

Tuhiga Igoa o te 2006

2006 Tokelau Census of
Population and Dwellings



2006 Census of Tokelau Analytical Report



February 2007

Produced by Statistics New Zealand and the Office for the
Council of the Ongoing Government of Tokelau

Further information

For more information about the 2006 Census of Tokelau, or for data requests, please contact:

Kelekolio Kelekolio
2006 Tokelau Census Manager
Office of the Council for the Ongoing Government of Tokelau

Telephone: (+685) 323 2526

Fax: (+685) 323 28

Email: tua5fafau@lesamoa.net

Information from the 2001 Census of Tokelau is available at the following url:
http://www.spc.int/prism/country/tk/stats/Social/Demographic/2001_population.htm

Cover illustration by Fota Daleb, age 10 years, of Atafu, Tokelau.

ACKNOWLEDGEMENTS

I would like to thank various institutions and people for all of the help they provided to ensure that the 2006 Tokelau Census of Population and Dwellings was well implemented and that information was released on time.

I would like to acknowledge the assistance from the Tokelau Government in funding the 2006 Census project. My sincere gratitude is extended to Statistics New Zealand for all the support, and for their outstanding team of experts, who were assigned to assist with the Tokelau Census. Many thanks to Keith Sykes, International Relations Manager, Michael Berry, Project Manager – External Relations, Crystal Maslin, Project Leader – Census Methods, Suzanne Jones, Census Analyst, and many others who were working behind the scenes, for all of their hard work throughout the project.

I would also like to register my appreciation of Statistics and Demographic Programme of the Secretariat of the Pacific Community for all the training and technical assistance provided throughout the planning phase of the 2006 Census of Tokelau.

I would like to convey my deepest gratitude to the three Taupulega for the funds provided and the manpower to work as enumerators. Many thanks to the three communities for hosting us during our pre-census visit, our enumerators training workshop in Fakaofu, and during the enumeration phase on each atoll. Finally, many thanks also to the three supervisors and the 26 enumerators for easing our path, and making the 2006 Census of Tokelau both enjoyable and memorable.

Fakafetai lahi te galulue hokohoko takuau.

Kelekolio Kelekolio
Census Manager

Office of the Council for the Ongoing Government of Tokelau.

New Zealand has a special relationship with Tokelau. Statistics New Zealand (Statistics NZ) has an obligation and a desire to develop a greater local understanding of statistics and promote their importance in Tokelau's future planning and policy development. Statistics NZ's involvement in the 2006 Census of Tokelau was managed and coordinated through our International Relations Manager, Keith Sykes.

A large number of Statistics NZ subject matter and technical experts (too many to mention) had significant roles in various stages of the project and helped to ensure its success. I would like to acknowledge the hard work and dedication of the wider Statistics NZ team who worked on the census, during an especially busy period for Statistics NZ, as the New Zealand census was also conducted in 2006.

The core Statistics NZ project team reported to me, and included Suzanne Jones and Crystal Maslin. The three of us are committed to the census, and relish any opportunity to promote the importance and usefulness of census information. Suzanne and Crystal, what a team – “well done”. I would like to thank Crystal for the long hours she has put in, her rigorous methodological / sociological debates (sometimes at very odd hours), for steadfastly and quietly dealing with the dreaded sea-sickness incurred on the infamous boat trips, and finally for putting up with living with me in such close quarters during our time in Tokelau. I would like to thank Suzanne for her technical / analytical input, her attention to detail (especially in keeping the two woolly sociologists on track), for taking on and successfully managing the collection phase in Samoa, and finally for organising the many and varied social events. We will never forget the Circus of Samoa and the Monday musicians' night at Laumei Faiaga.

