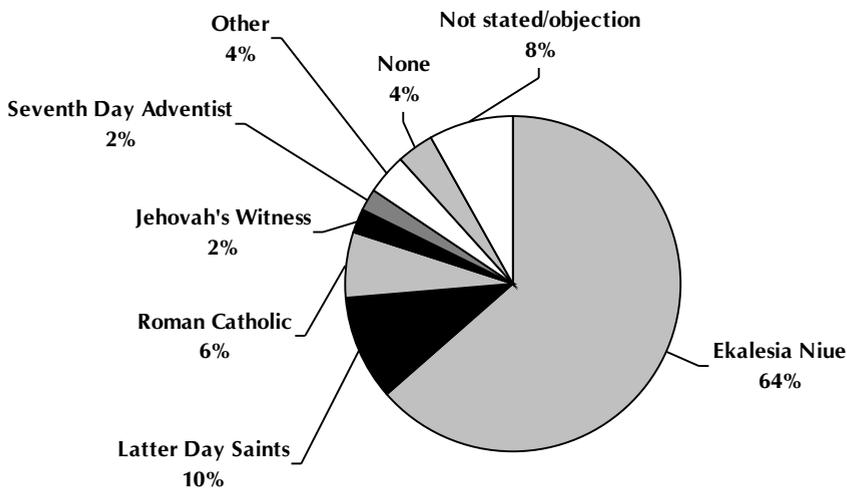
Table 6: Ethnicity by sex, Niue, 1986, 1991 and 1997

Ethnic origin	1986		1991		1997	
	No.	%	No.	%	No.	%
Niuean	2,199	86.9	1,962	87.6	1,779	85.2
Non- Niuean	332	13.1	277	12.4	309	14.8
Total	2,531	100.0	2,239	100.0	2,088	100.0

3.2 Religious denomination

Sixty-four per cent of the Niue population belonged to Ekalesia Niue, a church derived from the former London Missionary Society, and 10 % to the Latter Day Saints in 1997 (Figure 3 and Appendix Table 3). The remaining 14 % were either members of the Roman Catholic Church, the Jehovah's Witness faith, the Seventh Day Adventist Church or other religious denominations. Twelve per cent did not state their religious belief or objected to answering the question.

Figure 3: Religious denominations, Niue, 1997



Membership of Ekalesia Niue decreased quite rapidly during the 11 years before the 1997 Census (Appendix Table 3). The two next biggest religious groups, Latter Day Saints and Roman Catholics, have also had a decrease in membership. On the other hand, the number of people who did not state their religion and these objecting to stating their religious beliefs has increased.

Religious affiliations of Niueans living in New Zealand are characterised by marked differences compared to the population of Niue. A quarter of all Niueans in New Zealand did not state their religion or objected to stating their religion. Only 35 % were members of the Presbyterian, Congregational or Reform churches, and the rest were Catholics (8%), Mormons (8%), Anglicans (3%), Methodists (3%) or members of smaller denominations (18%).

3.3 Marital status

All persons 15 years and older were asked to answer the question on their current marital status. The main reason for including a question on marital status in a census is that marriage patterns can be important determinants of fertility, especially in societies where the use of modern contraceptives is limited, and marriage is regarded as the entry into sexual union. The proportion of the population married, the age at which people marry, and the frequencies of widowhood and divorce, have an impact on the number of children born. Furthermore, the incidence of widowhood can be a useful indicator of mortality differences between males and females.

Demographers often use age at first marriage as a determinant of fertility as it is closely linked to age at cohabitation and child-bearing, because people usually start to form families after marriage. However, children are often born to unmarried women. In Niue, 9 % of all unmarried women aged between 15– 49 years have had at least one child.

The 1997 Niue Census data show that people in general do not marry before the age of 20 (Appendix Table 4). A higher percentage of males was never married (37%) compared to females (27%). This is explained by the fact that men tend to marry later than women, as is illustrated by the considerably higher proportion of women who were married at young ages (20–29 years). The average age at marriage (the Singulate Mean Age at Marriage, SMAM) of 29.1 years for men and 24.9 years for women (Table 7), shows a slight upward trend in the age of marriage for males as compared to 1986 and 1991.

The proportion of married women at older ages (60+) is generally lower than that of men. This is because a much higher proportion of women are widows: 37 % of all females 60 years and older were widowed compared to only 10 % of males of the same age-group (Appendix Table 4). The reasons are that lower mortality rates for females enable them to outlive their spouses, and the fact that men are more likely to remarry after separation through death of a spouse. Men are also more likely to remarry after a divorce.

Table 7: Singulate Mean Age at Marriage (SMAM), Niue, 1986–1997

	1986	1991	1997
Males	26.3	27.3	29.1
Females	23.6	23.6	24.9
Total	24.9	25.7	27.1

SMAM: the mean age at first marriage among those who ever married.

3.4 Educational characteristics

Education levels are a key indicator of the development and quality of life of a country. Education plays an important role in development through its links with demographic, as well as economic and social factors. For example, there is a close and complex relationship between education, fertility, morbidity, mortality and mobility: when mothers are better educated, they tend to have fewer children, their children's health status improves and their survival rates tend to increase. Higher levels of educational attainment also contribute to better qualified workforces and better economic performance than where the majority of people have had little to no formal education and training.

Two government schools are located in Niue: the Niue Primary School and the Niue High School. The primary school offers classes from Class 1 until Class 6, and Niue High School offers classes from Form 1 until Form 6. Scholarships are offered to qualified Form 6 students attaining a total of at least 18 points in all subjects to allow them to pursue Form 7 studies in secondary schools in New Zealand.

Raising the qualifying criteria for a scholarship has reduced the number of qualifying students from about 10 per year to about 5. The remaining students not meeting the Form 7 scholarship criteria have the following choices: repeat Form 6, attend a year 13 at the Niue branch of the University of the South Pacific (USP), attend a Foundation programme, or leave school altogether.

Some parents still send their Form 6 children for secondary or tertiary education at polytechnics in New Zealand on full private or joint Government sponsorship. Students who qualify for Government awards to attend tertiary institutions have to go to New Zealand, Fiji or other countries for further education.

The 1997 Niue Census contained two questions on education: the highest level of education attained, and the highest qualification formally attained (questions 9 and 10).

3.4.1 School enrolment

School enrolment is compulsory in Niue from age 5 until 16 (to complete secondary education). Not surprisingly, at least 98% of the population of this age-group were enrolled at school with almost 2% of the school age population 'not stated'. This percentage is virtually the same for males and females (Table 8). Enrolment rates for the 5 and 6 year-olds are lower because not all children at that age are ready for school. Current enrolment rates for people over 16 years of age are not shown, as those still studying would have been overseas at the time of the census, attending tertiary education.

Table 8: School enrolment by age and sex, Niue, 1997

Age	Census population			Currently enrolled					
	Numbers			Numbers			Percentage		
	Males	Females	Both	Males	Females	Both	Males	Females	Both
5	20	14	34	16	10	26	84	91	87
6	19	22	41	18	20	38	100	91	95
7	25	19	44	25	18	43	100	100	100
8	32	25	57	32	24	56	100	96	98
9	28	25	53	28	24	52	100	96	98
10	22	20	42	21	19	40	95	95	95
11	15	34	49	14	34	48	93	100	98
12	29	24	53	29	24	53	100	100	100
13	24	23	47	24	23	47	100	100	100
14	25	27	52	24	27	51	96	100	98
15	18	28	46	18	28	46	100	100	100
16	28	31	59	28	30	58	100	97	98
Total	285	292	577	277	281	558	98	98	98

3.4.2 Educational attainment

Niue's population has a high level of educational attainment, with three out of four residents having at least some secondary education (Table 9). The percentage of males is higher (80%) than that of females (72%). These achievements have remained more or less constant since 1991, and reflect a substantial increase in the proportion of tertiary educated residents since 1986.

Table 9: Population aged 15 years and older by educational attainment, Niue, 1986, 1991 and 1997 (per cent)

Schooling	1986			1991			1997		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
no schooling	1.3	1.3	1.3	0.0	0.0	0.0	2.0	2.5	2.3
primary	25.3	32.0	28.6	17.1	25.3	21.1	13.2	20.4	16.8
secondary	67.9	62.6	65.2	62.7	60.9	61.8	63.0	59.4	61.2
tertiary	4.6	3.2	3.9	20.2	13.9	17.1	17.3	12.6	15.0
not stated	0.9	0.9	1.0	0.0	0.0	0.0	4.5	5.0	4.8
Total	100								

3.4.3 Educational qualifications

The high level of educational attainment just referred to does not necessarily translate into educational and professional qualifications (Table 10 & Appendix Table 5). Although 76% of Niueans had at least some secondary education, only 10% had a Form 5 certificate and a further 5% have university qualifications. While 15% had some tertiary education, only 5% had completed a degree or higher level of tertiary studies.

In Niue, males seem to be better educated than females. The percentages of people who had no educational or professional qualifications are 43 and 54% for males and females respectively. While 25% of males had a trade certificate/diploma or an academic degree, only 13% of women had such qualifications.

Table 10: Population 15 years and older by educational qualification, population of Niue (Niue, 1997) and Niueans living in New Zealand (New Zealand, 1996) (per cent)

	None	Form 5	Uni. Entrance	Trade Certif./ Diploma	Degree/ Masters/ Doctorate	Others	Not Stated	Total
Population of Niue								
Total	49	10	5	14	5	8	9	100
Males	43	10	4	19	6	9	9	100
Females	54	11	6	10	3	8	8	100
Niueans in NZ								
Total	49.5	11.2	12.2	8.6	1.6	13.3	3.6	100
Males	50.5	10.7	11.0	8.4	1.7	14.0	3.8	100
Females	48.5	11.8	13.4	8.7	1.5	12.7	3.5	100

While roughly half of both the population of Niue and Niueans living in New Zealand have no particular educational or professional qualifications (Table 10), there are some differences in the type of qualifications. The proportion of Niue residents with a university degree is larger than that of Niueans in New Zealand, whereas the proportion of Niueans living in New Zealand with a university entrance or 'other' qualifications is considerably higher than that of the population of Niue – a result of a broader range of educational possibilities and opportunities in New Zealand.

IMPLICATIONS FOR PLANNING

- Although it seems from information on educational attainment that, on average, men achieve higher levels than women, it has to be kept in mind that data on educational attainment mainly refer to developments in the past: people who have left school years ago. In contrast, information on school enrolment shows a more recent picture, and points to a more balanced situation.
- Changes in a country's demographic structure affect educational needs. The higher a country's level of fertility (number of births a year), the larger its school-age population relative to the total population. The birth of 36 children in 1997 means that there will be about 36 pupils entering primary school in the year 2002 (minus those who will not be present because of death or migration and plus those who arrive from overseas).
- Those who are able and willing to seek higher education should have the opportunity in the future to gain the highest possible educational and professional qualifications. When planning for future manpower requirements, one has to bear in mind that not all people leaving to seek higher education overseas will return to Niue, as appropriate job opportunities will not be available, remuneration levels are much lower than in comparable positions in New Zealand, and a professional life in Niue might appear less appealing after many years abroad.
- Extending the school age by two years (from 14 to 16) in order to keep young people longer in school – and therefore in Niue – prolongs the time that the school-age population will stay in Niuean schools, but also provides its pupils with higher education levels. They will need to find appropriate employment opportunities later on, which may not be available in Niue. As a result, in the long run, more and better educated people might be looking for suitable job opportunities overseas.

3.5 Economic activity

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 into economic and development strategies is vital to achieve desired results such as sustainable development and an improved quality of life for all people.

Data on economic activity and employment are important for Niue administrators, planners and policy-makers to determine the standard of living of the population.