Working on the 2006 Census of Tokelau project has been a very special experience for the three of us, both professionally and personally. While there were certainly opportunities to appreciate Tokelau's people and natural beauty (the snorkelling was particularly good), planning, implementing and publishing the Tokelau census, with a small team in a tight timeframe involved lots of hard work. While in Tokelau and Samoa the team were officially representing Statistics NZ and were therefore always on show. Gaining local acceptance and credibility was critical to the project's success. Eating raw fish in the sea, hitting home runs in kilikiti, and playing pool with the locals are also special personal memories.

We would like to sincerely thank the wider Tokelau census team and all of the people of Tokelau for their help, hospitality and good humour. Yours is a unique country and we will cherish our opportunity to have had an insight into your way of life.

Finally, a special thanks to the 2006 Census Manager Kele Kelekolio, our colleague and friend, for guiding us throughout in *faka* Tokelau or the Tokelau way.

Michael Berry
Pacific Censuses Project Manager

Statistics New Zealand

CONTENTS

CHAPTERS

1	Introduction and background to the census	1
2	Geography and history	5
3	Final population definitions and counts	9
4	Population structure	13
5	Social and cultural profile	23
6	Education.....	29
7	Paid and unpaid work.....	35
8	Dwellings and households	43
9	The census process	51

APPENDICES

1	Usual residence criteria	59
2	Questionnaires	63

CHAPTER ONE
INTRODUCTION AND
BACKGROUND TO THE CENSUS



Introduction

The following report is the final official release from the 2006 Tokelau Census of Population and Dwellings. The report contains detailed analysis of information collected in the census, as well as methodological information on how the census was carried out.

The 2006 Census of Tokelau was conducted on 19 October 2006 by both local representatives and Statistics New Zealand staff. Significant planning went into both the collection and output phases of the 2006 Census – with consultation on various aspects of the census (for example on questionnaire content) carried out in Tokelau, Samoa and New Zealand, where appropriate. The 2006 Census questionnaire was based on a standard form developed by the Secretariat of the Pacific Community (SPC), with some changes appropriate to the Tokelau situation.

Tokelau has a unique population composition. A significant proportion of the Tokelauan population are away from the islands at any one time, for various reasons (eg healthcare and education). Considerable time and effort has been put into developing effective population measures for the 2006 Census of Tokelau, with a focus on ensuring all usual residents were counted whether present in Tokelau or not. Core demographic information was completed by the head of the household, on behalf of absentees (people who usually live in Tokelau, but were away on census night).

Users of the Tokelau census data should be aware that comparability of data across census years may be difficult. Final population count comparisons are not recommended. Collection methodology and population count calculations have varied across censuses, with a focus in 2006 on ensuring all usual residents were counted. The 2006 Census of Tokelau is intended to provide a reliable base for future censuses. Where possible, the full analytical report has carried out time series comparisons with 2001 and earlier.

Statistics New Zealand's involvement in the 2006 Census of Tokelau

Statistics New Zealand was approached by New Zealand's Ministry of Foreign Affairs and Trade and the SPC's Population and Demography Programme, to provide guidance and support to the local staff involved in the development and operationalisation of the 2006 Census of Tokelau.

While it was important for Statistics NZ to ensure that local capability was enhanced, there are likely to be ongoing obligations in ensuring a core set of good quality statistics are produced and can be reproduced both for Tokelau government agencies, New Zealand-based users, and also other international agencies. Statistics NZ also maintains a role in encouraging the use of statistics in local planning and policy decision-making.

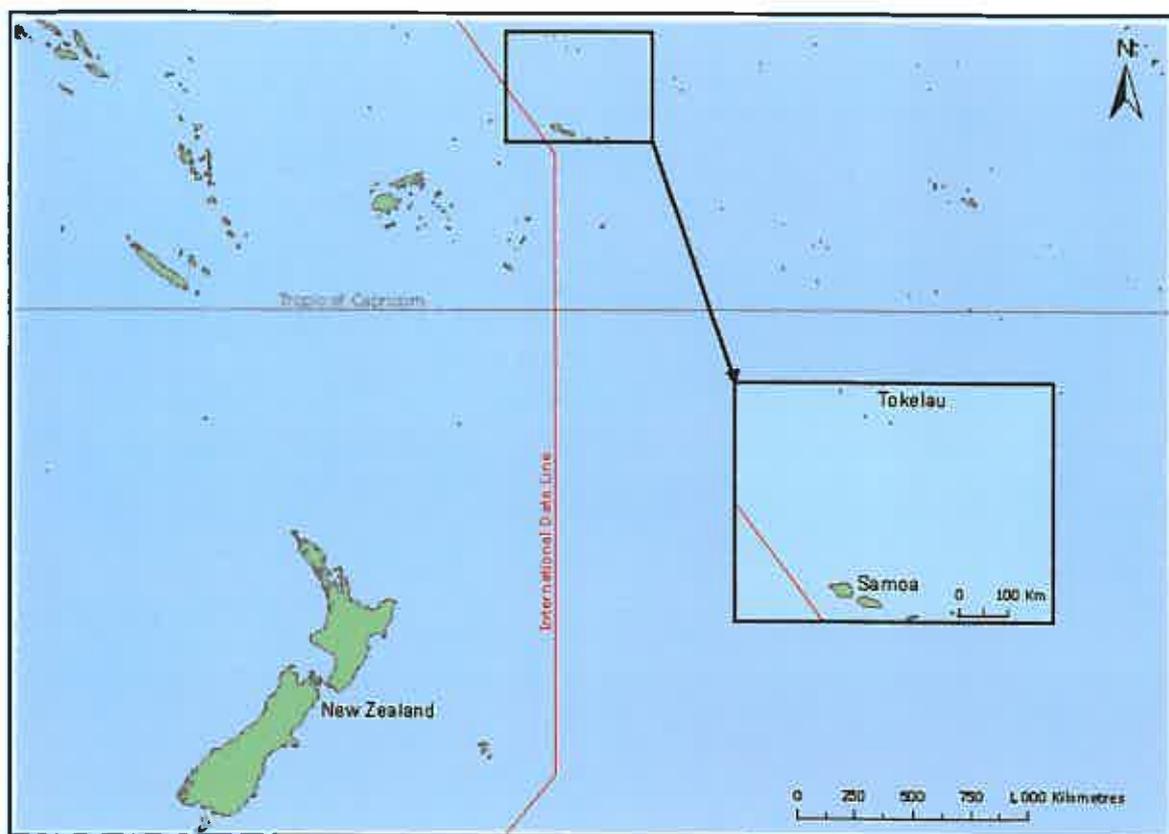
Why have a census?

The census is the official count of the population and dwellings in Tokelau, providing a unique source of detailed information on the demographic, social and economic make-up of Tokelau. The census is of particular importance, as it is currently the only regular official survey undertaken in Tokelau.

The information collected in the census can be used by many different groups in varying ways. For example, government users, schools and individuals can access and use the census data to inform their decision-making. Given the uniqueness of Tokelau and its special relationship with New Zealand, there are a number of international agencies also interested in the data. The census is also a primary source of information used for allocating public funding across Tokelau.

A key strength of the census is its ability to provide detailed information on the whole population of Tokelau. Information on those who usually live there but were away on census day for some reason, is also available from the census. This gives an insight into the unique structure of the population.