3.5.1 Labour force

Every person aged 15 years and over was asked whether he or she did any work in the week preceeding the census, whether they were working full-time or part-time for wages and salary, subsistence (production of goods for sale or for consumption), or not working for various reasons (census questions 19–22).

Niue's labour force consists of people who were: economically active in the week before the census (that is people who worked for wages or salary); who worked on goods to sell for their own profit; who did unpaid work for the benefit of their family or village (including subsistence activities); and who were unemployed, but were actively looking for and available for work at the time of the census.

The rest of the population, who did not work and were also not looking for work in the week before the census, were not economically active and are not part of the labour force. This includes people who did housework, students, retired people, prisoners and persons who were sick or are disabled.

According to the 1997 Census, 75% of Niue's population over 15 years of age were economically active; 83% of all males and 66% of females (Table 11, Figure 5 and Appendix Table 6). Niue's *labour force participation rate* (the number of people 15 years and older who were economically active divided by the total population 15 years and older) was 74.8%.

Table 11: Economic activity by gender, Niue, 1986, 1991 and 1997

Economic indicators	Males			Females			Total		
	1986	1991	1997	1986	1991	1997	1986	1991	1997
Labour force participation rate	76.2	84.9	83.3	37.6	62.5	66.2	59.6	74.0	74.8
Employment–population ratio*	66.6	58.3	57.4	32.4	40.3	41.1	49.5	49.5	49.3
Unemployment rate	4.4	2.6	3.2	10.6	8.5	7.8	6.4	5.1	5.2

*formally employed persons aged 15+ (excl. subsistence work)

Of the total population, 49% were regularly employed and therefore received a regular cash income (57% of males and 41% of all females 15 years and older), and only 55 people (5.2% of the labour force) were unemployed.

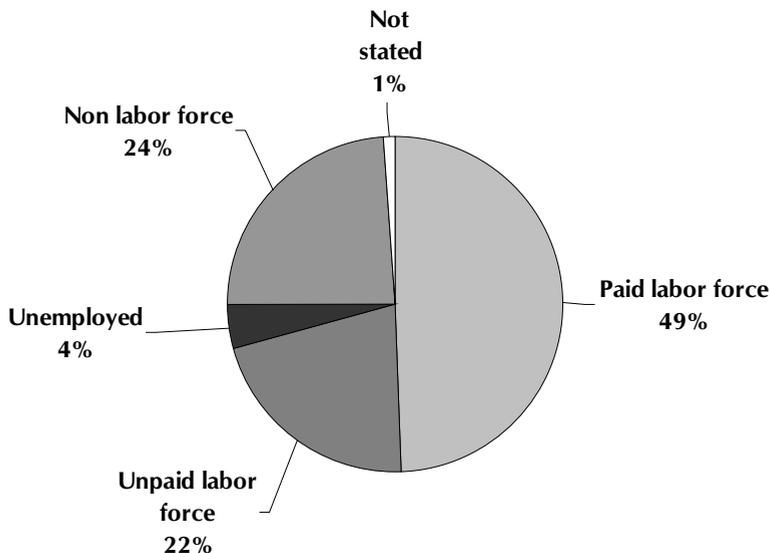
Regarding the subsistence sector, only 9% of the 304 people involved with subsistence work sold their products regularly; 33% sold them occasionally, while the vast majority of 58% of the subsistence workers produced for their own or their family's consumption.

Of Niue's population over 15 years of age 24% were not economically active; most were retired, but many were women primarily involved with house or domestic work. Seven per cent of the population older than 15 years of age were still at school (students).

During the 1990s, Niue's labour force participation rate and employment–population ratios have hardly changed. Although the Niue Government reform plan in 1992 was intended to reduce the public service by half, some re-hiring of redundant government workers has taken place since then.

A comparison of Niuean economic activity with that of Niueans living in New Zealand shows remarkable differences (Tables 11 and 12): the labour force participation rate on Niue was much higher (75%) than amongst Niueans in New Zealand (65%), with the latter having a quite substantial unemployment rate of 16%.

Figure 4: Labour force status of the total population 15 years and older, Niue, 1997



Note: Figure 4 shows % of total population. The unemployment rate is 5.2% of the labour force.

Table 12: Economic indicators by gender, Niueans living in New Zealand, New Zealand, 1996

Economic indicators	Males	Females	Total
Labour force participation rate	73.1	56.5	64.5
Employment–population ratio*	58.3	41.9	49.8
Unemployment rate	14.3	17.8	15.9

* formally employed persons aged 15+ (excl. subsistence work)

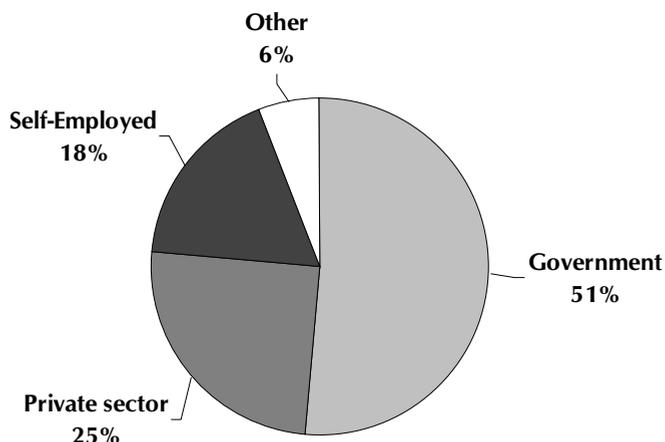
Although the difference in economic indicators between males and females is similar in Niue and among Niueans living in New Zealand, the overall proportion of Niuean women in the labour force was considerably lower in New Zealand (57%) than in Niue (66%).

3.5.2 Occupation

Of those formally employed, 51% were working for the Government, 25% were working for the private sector, and 18% were self-employed (Figure 5). The largest occupational groups of those formally employed in Niue were people working in Elementary Occupations (18%), 16% worked as Professionals and 14% were Legislators, Senior Officials and Managers (Appendix Table 7).

Of the 693 Niuean people employed in the cash economy, 41% were women (287) and 59% (406) were men. Most men were employed in Elementary Occupations (20%) and as Legislators, senior officials and managers (16%). Most women were working as Clerks (23%) and Professionals (20%).

Figure 5: Employment status of the formally employed population, Niue, 1997



The biggest gender gap in the employment sector can be found among Plant and Machine Operators and Assemblers, of whom only 9% were women, and among Craft and Trade Workers where men outnumbered women 4:1. Men also outnumbered women 2:1 amongst Legislators, Senior Officials and Managers; Technicians and Associated Professionals; and among Skilled Agricultural and Fisheries Workers. On the other hand, about four times as many women as men were employed in clerical positions.

In New Zealand, almost half of all employed Niueans were employed as Plant and Machine Operators and Assemblers (17.2%), as Service, Shop and Market Sales Workers (15.9%) and in Elementary Occupations (16.0%) (Appendix Table 8). In contrast to the employment structure in Niue, only very few Niueans in New Zealand were employed as Professionals and Legislators, Senior Officials or Managers (8.2%). Of all Niuean men in New Zealand 40% were working as Plant and Machine Operators and Assemblers (21.2%), and in Elementary Occupations (18.3%), while the majority of women worked as Service, Shop and Market Sales Workers (22.6%) and another 21.1% were employed as Clerks.

In general, Niue's labour force were employed in more prestigious occupations than Niueans in New Zealand. While almost 40% of the employed population of Niue works as Legislators, Senior Officials, Managers, Technicians and Professionals (including Technicians and Associate Professionals), less than 14% of the employed Niueans worked in such occupations in New Zealand.

IMPLICATIONS FOR PLANNING

- Labour force participation and formal employment in Niue have remained remarkably unchanged during the 1990s, apart from a small increase in the labour force participation rate by women.
- It is worth noting that more than one fifth of the population 15 years and older (22%) are involved with subsistence work and less than 10% sell their products regularly, suggesting that local demand for Niuean products appears to be insignificant. This, of course, has to do with every family owning their own land, and the widespread practice of part-time farming, with Saturdays still reserved for work on fields.
- Although the proportion of the population formally employed has remained at 49% of the total population since 1991, total numbers have decreased sharply. While there were 870 employed people in 1991, only 690 were employed in 1997. This may be due to further emigration of Niueans to New Zealand, and a result of the Government's plan in the early 90s to reduce the public service.
- One of the conclusions of the 1991 Census analysis was that there was a high degree of equal opportunity for women in Niue because more women than men were employed as Professionals, Legislators, Senior Officials and Managers. The same conclusion cannot be drawn again. Only 32% of Professionals, Legislators, Senior Officials and Managers were women in 1997, which suggests that female public servants were more affected by redundancy measures undertaken in the public service in recent years.
- Although the population of Niue is generally employed in more prestigious occupations than Niueans living in New Zealand, and despite much higher unemployment rates in New Zealand, Niueans leave for New Zealand in search of employment opportunities which are in short supply in Niue, especially since the Government embarked on downsizing the public service. Another reason is higher pay for jobs, even if they are of a lower status than those in Niue. Furthermore, unemployed persons in New Zealand can draw on unemployment benefits, which provide a high enough income to leave life and work in Niue behind. Perhaps most of all, life in urban New Zealand promises to be more exciting and prosperous than life in Niue.

4. POPULATION DYNAMICS

This chapter deals with Niue's population growth and its underlying dynamics: fertility, mortality and migration.

4.1 Population growth

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

$$\text{Natural increase} = \text{births} - \text{deaths}$$

In countries where international emigration and immigration is of great significance, such as Niue, we cannot look only at natural increase. *Population growth* defines the change in a country's population as the net result of natural increase and net-migration. This relationship is illustrated by the balancing equation:

$$\text{Population growth} = \text{natural increase} + \text{net migration (immigration} - \text{emigration)}.$$

In Niue, a total of 286 births and 102 deaths were registered in the seven years from 1991 to 1997 (Appendix Table 9). Of these, 243 births and 87 deaths took place during the intercensal period November 1991 to August 1997. These numbers include births and deaths of Niuean usual residents which occurred overseas, mainly in New Zealand. By subtracting the number of deaths from the number of births, the total natural increase is obtained: $243 - 87 = +156$. This means that the population of Niue had a natural increase of 156 people between November 1991 and August 1997.

Despite Niue's positive rate of natural increase, the population has declined from 2,239 to 2,088 between the two census enumerations in 1991 and 1997, a decrease of 151 people. This points to the continued importance of emigration from Niue. The number of total net migrants in the intercensal period can be calculated by subtracting the natural growth of the population (+156) from the overall difference in population change between 1991 and 1997 (-151):

$$\text{Total net migration} = (-151) - (156) = -307$$

In other words, between 1991 and 1997, 307 more people left Niue than arrived, averaging 51 persons per year (Table 13).

The most basic demographic measurements referring to births and deaths 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 each 1,000 people. They are normally calculated by simply dividing the number of births and/or deaths of a given year by the (mid-year) total population size of that year, multiplied by 1000.

For small populations such as Niue, it is essential to use multi-year averages, as the random fluctuations of annual events can be quite considerable with 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 1991–1997.

Niue CBR and CDR values were calculated by dividing the average annual number of births and deaths of the intercensal period 1991–1997, by the mid-period population size of the intercensal period. Because it is known that Niue’s population increased in 1994 (2,300), this number has to be taken into consideration to obtain an average population size:

$$(2,239 + 2,300 + 2,088) / 3 = 2,209$$

For Niue, an average of 40.5 annual births during the intercensal period 1991–1997 translates into an average CBR of 18.3 ($40.5 / 2,209 * 1000$).

An average of 14.5 deaths during the same period translates into an average CDR of 6.6 ($14.5 / 2,209 * 1000$).