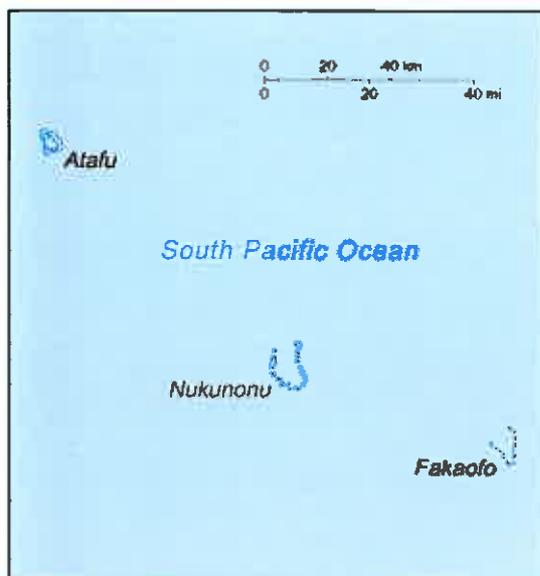
CHAPTER TWO GEOGRAPHY AND HISTORY



Geography

Tokelau is made up of three small coral atolls. The northernmost atoll, Atafu, lies 92 kilometres north-west of the central atoll Nukunonu. The third atoll, Fakaofu, is 64 kilometres south-east of Nukunonu. Tokelau has strong ties with its nearest significant neighbour, Samoa. Supplies are shipped fortnightly from Apia, Samoa, and the Tokelau Public Service (TPS) office is based in Apia.

Except for Fakaofu (which has two villages), the population of each atoll is concentrated in a single village, on the western shore, close to a small natural pass into the central lagoon. This allows canoes and smaller boats to transport passengers and cargo from larger ships docked in the deeper open sea. Low fertility of the coral-sand "soil" means that only a few food crops can be supported in the Tokelau environment (coconut, breadfruit, pandanus, giant swamp taro, taamu and banana).



The three atolls of Tokelau¹

History and settlement

Archaeological evidence suggests that settlement of Tokelau began around 1,000 years ago, however, most traditions can be traced back through oral history to the past few hundred years. The three atolls worked largely independently of one another, and were run by a local chief². However, the similarities between the societies of the three atolls were evident in language and social customs – and remain in place today.³

European contact with Tokelau was first reported in 1765. Commodore John Byron sighted Atafu and it was then recorded as Duke of York Island. From the 1840s, more significant exploration and settlement by Europeans occurred, introducing new food and other materials. Also with settlement came Christianity and therefore a major societal change. Tokelau became a British protectorate in 1877. In this relationship, the country formally agrees (by treaty) to have the stronger country protect it against third parties.

Relationship with New Zealand

In 1926, administration of Tokelau was passed from Britain to New Zealand. However, without New Zealand having an administrative base in Tokelau, governance has remained "light-handed".⁴ Today, each atoll is responsible for its own public administration, and, since 2003, Tokelau has been responsible for administering its own budget. New Zealand and Tokelau have recently approved the draft text of a Treaty of Free Association, as well as a Tokelau Constitution.

Following a decision made in a referendum early in 2006, Tokelau remains a New Zealand dependency and therefore has a special status as an "extension" of New Zealand. At the time of New Zealand's 2001 Census of Population and Dwellings, over 6,200 people identifying with the Tokelauan

¹www.exportinfo.org/worldfactbook/tokelau_WFB.html

² Tokelau Information Bulletin - New Zealand Ministry of Foreign Affairs and Trade <http://www.mfat.govt.nz/Foreign-Relations/Pacific/Tokelau/0-tokelaubooklet.php>

³ Tokelau: A Historical Ethnography, Huntsman, J. and Hooper, A. (1996)

⁴ New Zealand Ministry of Foreign Affairs and Trade

ethnic group were living in New Zealand – further displaying the countries' close relationship. A further referendum will be carried out late in 2007, which may have a different outcome, and therefore lead to an altered relationship between the two countries.

CHAPTER THREE
FINAL POPULATION DEFINITIONS
AND COUNTS



De jure usually resident population

This population count includes the *usually resident population present in Tokelau on census night* plus usual residents who are temporarily overseas at the time of the census (including Tokelauan Tokelau Public Service employees based in Apia and their immediate families, and usual residents who are temporarily overseas). These population counts are of major interest to Tokelauan users, as they will be used for distributing funds to the three atolls.

While the *de jure usually resident population count* will be of key interest to Tokelauan users, it is important to convey an understanding of how the other population counts are measured. This will help ensure that users will have the confidence to choose the appropriate population count, depending on the situation.