By subtracting the CDR from the CBR, the *rate of natural increase* is: CBR (18.3) – CDR (6.6) = 11.7 per 1000, or expressed in percentage terms: 1.17% per year.

By applying the corresponding rates in the intercensal period to the balancing equation, we obtain the *crude net migration rate*.

Table 13: Births, deaths, net-migrants and overall population change between 1991 and 1997

	Total number (intercensal period 1991–1997)	Average annual number (intercensal period 1991–1997)
Births	243	40.5
Deaths	87	14.5
Net migrants	– 307	– 51.2
Overall change	– 151	– 25.2

The decline from 2,239 in 1991 to 2088 in 1997 gives an annual intercensal growth rate of – 1.21%. The average CBR and CDR of the intercensal period were 18.3 and 6.6 (per 1000), respectively. Annual net migration is calculated as follows:

Population growth _{1991–1997}	=	CBR – CDR + Net Migration
– 1.21	=	1.83 – 0.66 + Net Migration
– 1.21 – 1.17	=	Net Migration
– 2.38%	=	Net Migration

The growth of Niue’s population is of course very much interwoven with that of the Niuean population in New Zealand. The Niuean population in New Zealand has grown by 2.9% annually between 1986 and 1991, and by almost 5% per annum between 1991 and 1996.

As is known from the 1994 Niue Census, when the population increased compared to 1991, there must have been a greater number of emigrants from Niue to New Zealand between 1994 and 1996.

IMPLICATIONS FOR PLANNING

- The negative population growth rate of Niue is a result of a moderate natural growth and a relatively high negative net-migration rate. Without migration, the population of Niue would grow by its natural rate of growth of + 1.2% per annum. The relatively moderate natural growth is the result of relatively low birth rates by Pacific standards. While 243 births were registered between November 1991 and August 1997, 307 people left Niue during that period. Adding in 87 registered deaths amounts to a total population decline of 151 people during the six-year intercensal period.
- The high negative population growth of the population of Niue is closely associated with substantial Niuean population growth in New Zealand.
- Reasons for people to leave Niue permanently are most probably the lack of employment and educational opportunities, but may also include possible dissatisfaction with life in Niue.

4.2 Fertility

Fertility refers to the reproductive behaviour of a population, relating 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 with relatively few women, particularly women in child-bearing ages, have relatively fewer births than populations with a large percentage of women in the child-bearing ages;
- *Fecundity.* This is the biological/physiological ability to reproduce.
- *Age at cohabitation/marriage.* In most countries, child-bearing is closely linked to marriage or cohabitation.
- *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.
- *Psycho-social and cultural factors.* 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.*
- *Status of women.* Women's place in society, level of education and work status. Based on world-wide 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 which has the biggest impact on a country's age–sex composition (unless there are high levels of migration), as the composition and size of different age-groups depend largely on birth rates. Populations have higher percentages in the older age-groups, with falling birth rates and a smaller percentage of children.

All women older than 15 years of age were asked how many live births they had ever had, how many of these children 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 (Appendix Table 10).

In the 1997 Niue Census, 33 children were under one year of age which exactly matches the number of children reported to be born in the year prior to the census.

During the six-year intercensal period 1991–1997, 243 births were registered in Niue (see page 25), which compares to the census figure for population under six years of age, of 244 children. Considering the fact that three children have died, and considering that some of those born in Niue probably have migrated with their parents, the number of registered births seems slightly too low (as one would expect it to be higher than the number of surviving and enumerated children). These missing registered births are most

probably 'overseas births' which were not registered in Niue or were registered after the statistics for a certain year were published.

As has been shown in Section 4.1, the average Crude Birth Rate (CBR) for Niue has been calculated at 18.3 for the intercensal period 1991–1997, 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 women would give birth to during their reproductive lives (15–49 years of age) if they were subject to the present fertility level and pattern during their entire reproductive lives. It is calculated from the number of live births by age of women in a given year, the *Age Specific Fertility Rates* (ASFRs). Data needed 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.

For Niue, a TFR of 3.0 for the intercensal period 1991–1997 is estimated (Table 14). This estimate is based on the average registered number of children born in the intercensal period 1991–1997 by age of mother, and the estimated mid-period (1991–1997) number of women of childbearing age (Appendix Table 11).

Table 14: Estimated Age-Specific Fertility Rates (ASFR) and Total Fertility Rate (TFR), Niue, 1991–1997

	Census count of women			Average number	Average number	ASFR
	1991	1994	1997	of women	of births	1991–1997
	1991	1994	1997	1991–1997	1991–1997	1991–1997
15–19	95	94	90	93	3.3	0.035
20–24	62	73	54	63	10.7	0.170
25–29	78	66	60	68	13.0	0.191
30–34	60	77	69	69	7.7	0.112
35–39	69	69	54	64	4.6	0.071
40–44	50	68	61	60	1.6	0.026
45–49	49	49	54	51	0.0	0.000
Total	463	496	442	467	40.9	0.607
TFR						3.0
MAC						28.3

MAC: Mean Age at Childbearing

From the ASFRs it can be seen that childbearing mainly takes place at ages 20 to 29. An ASFR of 0.170 for the 20–24 years age-group means that there were 170 births for every 1,000 women in this age-group. There were 191 births for every 1,000 women aged 25 to 29. During the seven years before the census, there was not a single birth to women older than 44 years, and there have been only very few births to women older than 40 years of age.

The mean age at childbearing (MAC) of women in Niue was 28.3 years of age. This figure tells us that the average age of Niuean mothers giving birth is 28.3 years.

By looking and comparing single year fertility rates for the years 1986, 1991 and 1997, it seems that fertility has been, and probably still is, declining. The calculated TFR is based on the number of births as reported during the year before each census, and was 4.85 in 1986, 3.5 in 1991 and only 2.65 in 1997, pointing to an ever decreasing fertility rate. However, because of Niue's small population size, and the random fluctuations of annual number of births by age of women, it is advisable to rely on a multi-year average, and a TFR of 3.0 for the intercensal period 1991–1997 seems to be the best estimate.

The impact of random fluctuations in small populations like Niue is nicely illustrated in Appendix Table 11, where in 1994, 22 persons in their early twenties had children, compared to only 9 and 7 women in the years before (1993) and after (1995).

IMPLICATIONS FOR PLANNING

- Further decreases in the total fertility rate would lower the rate of natural increase. Maybe, in the not too distant future, Niuean women might reach replacement level fertility of 2 children per woman, resulting in a no-growth situation, as these 2 children would just replace their parents. In such a case, Niue's population growth would be solely determined by its migration rate. This situation would be similar to that of New Zealand today.

4.3 Mortality

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

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

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

Appendix Table 12 shows the registered number of deaths by age and sex during the intercensal period 1987-1997. From these data, an average mortality pattern was calculated, and applied to the estimated mid period (1991-97) population by five-year age groups.

Estimated life expectancy at birth based only on the registered number of deaths is about 74 years for both sexes combined, which seems unrealistically high. This could be because some deaths occurred overseas when sick people were sent for treatment.

Mortality indicators can be estimated using the information gathered during a census by calculating the proportion of persons by sex and age group, who have survived until a certain age.

In the 1997 census the only question that related to mortality was the question on the number of children ever born and still alive (Appendix Table 13). From the proportion of children dead by age of their mother, early age mortality rates were calculated (using the UN's software package MORTPAK3.0). In general, the proportion of children dead increases continuously by age of mother. This is not the case in Niue because of the very small data set involved. Results based on the age groups 20-24 and 30-39 give a life expectancy at birth of about 69.5 years for both sexes combined (based on the UN's far Eastern model life table and the Coale-Demeny West model life table) which is consistent with neighbouring countries such as the Cook Islands and Tonga, and seems a more plausible estimate, although it should be used with caution because of limited data.

A single data set based on a very small population is normally not regarded as sufficient to calculate reliable infant and child mortality estimates. The registered number of deaths by age and sex should be considered too, in order to calculate a life table from the number

of deaths by five-year age-groups. Because the possibility of random fluctuations is very high when very small numbers are involved, as is the case with the Niue data, it is imperative to work with multi-year averages to spell out meaningful indicators.

A rather big difference in male and female life expectancy at birth is assumed. The difference in life expectancy between males and females could be as much as 8 years. Unfortunately, the very low number of deaths do not allow for a separate calculation of a male and female life tables, and the assumption is based on the observed big difference in total recorded deaths of males and females during the last 11 years, when there were 50% more male deaths than female deaths (Appendix Table 12). Furthermore, it is also based on data on widowhood status of males and females as observed from data by marital status (Appendix Table 4). Overall, 37% of all women older than 60 years of age were widowed, compared to only 10% of men 60 years and older, (although widowed men are more likely to remarry than widowed women).

The Infant Mortality rate (IMR) is the most common and basic measurement of early age mortality. It measures the number of deaths at age less than one year in relation to every 1000 births in a given time interval (usually a calendar year). Infant mortality can be very crudely measured by looking at the total number of births during the intercensal period and the number of deaths of children aged less than 1 year during the same period. There were 5 infant deaths compared to 286 births, which results in an average infant mortality rate (IMR) of 17.5 ($5/286 * 1000$) for the years 1991–1997. However, the IMR varies widely from year to year only if there are one or two more or less infant deaths.

4.3.1 Data on smoking and drinking

In a response to a request from the Mouia Olaola Project (Australia–South Pacific Healthy Islands Health Promotion Project), two questions were included in the 1997 Census regarding smoking and drinking; whether a person smokes cigarettes or drinks alcohol at all, and if yes, whether heavily or only casually. The respondents were asked to place themselves into the different categories and were then asked to say how much they smoked or drank per day. However, it must be remembered that self-description of alcohol and tobacco consumption is not always reliable.

Overall, 69% of males and 86% of females never smoked, and 20% of males described themselves as heavy smokers compared with only 6% of females. Of the heavy smokers, 59% smoked between 11 and 20 cigarettes per day and 32% smoked less than 11 cigarettes per day. Of the casual smokers, 86% smoked less than 11 cigarettes a day and the rest smoked 11 or more a day.

The 1996 New Zealand Census also provided some information on the incidence of smoking among Niueans 15 years and older living in New Zealand. According to the census results, only half of all men and just over half of all women (55%) have never smoked and 32% of men and 29% of women were smokers. The rest of the population were either ex-smokers or not specified. This shows that a larger proportion of Niueans living in New Zealand smoke compared to the population of Niue, and, especially among Niuean women, smoking is much more widespread in New Zealand than in Niue.

While the 1997 Niue Census questionnaire on drinking alcohol invited respondents to state how many cans or glasses per day or occasion a person drinks, this analysis can only concentrate on the number of cans as it is not clear whether the glasses refer to beer, strong liquor or to some sort of 'mixes'.

Table 15: People 15 years and older who smoke cigarettes and drink alcohol by gender, Niue, 1997 (per cent)

	Smoking			Drinking		
	Never	Casual	Heavy	Never	Casual	Heavy
Males	69.2	10.6	20.2	37.9	56.1	6.0
Females	86.4	7.4	6.2	69.8	29.8	0.4
Total	77.8	9.0	13.2	53.7	43.0	3.2

Overall, 38 and 70% of males and females respectively reported that they never drink alcohol. While 6% of all men described themselves as heavy drinkers, less than 1% of women did. However, 40% of the 'heavy' drinkers drank less than 5 cans of beer a day, while 70% of those who described themselves as 'casual' or 'social' drinkers drank more than 5 cans of beer per occasion, and 32% drank more than 10 cans of beer per occasion. It is not clear from the data how often these 'social occasions' occur. 'Social' drinking is marked by big differences between the sexes: while 74% of all male 'casual' drinkers drank more than 5 cans per occasion, only 40% of female 'social' drinkers did so. Of all male 'casual' drinkers 34% drank more than 10 cans of beer per occasion, compared to only 11% of female 'social' drinkers. While no females reported drinking more than 14 cans of beer per occasion, almost 6 per of all male 'social' drinkers did.