The majority of detailed census data will be available for only a subset of the *de jure usually resident population counts*. The *usually resident population present in Tokelau on census night* is the only population that answered the majority of census questions and will therefore be the population for which the bulk of analysis can be done.

Usually resident population present in Tokelau on census night

The *usually resident population present in Tokelau on census night* count is a count of all people who usually live in Tokelau, and were present in Tokelau on census night. This count excludes visitors from overseas and excludes residents who are temporarily overseas on census night. Residents who are in Tokelau and were away from their usual address (on another atoll) on census night are allocated back to the atoll where they usually live and form part of the *usually resident population present in Tokelau on census night* count of that atoll.

While the other population counts will mainly provide national and atoll population counts, it is the *usually resident population present in Tokelau on census night* count that will be used for most of the detailed analysis. This is because we have full information for these respondents as they were interviewed using the standard census form.

Census night population

The *census night population count* gives a snapshot of the population at a point in time. It is a count of the number of people at the location they were interviewed on census night. This count includes overseas visitors as well as visitors from elsewhere in Tokelau. It excludes Tokelau residents temporarily overseas.

The *census night population count* is what is known as a *de facto* census count.

De jure usually resident population

- = Usually resident population present in Tokelau on census night (19 October 2006) + usually resident absentee sub-population.
- = 1,074 + 392⁵
- = 1,466

Usually resident population count present in Tokelau on census night

- = All people present in Tokelau on census night who qualify as usual residents under the specified criteria (therefore, excludes overseas visitors).
- = 1,074

Census night population

- = All people present in Tokelau on census night. Includes overseas visitors and excludes people absent from Tokelau on census night.
- = 1,151

⁵ A total of 392 people were recorded as absentees from Tokelau on Census Night, who qualify as usual residents under the specified criteria. This includes 33 TPS employees and their immediate families enumerated in Apia, Samoa and 359 international absentees not enumerated in Apia.

CHAPTER FOUR POPULATION STRUCTURE



Introduction

The aim of this chapter is to provide a context for the chapters that follow, by describing key population count results from the 2006 Tokelau Census of Population and Dwellings. The information in this chapter will assist users of the report in interpreting both this report and the previously released *2006 Census Tabular Report*.



The 2006 Census field team

Small Pacific nations like Tokelau tend to have very mobile populations. People are sometimes required to travel offshore to further their education (post-secondary level) and to receive certain medical treatments – due to the limited resources available on the atolls. This makes counting those who were absent on census day, who usually live in Tokelau all the more important.

On census day, 1,151 people were present on the three atolls of Tokelau. There were 1,074 usual residents and 77 non-residents. The 77 non-residents were either overseas visitors or people normally living in Tokelau who did not meet the usual residence criteria.

The final *de jure usually resident population* count for Tokelau on census day was 1,466 people. This was made up of 1,074 people present in Tokelau for the census count and 392 usual residents who were absent from Tokelau on census day.

To be counted as a usual resident, a person was required to fulfil strict criteria (see Appendix 1).

Population distribution

Table 4.1 shows the *de jure usually resident population* by sex and atoll of usual residence. It also gives the numbers of usual residents absent from Tokelau on census night. Over a quarter (26.7 percent) of the usually resident population of Tokelau was absent on census night.

The atoll of Nukunonu had the highest proportion of absentees at 32.6 percent. Approximately equal numbers of males and females were absent from Tokelau on census night. There were, however, differences among the atolls.

The sex ratio varies among the atolls. For the *de jure usually resident population* of Atafu, there are 91 males for every 100 females. In comparison, for the Nukunonu population, there are 132 males for every 100 females. The sex ratio for Fakaofu is similar to that for Atafu. Overall, there are nearly equal numbers of males and females for the total Tokelau population.