IMPLICATIONS FOR PLANNING

Improved mortality rates mean that healthier people live longer lives. The following efforts should be made to continue working towards this goal:

- * improve infant, child and maternal health by improving primary health care programmes;
- * expand programmes of immunisation;
- * provide a hygienic and safe living environment;
- * promote healthy nutrition;
- * advocate a general healthy life style including regular physical exercise;
- * discourage smoking and excessive alcohol consumption.

4.4 International migration

Migration is the movement of people across a certain boundary. When this boundary is a national border, we speak of international migration; otherwise we refer to it as internal migration. 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 (movement within a country, between districts and municipalities, for example), we speak of in-migrants and out-migrants.

Apart from spatial considerations, time plays a major role in the analysis of migration. Someone coming for a short visit can hardly be termed a migrant – he or she is a visitor. Apart from time, intent is also of crucial importance, as 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 can only be established *post facto* (after the fact). Planners therefore have to base their decisions on past and projected movements of people.

Unfortunately, Niue's recording of arriving and departing passengers at Hanan International Airport is inconsistent with the overall declining population of Niue. It shows a large surplus of arriving compared to departing passengers which would, if correct, result in a continuously increasing population. It therefore has to be concluded, that the recording of international migration statistics is incomplete.

In Section 4.1 it was estimated that about 51 more people left Niue than arrived each year. That is, about 1 person per week, or per flight to Auckland, was a migrant. This estimate is based on the difference between Niue's natural growth and its overall population growth (as in the balancing equation).

From the population pyramid in Section 2.2, it seems that it is mainly the 20–29 year olds who leave Niue. However, by comparing the 1991, 1994 and 1997 census populations by single-year cohorts, and by taking the registered number of deaths by age and sex into consideration, it can be seen that it is mainly the 5–9, the 15–19 and the 25–29 year-olds who have left Niue (Table 16). The 15–19 year-olds are clearly those who have finished their education in Niue and are looking for further education or employment opportunities overseas. The 5–9 and 20–29 year olds are most probably whole families leaving Niue (family migration). Almost 43% of all migrants are between the ages 15–19 and 20% are 20–29 years of age. Children between 5–9 years of age comprise 16% of those leaving Niue.

There were almost equal numbers of male and female migrants.

Table 16: Distribution of migrants by age and sex, Niue, 1991–1997 (per cent)

Age-group	Males	Females	Total
0–4	+0.6	–0.9	–0.3
5–9	–6.0	–10.1	–16.1
10–14	–6.0	–3.8	–9.8
15–19	–20.2	–22.4	–42.6
20–24	–6.0	–3.8	–9.8
25–29	–9.1	–0.9	–10.1
30–34	+1.3	–2.8	–1.6
35–39	–3.8	–0.6	–4.4
40–44	+3.8	–3.5	+0.3
45–49	–4.4	+0.6	–3.8
50–54	+2.2	+0.3	+2.5
55–59	–2.2	–1.6	–3.8
60+	+0.9	–1.6	–0.6
Total	–48.9	–51.1	–100.0

Based on the census question which asks where a person expects to live in the next five years, only 62% (1,295) of Niue's population was expecting to live in Niue in the year 2002 (five years after the census). Almost 29% of the people were undecided about their future whereabouts while 9% clearly expected to live overseas in the year 2002 .

As regards people's residence five years ago, 15.6% of the Niuean population lived overseas in 1992. This indicates that, despite the overall picture of people emigrating to New Zealand, there also must have been some return migration of Niueans living overseas.

IMPLICATIONS FOR PLANNING

- Niue’s population decline since 1966 in general and 1971 in particular (Figure 1), was due to high net-emigration of Niueans, primarily to New Zealand. There seems no immediate indication that this trend is going to reverse in the near future (although it has slowed during the 1990s). This is indicated by the fact that only 62% of the population expected to be living in Niue in the year 2002. That is less than 1,300 people.
- The estimated annual net-migration rate of around –2.4% during the intercensal period has offset the positive rate of natural increase of 1.2%, which results in an overall population growth rate of –1.2% per annum. Those who have left are mostly young people of working ages, the most dynamic and innovative members of the population. This could be considered as a loss of human resources for the country.
- By increasing the minimum age students have to stay in school by 2 years, from 14 to age 16, in order to keep Niue’s children in school and therefore in Niue, the Government creates a better educated work force. By looking for job opportunities suiting their educational status, people might have to and/or want to look overseas and eventually migrate permanently.
- It is strongly recommended that a well-functioning system of recording the number of arriving and departing passengers is established in order to keep information on Niue’s population size and structure up-to-date at any given time, without having to rely on the next census results. These data should include information on at least the person’s age and sex.
- As not much return migration occurs from New Zealand back to Niue, Niuean migrants in New Zealand seem to prefer New Zealand, despite their seemingly disadvantaged situation compared to the total New Zealand population (the unemployment rate is 16% among Niueans).
- New Zealand may be seen as a land of opportunity – with education and employment being the main incentives that entice Niueans to its shores. A move to New Zealand is often seen as a sign of progress and a means of bettering oneself.

5. HOUSING CHARACTERISTICS

5.1 Dwelling type

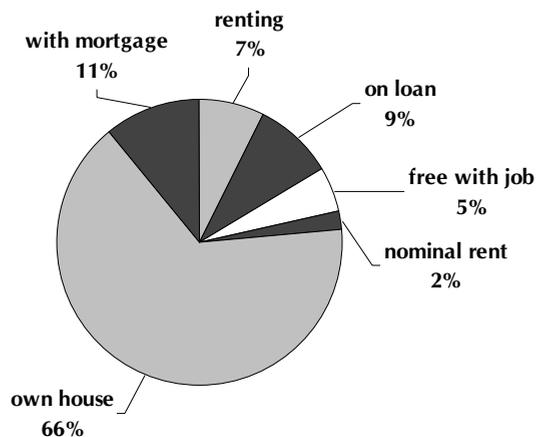
Niuean houses are typically of two types: the hurricane house and the modern house.

The hurricane houses were constructed in the early 1960s as part of the New Zealand aid to Niue which specifically aimed at providing hurricane resistant houses to Niuean families. Most of the hurricane houses have concrete walls and fibrolite roofing. They usually have three bedrooms and a sitting room, but most have no built-in toilet. However, some families have extended their houses and have added toilets and kitchens. Of the 543 private households, 511 (94%) have an average of five rooms per house. The remaining 6% of Niuean private households were flats, kitset houses or other dwellings.

The building of modern houses started in the early 1970s under the housing programme of the Niue Housing Authority (now operating under the Niue Development Bank). The Housing Authority 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 the hurricane houses, they included a kitchen and bathroom facilities.

Almost 66% of all dwellings (houses) were owned by their occupants, 11% were mortgaged, 9% were loaned without rent, 7% were rented and 5% of houses were given free as part of an employment package. The rest were occupied for only nominal rent (Figure 6).

Figure 6: Tenure of residence, Niue, 1997

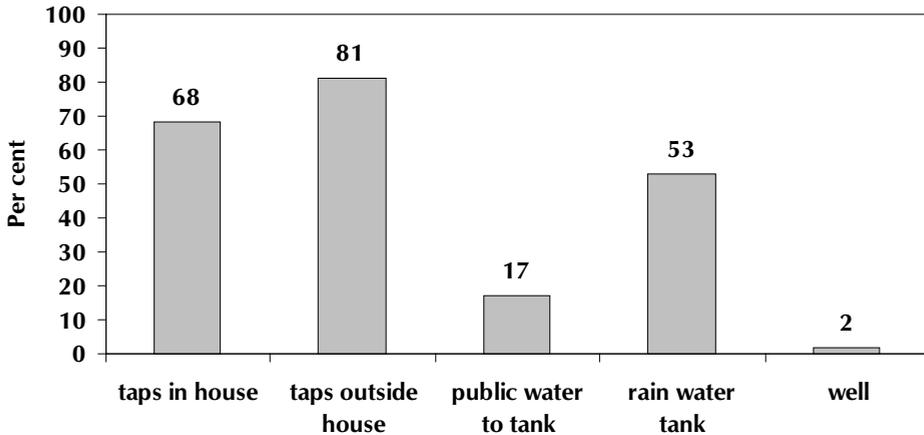


The average weekly rent of those 40 dwellings which were rented, was about NZ\$63. Only the Government rents out houses, for about NZ\$80 – NZ\$134 per fortnight.

5.2 Water

In Niue, 98% of all households were supplied by public piped water in 1997. All households had internal taps, 81% had outside taps, 17% had public piped water to their watertanks, 53% of all households also had a water tank fed by rain water, and only 2% got their water from a well (Figure 7). These percentages do not add up to 100%, because households were connected to the public water system in multiple ways.

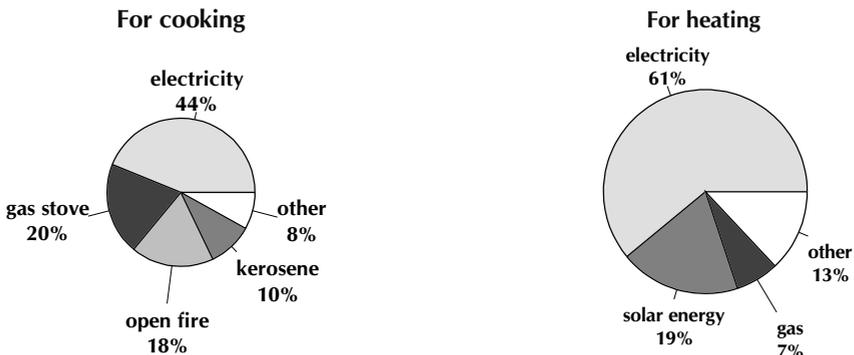
Figure 7: Source of potable water, Niue, 1997



5.3 Energy

Almost all Niuean households (98%), were connected to the public electricity supply, which is their main source of lighting, and less than 1% used their own generator. Electricity was the main source of energy for cooking for 44% of the Niuean households, 20% used a gas stove, 18% used open fires and 10% used kerosene. The rest used wood or charcoal stoves and the traditional umu (Figure 8). The main source of heating water was electricity (61%), solar energy (19%) and gas (7%). The rest used wood stoves or other fuels (Figure 8).

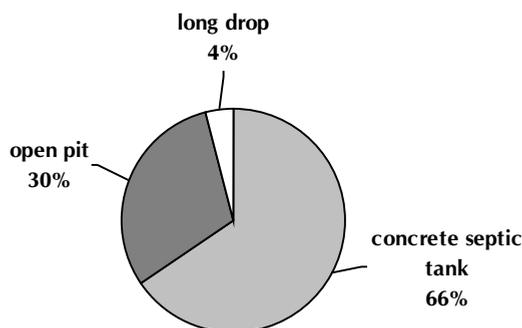
Figure 8: Household utilisation of energy, Niue, 1997



5.4 Sanitation and hygiene

All but four households in Niue had toilet and sewage facilities. These four households shared facilities with other households. Of all households, 79% had a flush toilet available, and 33% used a water seal toilet. Overall, 66% of households had a concrete septic tank, 30% a non-concrete water tank (open pit), and 4% had a sewage 'long drop' available (Figure 9).

Figure 9: Sewage facilities as percentage of all households, Niue, 1997



Of all households in Niue, 82% had showers, and 17% had bathtubs. The percentages of the availability of handbasins, washing tubs and kitchen sinks were 68, 43 and 69% respectively.

5.5 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 quite costly to run.

Expensive and energy consuming appliances like televisions and videocassette recorders, refrigerators, deep freezers and washing machines were considerably more widely used in 1997 (Table 17). Old fashioned utilities such as hand sewing machines, manual telephones and electric water pumps have been replaced by modern equipment such as electric sewing machines and automatic and cellular phones.

Table 17: Total number of household goods and appliances, Niue, 1997

Household item	Total number of items 1997	Household item	Total number of items 1997
Hand sewing machine	99	Charcoal stove	182
Treadle sewing machine	51	Gas stove	161
Electric sewing machine	178	Electric stove	210
Radio/tape recorder	626	Solar water heater	61
CD player	161	Electric water pump	57
Cooler	85	Motor mower	267
Refrigerator	405	Grass cutter	183
Deep freezer	321	Chain saw	104
Electric toaster	331	Knapsack sprayer	328
Wringer washing machine	302	Firearm	310
Automatic washing machine	106	Bicycle	373
Hoovermatic washing machine	18	Motorcycle	209
Electric iron	537	Car	193
Electric jug	562	Truck	52
Video recorder	222	Van	140
TV	395	Pickup	72
Video camera	18	Double cab	13
Camera	206	Canoe	163
Manual telephone	4	Aluminum dinghy	54
Automatic telephone	223	Inflatable dinghy	3
Cellular unit telephone	212	Boat	19
Mobile phone	16	Outboard motor	70
Cordless phone	13		
Computer	25		
Printer	20		
Fax machine	16		
Deep frier	42		
Bread maker	8		
Sandwich maker	179		
Crockpot (electric pot)	61		
Electric cook top	51		
Food safe	317		
Microwave	127		
Electric frying pan	325		
Wood range stove	28		

6. OVERALL IMPLICATIONS FOR PLANNERS AND POLICY-MAKERS

1. Niue's negative population growth rate over the past 28 years has been brought about by two, counterbalancing forces: a moderately positive rate of natural increase and a high rate of negative net-migration. The beginning of high rates of emigration coincided with the opening of Niue's Hanan International Airport in 1970.
2. The main country of destination for Niue emigrants is New Zealand, as Niueans are New Zealand citizens. In 1996, almost nine times as many Niueans lived in New Zealand (18,474) as in Niue itself (2,088). Today, several generations of Niueans live in New Zealand, as 66% of them were born in New Zealand and only 28% were born in Niue.
3. Although there seems to be some return migration from New Zealand to Niue, net migration is estimated at -51 people per year, which means that on average 51 more people leave than arrive in Niue annually.
4. Niuean emigrants come mostly from the working age group, especially between 15 and 19 years of age, and are thus considered a loss of human resources. People who leave Niue to seek a higher education may not find appropriate (paid) jobs back in Niue, and so may decide to remain overseas.
5. In other countries, the loss of human resources is often compensated for by remittances from those working and living overseas. Niue, however, does not receive significant remittances from overseas because it is usually whole families who decide to move to New Zealand, and there are often no close relatives left in Niue to receive remittances.
6. As not much return migration occurs from New Zealand back to Niue, Niuean migrants in New Zealand seem to prefer life in New Zealand, despite their seemingly disadvantaged situation compared to the total New Zealand population. The reasons for leaving Niue can only be answered adequately by the people themselves. Specially designed surveys and in-depth research are needed to shed some light on this complicated relationship of interrelated factors. However, the decision to migrate to New Zealand is probably not just for economic reasons (education, employment, income), but may also be perceived as a means of 'bettering' oneself – a sign of progress. Life in New Zealand includes more choices (clothes, food, entertainment) and excitement, such as being exposed to living among different cultures and different ideas.
7. A population's demographic structure and its level of fertility affect its future school and working age populations. The number of births today determines the size of the school age population in 5 to 6 years' time.
8. Niuean women bear on average three children and the natural growth rate of Niue is estimated at 1.2% per annum, which would also be Niue's population growth rate if there was no migration.

9. Fertility rates in Niue appear to be declining, and there are a decreasing number of children born by Niuean woman.

10. The estimated level of mortality, with a life expectancy at birth of 69.5 years for both sexes combined, and an infant mortality rate of about 17, is comparable to those of neighbouring countries such as Tonga and the Cook Islands. However, a coherent assessment of the mortality and health situation in Niue would require a long term study of morbidity and mortality indicators, and most importantly, the total number of deaths by age and sex, including deaths of Niuean residents overseas.

11. Reliable population statistics provide the basis for sensible development planning, and hence it is indispensable to keep data on population size, growth rates and population indicators up to date. In Niue, it is mainly the accurate registration of arriving and departing passengers by age and sex that is insufficient. The impact and success of any policies, programmes and projects designed to influence any of the population parameters (fertility, mortality, migration) could be readily evaluated with the help of a complete, reliable vital registration system. With such a system in place, it would no longer be necessary to conduct a census every 5 years. If it were necessary at all, every 10 years would be more than sufficient.

12. Should these improvements prove impossible, another option would be to keep on undertaking censuses at five-year intervals. By applying proper demographic methods, it would be possible, by comparing the two nearest censuses, to calculate the desired population data. However, this option is more time-consuming and expensive than an effective registration system, and data can only be analysed after each census is complete.

13. It is recommended that the Niue Government seeks professional advice for the design of its future census and survey questionnaires in order to ensure that all information gathered is properly quantifiable. While this goal has been largely achieved, some questions do not provide the precise data which is needed for analysis.

14. With school attendance in Niue compulsory from ages 5 to 16, it is not surprising that school enrolment rates of children in that age-group are near 100%. People who seek higher education do so overseas, usually in New Zealand, funded by (competitive) government scholarships or private means.

15. While information on school enrolment shows that males and females were equally represented at school, data on educational attainment shows that on average, men have achieved higher academic levels than females.

16. With more than half of Niue's employed population working for the public sector, the Government forms the primary employment body in Niue. Alternative employment opportunities are limited and mainly in the Wholesale, Retail Trade, Manufacturing and Construction industries, the Tourism industry such as in hotels and restaurants, and Agriculture and Fisheries.

17. Although overall population characteristics by economic activity have hardly changed since 1991, a higher percentage of females were economically active, and employed in the cash economy in 1997 than in 1991. In contrast, male participation in the labour force has decreased slightly.

18. Compared to 1991, the total number of people employed in the public service has decreased sharply, from 870 in 1991 to 690 in 1997. This might be a concern to women, as it seems that it was mainly female public servants who were made redundant during the public service reform process.

19. Niueans living in New Zealand seem to prefer life there despite their seemingly disadvantaged situation compared to the population of Niue, as is apparent from a continuous high rate of emigration and low levels of return migration. People in Niue generally work in occupations of a higher status than in New Zealand, and unemployment rates for Niueans are a lot higher in New Zealand. Despite all this, a move to New Zealand is often seen as a sign of progress and a means of bettering oneself, and of course, the larger country offers a wider range of employment and educational opportunities.

20. Regarding migration, it should be noted that almost one third of Niue's population was undecided about its future place of residence. Decisions most probably will depend on future socio-economic developments in Niue and New Zealand.

21. Compared to 1991, average household size had decreased in 1997. This has resulted in an increase in the number of households despite a decline in total population size. In order to foresee different demands for housing and dwellings in future, the Niue Government should monitor any changes in household size and composition. The different demands for housing are closely linked to demands for land allocation, energy and water consumption, waste disposal and sewage treatment.

22. In order to protect Niue's precious natural resources, pollution of its land and surrounding waters should be avoided by all means, not least to attract the desired increase in the number of tourists. Sewage and waste can pose a serious health threat as has been shown in other Pacific Island countries. As the natural resources of the land and sea form the basis of a sustainable and healthy life for Niuean people, maintaining a healthy living environment should be a top priority for Niue's Government.

23. The small size, remoteness and isolation of Niue, although often seen as an obstacle for development, may prove to be an advantage in the attempt to preserve Niue's unique way of life, which is inextricably linked to the traditional system of land tenure, gender relations, use and understanding of natural resources, language and songs.

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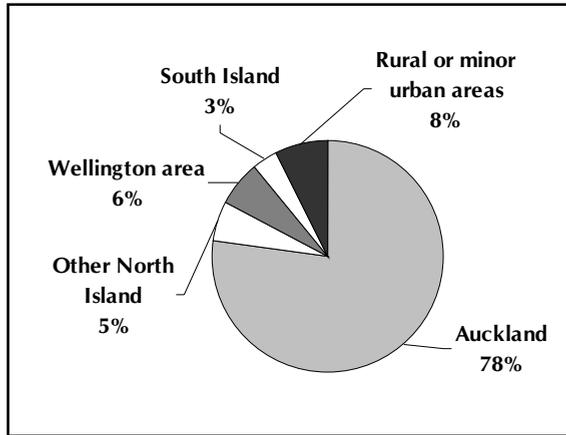
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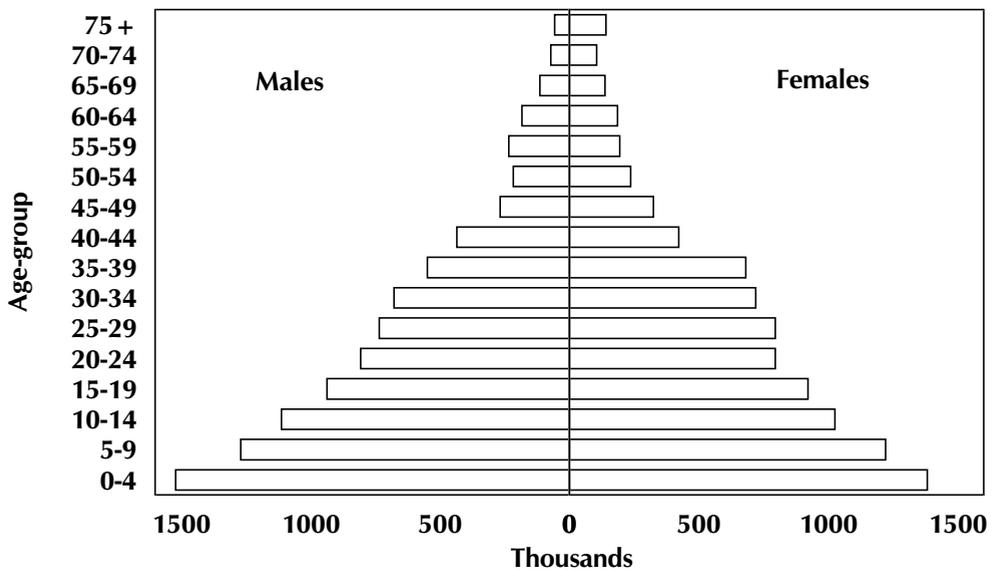
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APPENDIX FIGURES AND TABLES

Appendix Figure 1: Population distribution of Niueans living in New Zealand, 1996 (per cent)



Appendix Figure 2: Population pyramid, Niueans living in New Zealand, 1996



Appendix Table 1: Total population by 5-year age-groups and sex, Niue, 1997

Age-group	Males	Females	Persons	Sex ratio
0-4	107	103	210	104
5-9	124	105	229	118
10-14	115	128	243	90
15-19	105	90	195	117
20-24	62	54	116	115
25-29	66	60	126	110
30-34	76	69	145	110
35-39	68	54	122	126
40-44	64	61	125	105
45-49	40	54	94	74
50-54	53	47	100	113
55-59	52	57	109	91
60-64	48	53	101	91
65-69	23	28	51	82
70-74	24	20	44	120
75+	26	52	78	50
Total	1,053	1,035	2,088	102

Note: Sex ratio: number of males per 100 females

Appendix Table 2: Household size, Niue, 1986, 1991 and 1997 (per cent)