Table 4.1

De jure usually resident population of Tokelau – present and absent on census night
2006 Census

Atoll of usual residence	Male		Female		Total	
	Present	Absent	Present	Absent	Present	Absent
Samoa	0	16	0	17	0	33
Atafu	203	46	214	61	417	107
Fakaofu	169	60	201	53	370	113
Nukunonu	171	71	116	68	287	139
Total	543	193	531	199	1074	392

Figure 4.1 shows the age-sex distribution of the usually resident population who were present in Tokelau on census night. The graph shows an obvious narrowing in the pyramid, suggesting that there are fewer people (both males and females) in this age range. The graph also shows that the sex structure of the population present in Tokelau is slightly uneven across the age groups. For example, Figure 4.1 shows slightly higher proportions of females than males in the middle age groups (30 to 49 years). Conversely there were fewer females in the 15 to 19 year age group present in Tokelau on census night.

The population of Tokelau is a youthful one, as displayed by the broad bases of the pyramids. The median age of the population is 22 years. The median age for males is 20 years, while the median age for females is 23 years. In Tokelau, there are 63 females aged 65 years and over and 45 males. This reflects the higher life expectancy for women compared with men. Fakaofu has the youngest median age of the three atolls at only 19 years. In Atafu the median age is 21 years, and for Nukunonu it is 23 years.

Figure 4.1
Age-sex distribution – usual residents present in Tokelau on census night
2006 Census

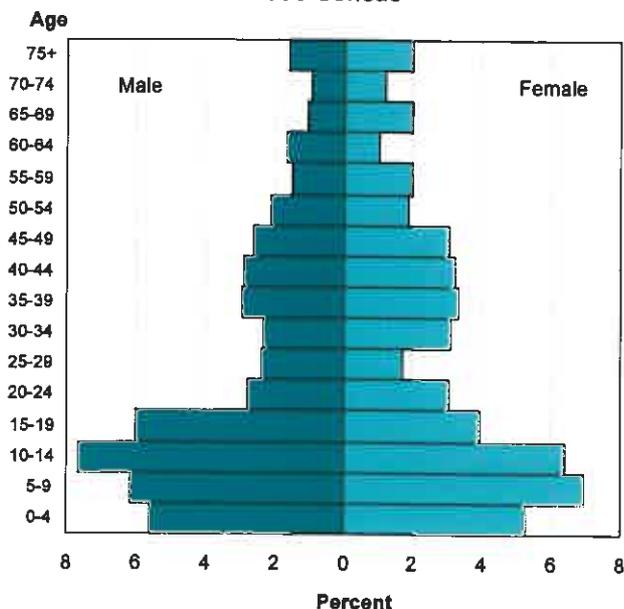
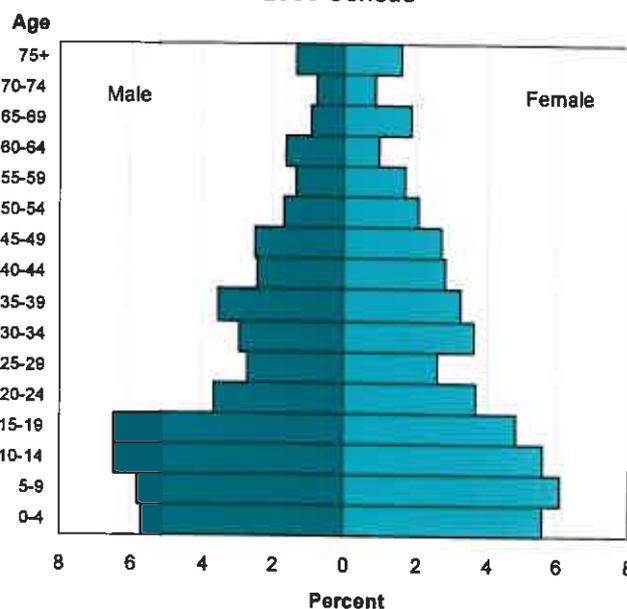


Figure 4.2
Age-sex distribution – Tokelau de jure usually resident population
2006 Census



The distribution of the usually resident population who were present in Tokelau on census night is quite different from that in Figure 4.2, which includes the usually resident absentees. The pyramid for those present in Tokelau on census night is less regular. There are a higher proportion of very young people present in Tokelau on census night compared with the final de jure usually resident population count.