Household size	1986		1991		1997	
	No.	%	No.	%	No.	%
1	60	10.9	64	12.3	74	13.7
2	74	13.5	75	14.4	97	17.9
3	77	14.0	75	14.4	99	18.3
4	88	16.0	87	16.7	81	14.9
5	75	13.7	86	16.5	79	14.6
6	61	11.1	53	10.2	50	9.2
7	41	7.5	25	4.8	26	4.8
8	30	5.5	26	5.0	16	3.0
9	18	3.3	13	2.5	14	2.6
10+	25	4.6	17	3.3	7	1.3
Total	549	100.0	521	100.0	543	100.0

Appendix Table 3: Religious denominations, Niue, 1986, 1991 and 1997

Religion	1986	1991	1997
Ekalesia Niue	1,749	1,588	1,330
Latter Day Saints	307	237	206
Roman Catholic	170	139	133
Jehovah's Witness	33	47	46
Seventh Day Adventist	77	46	51
Other	135	111	76
None	48	68	77
Not stated/objection	12	3	169
Total	2,531	2,239	2,088

Appendix Table 4: Population 15 years and older by marital status, age and sex, Niue, 1997 (per cent)

Age group	Males				Females			
	Never married	Married	Widowed	Divorced/separated	Never married	Married	Widowed	Divorced/separated
15-19	99.0	1.0	0.0	0.0	100.0	0.0	0.0	0.0
20-24	83.9	16.1	0.0	0.0	68.5	29.6	0.0	0.0
25-29	60.6	36.4	1.5	1.5	25.0	75.0	0.0	0.0
30-34	26.3	69.7	1.3	2.6	23.2	71.0	0.0	5.8
35-39	23.5	73.5	0.0	2.9	9.3	81.5	1.9	7.4
40-44	12.5	85.9	1.6	0.0	8.2	88.5	3.3	0.0
45-49	7.5	85.0	2.5	5.0	7.4	83.3	7.4	1.9
50-54	7.7	86.5	3.8	1.9	10.6	74.5	10.6	4.3
55-59	13.5	80.8	3.8	1.9	5.3	82.5	7.0	5.3
60+	6.8	82.2	10.2	0.0	8.0	50.7	37.3	3.3
Total	36.9	58.8	2.9	1.3	27.1	59.5	10.4	2.7

Appendix Table 5: Population 15 years and older by age and sex and highest educational qualification attained, Niue, 1997 (per cent)

	None	Form 5	University Entrance	Trade Certificate/ Diploma	Degree/ Masters/ Doctorate	Others	Not Stated	Total
Both								
Total	49	10	5	14	5	8	9	100
15–19	55	28	7	0	0	2	8	100
20–29	40	15	15	14	4	5	5	100
30–39	40	13	4	21	9	6	6	100
40–49	40	5	1	24	10	14	6	100
50–59	45	1	1	21	4	17	11	100
60+	70	1	0	6	2	5	15	100
Males								
Total	43	10	4	19	6	9	9	100
15–19	51	28	9	0	0	2	10	100
20–29	41	16	12	14	5	6	5	100
30–39	40	10	1	26	11	5	8	100
40–49	32	5	0	33	11	16	4	100
50–59	33	1	1	28	6	18	13	100
60+	62	1	0	12	4	8	13	100
Females								
Total	54	11	6	10	3	8	8	100
15–19	59	29	6	0	0	2	4	100
20–29	39	14	20	14	3	4	5	100
30–39	40	18	8	16	6	8	4	100
40–49	47	6	2	16	9	12	9	100
50–59	57	2	2	13	2	16	8	100
60+	76	1	1	1	1	3	17	100

**Appendix Table 6: Population 15 years and older by economic activity, Niue, 1997
(per cent)**

Economic activity	Males		Females		Total		Males %	Female %
	No.	%	No.	%	No.	%		
Population 15 years and older	707	100	699	100	1,406	100	50.3	49.7
Economically active	589	83	463	66	1,052	74.8	56.0	44.0
Cash work	406	57	287	41	693	49.3	58.6	41.4
Subsistence work	164	23	140	20.0	304	21.6	53.9	46.1
Unemployed	19	2.7	36	5.2	55	3.9	34.5	65.5
Not economically active	110	16	228	33	338	24.0	32.5	67.5
Domestic duties	5	0.7	98	14.0	103	7.3	4.9	95.1
Student	46	6.5	52	7.4	98	7.0	46.9	53.1
Other	59	8.3	78	11	137	9.7	43.1	56.9
Not stated	8	1.1	8	1.1	16	1.1	50.0	50.0

Note: 'other' includes prisoners, retired, sick and disabled persons

Appendix Table 7: Employed population by occupation, Niue, 1997 (per cent)

Occupation	Male		Female		Total		Male %	Female %
	No.	%	No.	%	No.	%		
Legislators, Senior Officials and Managers	65	16.0	31	10.8	96	13.9	67.7	32.3
Professionals	55	13.6	56	19.6	111	16.1	49.5	50.5
Technicians and Associated Professionals	35	8.6	19	6.6	54	7.8	64.8	35.2
Clerks	17	4.2	67	23.4	84	12.2	20.2	79.8
Service, Shop and Market Sales Workers	47	11.6	40	14.0	87	12.6	54.0	46.0
Skilled Agricultural and Fishery Workers	19	4.7	9	3.1	28	4.1	67.9	32.1
Craft and Trades Workers	46	11.4	13	4.5	59	8.5	78.0	22.0
Plant and Machine Operators and Assemblers	39	9.6	4	1.4	43	6.2	90.7	9.3
Elementary Occupations	80	19.8	47	16.4	127	18.4	63.0	37.0
Not stated	3	0.5	1	0.0	4	0.3	100.0	0.0
Total	406	100.0	287	100.0	693	100.0	58.6	41.4

Appendix Table 8: Employed population by occupation, Niueans living in New Zealand, New Zealand, 1996 (per cent)

Occupation	Male		Female		Total		Male	Female
	No.	%	No.	%	No.	%	%	%
Legislators, Senior Officials and Managers	141	4.3	102	3.9	243	4.1	58.0	42.0
Professionals	84	2.5	162	6.2	246	4.1	34.1	65.9
Technicians and Associate Professionals	150	4.5	171	6.5	321	5.4	46.7	53.3
Clerks	267	8.1	555	21.1	822	13.8	32.5	67.5
Service, Shop and Market Sales Workers	351	10.6	594	22.6	945	15.9	37.1	62.9
Skilled Agricultural and Fishery Workers	105	3.2	36	1.4	141	2.4	74.5	25.5
Craft and Related Workers	531	16.0	66	2.5	597	10.0	88.9	11.1
Plant and Machine Operators and Assemblers	702	21.2	318	12.1	1,020	17.2	68.8	31.2
Elementary Occupations	606	18.3	342	13.0	948	16.0	63.9	36.1
Not Stated	378	11.4	282	10.7	660	11.1	57.3	42.7
Total	3,315	100.0	2,628	100.0	5,943	100.0	55.8	44.2

Sources: 1997 Niue Census data and 1996 New Zealand Census

Appendix Table 9: Registered number of births and deaths, Niue, 1987–1997

Year	BIRTHS				DEATHS				
	in Niue		Overseas	Total	in Niue		Overseas		Total
	Males	Females	(both sexes)		Males	Females	Males	Females	
1997	17	16	3	36	9	9	0	0	18
1996	13	14	5	32	7	4	2	0	13
1995	15	15	5	35	15	2	4	0	21
1994	20	15	7	42	8	1	1	1	11
1993	20	19	5	44	4	5	0	0	9
1992	26	17	5	48	7	6	3	1	17
1991	16	21	12	49	6	6	0	1	13
1990	N/A	N/A	N/A	N/A	10	7	0	0	17
1989	N/A	N/A	N/A	N/A	11	9	1	0	21
1988	N/A	N/A	N/A	N/A	6	7	0	0	13
1987	N/A	N/A	N/A	N/A	5	8	0	0	13
Total	127	117	42	286	88	64	11	3	166

Note: Overseas: mainly in New Zealand

N/A: Not Available

Appendix Table 10: Children ever born by age of women and number of births during the year prior to the census by age of women, Niue, 1997

Age of women	Number of women	Number of children ever born				Average parity	Births in 12 months prior to the census	ASFRs
		Still living	Now dead	Total				
15–19	90	4	1	5	0.1	1	0.011	
20–24	54	30	1	31	0.6	4	0.074	
25–29	60	109	0	109	1.8	8	0.133	
30–34	69	175	5	180	2.6	14	0.203	
35–39	54	165	6	171	3.2	5	0.093	
40–44	61	251	11	262	4.3	1	0.016	
45–49	54	199	2	201	3.7	0	0.000	
Total	442	933	26	959	2.2	33	TFR = 2.65	

Note: ASFR = Age-Specific Fertility Rate

TFR = Total Fertility Rate

Average parity = total number of children ever born divided by the number of women

Appendix Table 11: Registered births by age of women, Niue, 1991–1997

Age of Women	1991	1992	1993	1994	1995	1996	1997	1991–1997	
								Total	Average
15–19	6	3	4	3	1	3	3	23	3.29
20–24	15	10	9	22	7	6	6	75	10.71
25–29	13	16	14	13	11	14	10	91	13.00
30–34	9	10	9	2	10	6	8	54	7.71
35–39	5	7	5	1	4	3	7	32	4.57
40–44	1	2	3	1	2	0	2	11	1.57
45–49	0	0	0	0	0	0	0	0	0.00
Total	49	48	44	42	35	32	36	286	40.86

Source: Registrar, Justice, Lands & Survey Department, Niue

Appendix Table 12: Registered deaths by age and sex, Niue, 1987–1997

Age	1987			1988			1989			1990			1991			1992			1993			1994			1995			1996			1997						
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T							
0–1	0	0	0	0	0	0	0	1	1	0	1	1	1	0	1	0	1	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1			
1–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5–9	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
10–14	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0		
15–19	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0		
20–24	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
25–29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	
30–34	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
35–39	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40–44	1	0	1	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	
45–49	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0	1		
50–54	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	2	2	4	0	0	0	0	1	1	1	0	1	1	0	1	0	1	1	0	1	
55–59	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
60–64	0	0	0	1	1	2	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65–69	0	3	3	1	1	2	1	0	1	2	2	4	0	0	0	1	0	1	0	0	0	0	1	1	2	2	0	2	0	0	0	0	0	1	0	1	
70–74	0	0	0	1	0	1	2	1	3	1	1	2	0	0	0	2	0	2	0	0	0	0	1	0	1	3	0	3	0	2	2	2	1	3	2	1	3
75+	3	4	7	2	5	7	4	7	11	2	3	5	5	5	10	3	4	7	0	1	1	5	0	5	6	2	8	3	2	5	0	4	4	0	4	4	
Total	5	8	13	6	7	13	12	9	21	10	7	17	6	7	13	10	7	17	4	5	9	9	2	11	19	2	21	9	4	13	9	9	18	9	9	18	

Source: Registrar, Justice, Lands & Survey Department, Niue

Appendix Table 13: Children ever born and children surviving, Niue, 1997

Age of women	Number of women	Number of children ever born	Number of children surviving	Proportion dead
15-19	90	5	4	0.2000
20-24	54	31	30	0.0323
25-29	60	109	109	0.0000
30-34	69	180	175	0.0278
35-39	54	171	165	0.0351
40-44	61	262	251	0.0420
45-49	54	201	199	0.0100

APPENDIX 2: THE 1997 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, so that the 1997 Niue Census of Population and Dwellings, was a routine undertaking.

The 1997 Niue Census of Population and Dwellings, like the censuses before, was conducted to provide the administration, planners and policy-makers, with up-to-date statistical information on demographic and socio-economic developments. These data are needed for planning purposes and to evaluate and monitor the success and failure of programmes and projects.

The 1997 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 time 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 analysis.

Niue officials requested that the final census report titled *Niue Population Profile* be consistent with other population profiles written by the Population/Demography Programme of the Secretariat of the Pacific Community, which 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 1997 Census followed the design of the questionnaires used in the previous censuses. As usual, a list of questions was distributed to all Government departments which were also asked to submit any specific additional questions they wanted to add. All requests from departments were prioritised, and 'new' questions on migration and immigration, energy use, selling and buying of food in the market, and smoking and alcohol consumption were included. The questionnaire was pre-tested by staff members of Statistics Niue.

The typesetting of the questionnaire for printing was done using Microsoft Excel. There were two types of questionnaires used in the census; the household and individual questionnaires. An enumerator manual was prepared to assist enumerators in their duties. In addition, a field record book was used to record basic information, including estimates of population size as well as a log of the number of households enumerated and a record of problems encountered.

Publicity

Generally, Niue residents are well aware of census activities, and most of the older population has been enumerated in at least five census undertakings in the past. Therefore most people are quite aware of their involvement in a census enumeration. The publicity for the 1997 Census covered a period of four months and started in April 1997, and

continued until the enumeration began in mid August. The *Niue Star* newspaper was used to promote the census in the initial stages. During the week before the census, the television news showed topics related to the census, and five days before the census, radio notices were transmitted. There also were television advertisements during the weekend of the census enumeration itself. After the census, public announcements were broadcast on the radio to alert people who were not yet enumerated.

Preliminary field work

Updated maps of previous censuses were used. Due to Niue's continuous depopulation, this task mainly involved marking the increasing number of empty dwellings, rather than adding new dwellings. At present, the Lands and Survey Department is computerising the maps, which will be very useful for census undertakings in the future.

One of the advantages of Niue's small size has been that the census questionnaire could be pre-tested several times. The questionnaire was tested about four times, after major amendments were made.

Recruitment and training of enumerators

Many enumerators and supervisors employed for the 1997 Census were employees of the Niue Public Service, and most of them had experience with previous census projects. In addition, consideration was given to the need for a geographically dispersed enumeration team, to ensure that enumerators could work in their home villages. The training of the enumerators was carried out on three afternoons in the week before the census weekend.

Enumeration

The enumeration started on Friday evening, 15 August 1997 and ended on Monday morning, 18 August 1997. The census reference point is midnight of Sunday, 17 August 1997. All schedules were submitted to the Census Office on Monday, 18 August 1997.

Data processing

The processing of the census took place during the period March to May 1998. The forms were checked, edited and coded before being entered into the computer database. The PC-Edit software package was used for data entry, and IMPS was used for creating the tabulations.

Budget

The 1997 Census operation was funded by the Government of Niue and UNFPA, with technical assistance in data analysis provided by the Secretariat of the Pacific Community (SPC), which also funded a three-week professional attachment in Noumea of the Niue Government Statistician, 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.

Output

Tabulation and report writing of the census results were done simultaneously and are presented in this *Niue Population Profile*. The interpretation of results was done in collaboration with Niue officials during visits of staff of SPC's Population/Demography Programme to Niue, and during a visit by Niue's Government Statistician to SPC in Noumea in October 1998.

CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

A full list of definitions and terms used for the 1997 Niue Census of Population and Dwellings is also contained in the Manual of Instructions for Census Enumerators.

1. AREA DEFINITION

- Enumeration area (EA)** This is a unit which 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 be made up of several enumeration areas (see reasons given above). The traditional unit of a village and its pre-defined boundaries always remain the same and have never changed
- Niue** The terms relate solely to 'geographic Niue' and include persons enumerated on board vessels anchored in port on census night.

2. POPULATION DEFINITIONS

- Relationship to head of household** Refers to the relationship of the 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.
- Country of citizenship** A person's immigration status, usually determined by the passport (or certificate of identity) a person holds. All Niueans and Non-Niueans born on Niue are New Zealand citizens. Sometimes the descent or racial origin of a person is different from the citizenship he or she holds, i.e. Samoan with New Zealand citizenship.
- 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.

Niuean population Comprises all persons 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 persons 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 The religious denomination with which a person identifies. This is the only question in the census where 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.

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.

Marital status Refers to the marital status of a person. 'Married' includes all legally married or in de facto relationships. 'Divorced' is when legally divorced by the Court.

Where were you in October 1992	Refers to where the respondent was 'permanently living' during October 1992. All persons temporarily overseas such as students, Government officials, or on holidays were excluded.
Where do you think you will be living in the next 5 years	Refers to a person's expectation of where their future permanent residence will be.
Where do you prefer to live	Refers to a person's preference regarding future permanent residence.
Do you think we should increase our population for economic development, by allowing people from overseas to come and live in Niue	This question asks for the person's opinion on this issue. If the answer is yes, the person has to select the races of people they would like to immigrate to Niue.
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.
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 the week before the census.
Unpaid labour force	A person was included in the unpaid labour force if he or she worked on a plantation or fishing (i.e. subsistence activities for sale and/or consumption) in the week before the census. Those under 'paid labour force' who also participate in subsistence activities are not included here.
Unemployed	These are people not in the paid or unpaid labour force, and who either looked for work or were available to work in the week prior to the census.
Not in labour force	These are persons not in the above categories, that is they did not work, were not looking for work and were not available to work in the week before the census.
Types of subsistence	Refers to the end use of subsistence products, whether they were for family use and not sold, or occasionally or regularly sold.
Employed	Refers to persons engaged in formal income-earning activities, whether full-time or part-time, and those engaged in subsistence activities.

Employment status	This refers to whether the person is working for the Government, in the private sector or is self-employed.
Hours worked	Hours worked during the week preceding the census by persons aged 15 and over for monetary gain, or subsistence activities, whether full-time or part-time.
Industry	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. 4.
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 Organisation (ILO) International Standard Classification for Occupation 1988.
Seeking work	Refers to persons aged 15 and over, who are without work, whether paid or unpaid, but who are available for work and have actively sought work during the week before the census.
Availability for work	Refers to persons aged 15 and over who are without work, whether paid or unpaid, and who are available for work, regardless of whether or not they sought work during the week before the census.
Types of smoker	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).
Types of alcohol drinker	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 like whisky and Coca-Cola.
Children still living	Refers to the number of children born alive who are still living.

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

3. HOUSEHOLD DEFINITIONS

Household 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 A family is 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 (though not always) form a durable social and economic unit, co-operating 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.

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

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

Type of tenure Refers to the nature of occupancy of a private dwelling.

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

4. 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 verandahs 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.
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.

- Non-private dwelling** This is a dwelling occupied by a non-private household. Such dwellings include hospitals, prisons, hotels, motels, yachts etc. They are also referred to as establishments.
- Household items** Refers to the selected items owned and use by the household, which are in good working order.
- Marketing of produce** This series of questions determines the supply and demand for the food and produce sold at the market in Alofi.

NIUE CENSUS 1997

HOUSEHOLD & DWELLING SCHEDULE

CONFIDENTIAL

Carried out under the legal authority of the Niue Census Ordinance 1971

HEAD OF HOUSEHOLD SURNAME, GIVEN NAMES (please print)

EA Number		HH Number	

Males	Females	Total	Number of family Units
(2)	(3)	(4)	(5)

Data Processing	
Checked	
Entered	
Edited	

1 MEMBERS OF THIS HOUSEHOLD TEMPORARY ABSENT OVERSEAS? (6)
(members expected to be away for a period of less than 12 months)

FULL NAME (please print clearly)

Male	Female
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
males	females

Date of Birth		
DAY	MONTH	YEAR

TOTAL

2 NUMBER OF FISHING VESSELS (Write actual number in appropriate BOX)

(7) <input type="text"/>	Canoe	(10) <input type="text"/>	Boat
(8) <input type="text"/>	Alluminium dinghies	(11) <input type="text"/>	Outboard motor
(9) <input type="text"/>	Inflatable dinghies		

3 TENURE OF LIVING QUARTERS

(Mark one BOX with an "X")

(12) <input type="checkbox"/>	1 Rent or lease	<input type="checkbox"/>	4 Pay nominal rent
<input type="checkbox"/>	2 On loan without payment	<input type="checkbox"/>	5 Own
<input type="checkbox"/>	3 Free with job	<input type="checkbox"/>	6 Buying on mortgage or tenure payment

4 IF RENT, WHAT IS THE WEEKLY RENT? (13)

5 TYPE OF DWELLING (Mark one BOX with an "X")

(14) <input type="checkbox"/>	1 House	<input type="checkbox"/>	4 Kitset house / pre-cut
<input type="checkbox"/>	2 Assembly unit (Fale fuakau)	<input type="checkbox"/>	5 Other (please specify) _____
<input type="checkbox"/>	3 Flat - self contained		

6 NUMBER OF ROOMS (15)

WARNING:

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7 AMENITIES OF DWELLING (Mark with "X" in appropriate BOX)

	Yes	No
	1	2
(16)	<input type="checkbox"/>	<input type="checkbox"/>
(17)	<input type="checkbox"/>	<input type="checkbox"/>
(18)	<input type="checkbox"/>	<input type="checkbox"/>
(19)	<input type="checkbox"/>	<input type="checkbox"/>
(20)	<input type="checkbox"/>	<input type="checkbox"/>
(21)	<input type="checkbox"/>	<input type="checkbox"/>
(22)	<input type="checkbox"/>	<input type="checkbox"/>

Flush toilet
Water seal toilet
Bathtub
Handbasin
Washing tub
Shower
Kitchen Sink

	Yes	No
	1	2
(23)	<input type="checkbox"/>	<input type="checkbox"/>
(24)	<input type="checkbox"/>	<input type="checkbox"/>
(25)	<input type="checkbox"/>	<input type="checkbox"/>
(26)	<input type="checkbox"/>	<input type="checkbox"/>
(27)	<input type="checkbox"/>	<input type="checkbox"/>

Electricity public supply
Electricity own generator
Sewage - long drop
Sewage - non concrete water seal
Sewage - concrete septic tank

8 SOURCES OF WATER SUPPLY (Mark with "X" in appropriate BOX)

(28)	<input type="checkbox"/>
(29)	<input type="checkbox"/>
(30)	<input type="checkbox"/>

Piped public water supply to taps in house
Piped public water to taps outside house
Piped public water to watertank

(31)	<input type="checkbox"/>
(32)	<input type="checkbox"/>
(33)	<input type="checkbox"/>

Water tank fed by rain water
Water well
Other (please specify) _____

9 MAIN MEANS OF COOKING (Mark one BOX with an "X")

(34)	<input type="checkbox"/>
	<input type="checkbox"/>

Electric stove/element/cooker
Gas stove
Wood stove
Kerosene cooker
Charcoal stove

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Open fire
Umu
Drum oven
Other (please specify) _____

10 MAIN MEANS OF HOTWATER SYSTEM (Mark one BOX with an "X")

(35)	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

Electricity
Gas
Solar energy
Wood stove

<input type="checkbox"/>
<input type="checkbox"/>

Other fuel (please specify) _____
None

11 ENERGY USED IN (Mark with "X" in appropriate BOX)

- (36) Cooking
(37) Water Heating (Hot water system)
(38) Lighting
(39) Umu
(40) Barbecue
(41) Other _____

A	B	C	D	E	F
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					

KEY

- A** Electricity
B Own Generator
C Gas
D Wood
E Kerosene
F Charcoal

12 IF YOU USE ENERGY EFFICIENT LIGHT BULBS; HOW MANY ARE CURRENTLY BEING USED IN HOUSEHOLD?
(Write actual number in BOX)

(42)

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13 NUMBER OF HOUSEHOLD ITEMS OWNED OR PARTLY OWNED BY THE HOUSEHOLD?

(Write actual number in appropriate BOX)

(43)	<input type="text"/>	Hand sewing machine	(61)	<input type="text"/>	Manual telephone	(79)	<input type="text"/>	Gas stove
(44)	<input type="text"/>	Treadle Sewing Machine	(62)	<input type="text"/>	Automatic telephone	(80)	<input type="text"/>	Electric stove
(45)	<input type="text"/>	Electric sewing machine	(63)	<input type="text"/>	Cellular unit telephone	(81)	<input type="text"/>	Solar - water heater
(46)	<input type="text"/>	Radio/Tape recorder	(64)	<input type="text"/>	Mobile telephone	(82)	<input type="text"/>	Electric water pump
(47)	<input type="text"/>	CD Player	(65)	<input type="text"/>	Cordless Phone	(83)	<input type="text"/>	Motor mower
(48)	<input type="text"/>	Cooler	(66)	<input type="text"/>	Computer	(84)	<input type="text"/>	Grass cutter
(49)	<input type="text"/>	Refrigerator	(67)	<input type="text"/>	Printer	(85)	<input type="text"/>	Chain saw
(50)	<input type="text"/>	Deep Freezer	(68)	<input type="text"/>	Fax Machine	(86)	<input type="text"/>	Knapsack sprayer
(51)	<input type="text"/>	Electric Toaster	(69)	<input type="text"/>	Deep frier	(87)	<input type="text"/>	Firearm
(52)	<input type="text"/>	Wringer washing machine	(70)	<input type="text"/>	Bread maker	(88)	<input type="text"/>	Bicycle
(53)	<input type="text"/>	Automatic washing machine	(71)	<input type="text"/>	Sandwich maker			
(54)	<input type="text"/>	Hoovermatic washing machine	(72)	<input type="text"/>	Crockpot (electric pot)	(89)	<input type="text"/>	(a) (b) (c) (refer note below)
(55)	<input type="text"/>	Electric iron	(73)	<input type="text"/>	Electric Cook Top	(90)	<input type="text"/>	Motorcycle
(56)	<input type="text"/>	Electric jug	(74)	<input type="text"/>	Food safe	(91)	<input type="text"/>	Car
(57)	<input type="text"/>	Video recorder	(75)	<input type="text"/>	Microwave	(92)	<input type="text"/>	Truck
(58)	<input type="text"/>	Television set	(76)	<input type="text"/>	Electric frying pan	(93)	<input type="text"/>	Van
(59)	<input type="text"/>	Video Camera	(77)	<input type="text"/>	Wood range stove	(94)	<input type="text"/>	Pickup
(60)	<input type="text"/>	Camera	(78)	<input type="text"/>	Charcoal stove		<input type="text"/>	Double cab

NOTE: The boxes 89 to 94 in Question 13 above is a little different from the rest in that you would have to specify whether the vehicle uses petrol or diesel fuel. The letters (a), (b), and (c) on the top of the columns on box 89 corresponds to the following letters.

14 IF YOU SELL FOODSTUFFS AT THE PRODUCE MARKET PLEASE MARK THOSE TYPE OF FOODSTUFFS.

(Mark with "X" in appropriate BOX)

(95)	<input type="checkbox"/>	1 Fresh Vegetables	(98)	<input type="checkbox"/>	4 Coconuts	(101)	<input type="checkbox"/>	7 Cooked Food
(96)	<input type="checkbox"/>	2 Fish	(99)	<input type="checkbox"/>	5 Bananas	(102)	<input type="checkbox"/>	8 Other _____
(97)	<input type="checkbox"/>	3 Food Crops	(100)	<input type="checkbox"/>	6 Taros			(please specify)

15 FROM THE ABOVE CATEGORIES, WHAT 3 FOODSTUFFS YOU SELL MOST OF, WITH THE FIRST BEING THE MOST SOLD FOODSTUFF. (use the NUMBERS inside the boxes)

(103) First Most Sold (104) Second Most Sold (105) Third Most Sold

16 IF YOU BUY FOODSTUFFS AT THE PRODUCE MARKET PLEASE MARK THOSE TYPE OF FOODSTUFFS.

(Mark with "X" in appropriate BOX)

(106)	<input type="checkbox"/>	1 Fresh Vegetables	(109)	<input type="checkbox"/>	4 Coconuts	(112)	<input type="checkbox"/>	7 Cooked Food
(107)	<input type="checkbox"/>	2 Fish	(110)	<input type="checkbox"/>	5 Bananas	(113)	<input type="checkbox"/>	8 Other _____
(108)	<input type="checkbox"/>	3 Food Crops	(111)	<input type="checkbox"/>	6 Taros			(please specify)

17 FROM THE ABOVE CATEGORIES, WHAT 3 FOODSTUFFS YOU BUY MOST OF, WITH THE FIRST BEING THE MOST BOUGHT FOODSTUFFS. (use the NUMBERS inside the boxes)

(114) First Most Bought (115) Second Most Bought (116) Third Most Bought

(AT END OF INTERVIEW, PLEASE HAVE ANOTHER LOOK THROUGH THE FORM TO CHECK THAT EVERYTHING HAS BEEN ANSWERED)

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NIUE CENSUS 1997

POPULATION SCHEDULE

CONFIDENTIAL

Carried out under the legal authority of Section (3) of the Niue Census Ordinance 1971

SURNAME, GIVEN NAMES (Print clearly) (1)		EA Number	HS Number	Person No.
	(100)			

1 RELATIONSHIP TO HEAD OF HOUSEHOLD (101) _____

2 SEX (102) 1 Male 2 Female

Data Processing	
Checked	
Entered	
Edited	

3 DATE OF BIRTH (103)

Day	Month	Year			

4 PLACE OF BIRTH (104) _____
 (If on Niue, give the respondent's mother home village at time of birth, if overseas give country)

5 CITIZENSHIP (105) _____

6 DESCENT (106) _____

7 HOME VILLAGE (Niuean descendants only) (107) _____

8 RELIGION (108) _____

FOR ALL PERSONS 5 YEARS AND OVER ONLY.

9 HIGHEST LEVEL OF EDUCATION ATTAINED (109) _____

10 HIGHEST QUALIFICATION FORMALLY ATTAINED (110) _____

FOR ALL PERSONS 15 YEARS AND OVER ONLY.

11 MARITAL STATUS (111) _____

12 WHERE WERE YOU IN OCTOBER 1992? (Mark one BOX with an "X")

(112)	1	This village	
	2	Other village, specify village	(113)
	3	Overseas, specify country	(114)

13 WHERE DO YOU THINK YOU WILL BE LIVING IN THE NEXT 5 YEARS? (Mark one BOX with an "X")

(115)	1	Niue	
	2	New Zealand	
	3	Don't know	
	4	Other, (please specify)	(116)

REASON FOR LEAVING NIUE?

(117) _____

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14 WHERE DO YOU PREFER TO LIVE: (Mark one BOX with an "X")

(118)	1	Niue
	2	New Zealand
	3	Both in Niue and New Zealand
	4	Other (please specify) (119) _____

15 WHY? (referring to question 13) _____
 (120) _____

16 DO YOU AGREE THAT WE SHOULD INCREASE OUR POPULATION FOR ECONOMIC DEVELOPMENT. THUS ALLOWING PEOPLE FROM OVERSEAS TO COME AND LIVE ON NIUE. (Mark one BOX with an "X")

(121) 1 Yes 2 No 3 Don't know (please go to question 19)

17 IF YOU ANSWERED YES TO QUESTION 16. WHAT RACE OF PEOPLE WOULD YOU PREFER.

(122) 1 Overseas Niueans 3 Europeans 5 Middle Eastern 7 African
 2 Other Pacific Islanders 4 Asians 6 Other (123) _____
 (please specify)

18 WHY? (124) _____
 (in reference to question 17) _____

19 WHAT WAS YOUR MAIN ACTIVITY LAST WEEK? (125)

Codes

- | | |
|---------------------------------------------------------------|-----------------------------------------------------|
| 1 Working full time for wage and salary | 5 Unemployed |
| 2 Working for wages part time on a casual basis | 6 Domestic duties and not working for wages |
| 3 Working mainly to produce for own use/household consumption | 7 Attending full time education |
| 4 Working mainly to produce for sale | 8 Others (pensioner, disabled etc.) - specify (126) |

20 DID YOU WORK FOR PAY OR PROFIT OR IN A FAMILY BUSINESS LAST WEEK?

(127) 1 Yes Total hours (128) _____
 2 No

21 DID YOU DO ANY WORK ON A PLANTATION OR FISHING LAST WEEK?

(129) 1 Yes Total hours (130) _____
 2 No (go to question 23)

22 IF YOU ANSWERED YES TO QUESTION 21; WAS THIS FOR (Mark one BOX with an "X")

(131) 1 Own Family use? Never Sell
 2 Occasionally Sell
 3 Regularly Sell

NOTE: If answered YES for previous two questions, answer the next two questions using the word OTHER in brackets.

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23 DID YOU LOOK FOR ANY (OTHER) WORK LAST WEEK?

(132)

1
2

 Yes
No

24 WERE YOU AVAILABLE FOR (OTHER) WORK LAST WEEK?

(133)

1
2

 Yes
No

25 HOW MANY HOURS DID YOU WORK LAST WEEK? (134)

26 EMPLOYMENT STATUS: (Mark one BOX with an "X")

(135)

1
2
3
4

 Government
Private Sector
Self employed / Family business
Other (please specify) _____

27 OCCUPATION (136)

28 INDUSTRY (137)

29 TYPE OF TRANSPORT TO WORK (138)

30 ARE YOU A: (Mark one BOX with an "X" and complete where appropriate)

(139)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

 Non smoker (go to question 31)
Heavy Smoker How may cigarettes per day. (140) _____ per day
Casual Smoker How many cigarettes per occasion. (141) _____ per occasion

31 ARE YOU A: (Mark one BOX with an "X" and complete where appropriate)

(142)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

 Non alcohol drinker (go to question 32)
Heavy Drinker How may can/glass per day. (143) _____ per day
Social Drinker How many can/glass per occasion. (144) _____ per occasion

FOR ALL FEMALE PERSONS 15 YEARS AND OVER

32 NUMBER OF CHILDREN STILL LIVING (145)

33 NUMBER OF CHILDREN ALIVE AT BIRTH NOW DECEASED (146)

34 DATE OF BIRTH OF LAST CHILD BORN ALIVE

Day		Month		Year	

 (147)

(At the end of the interview, please have a look through the form and check to ensure that everything is correct)

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Term	Definition/description
Age-dependency ratio	The ratio of persons in the ages defined as dependent (under 15 and over 60 years) to persons 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
Child-bearing age (for women)	Ages 15–49 (the reproductive age-span of women)
Children	Population under 15 years
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 population	Persons 15 years and older who were employed or looking for work; also referred to as the ‘labour force’

Term	Definition/description
Educational attainment	Proportion of the population 15 or 25 years and over by age-groups and level of education
Elderly persons	Persons aged 60 years and over
Emigrants	Persons 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 persons 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 persons
Immigrants	Persons 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 under one year per 1,000 live births in a year
In-migrants	Persons 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
Labour force	Persons employed and unemployed; excludes those not seeking employment, housewives and students

Term	Definition/description
Labour force participation rate	The number of persons in the labour force divided by the corresponding total number of persons (usually those 15 years and older)
Life expectancy at birth (E(o))	The average number of years a new-born 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 1,000 population in a given year
Nuclear family	A couple and their unmarried children residing together
Out-migrants	Persons 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 persons per square mile or square kilometre of land area

Term	Definition/description
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 child-bearing 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 socio-economic 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 growth	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
Socio-economic 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 of a given year

Term	Definition/description
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)