There is a noticeable narrowing in the younger age group mentioned earlier (20 to 29 years). This more mobile age group was most likely to be away for reasons such as furthering their education or being on holiday (both 32.1 percent). It is interesting to note, however, that in Figure 4.1 there is still a relatively high proportion of young people present in Tokelau in the 15 to 19 year age group.

Both Figure 4.1 and Figure 4.2 show a higher proportion of children in the 5 to 9 year age group than in the youngest 0 to 4 year group. This suggests that the number of births is decreasing. This assumption is further

supported by Figure 4.4, on the following page which shows the age-sex distribution for 2001 compared with 2006. There is a smaller proportion of those in the youngest age group in 2006, when compared with 2001.

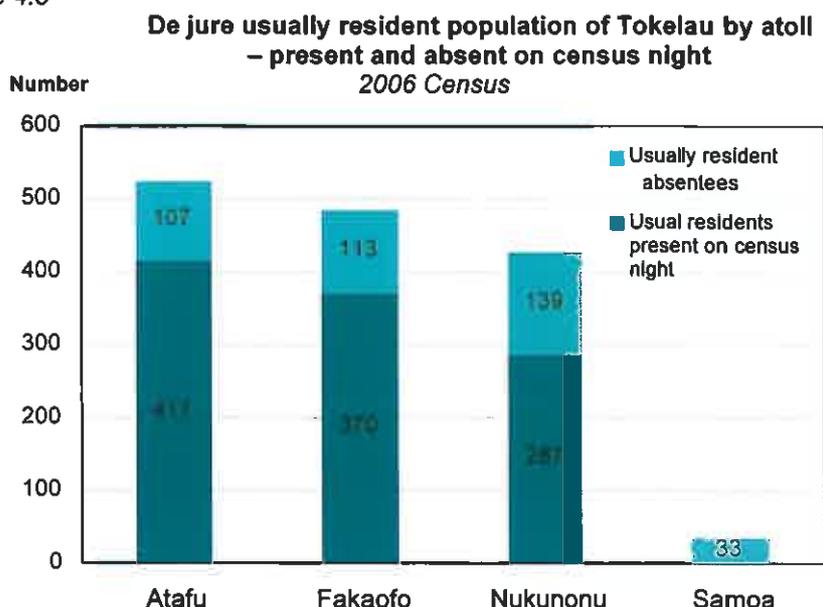
Absentee population

Tokelau has a unique population in that around a quarter of the *de jure usually resident population* was away from the islands at the time of the census. At the time of the 2006 Census, 26.7 percent of the *de jure usually resident population* were absent from Tokelau for some reason. It was therefore important to include absentees in the final population counts. Key demographic variables were collected for these people in the census.

The graph shows that the atoll of Nukunonu had the highest proportion of people absent on census night. Almost one-third of Nukunonu's usual residents were absent on census night (32.6 percent). The proportions of absentees from Atafu and Fakaofu were 20.4 percent and 23.4 percent respectively. The 33 absentees in Samoa were the Tokelauan Tokelau Public Service employees and their immediate families (who meet the criteria specified for usual residents of Tokelau).

Figure 4.3 shows the population counts of each atoll making up the total population of Tokelau, with the counts of absentees and usual residents present on census night.

Figure 4.3



The most common reason for absence in Tokelau was being “on holiday” with 111 of 392 absentees away for this reason. This varied by atoll with the most common reason for absence in Atafu being “schooling / education”, with 48 people away from Atafu for this reason.

In Nukunonu and Fakaofu, education was the second most common reason for absence behind being “on holiday”.

As expected, the reasons for people to be away from Tokelau vary by age group. For example, the majority of those performing "official duties overseas" were aged between

30 and 45 years, whereas the majority of those away for education were in the younger age groups (15 to 24 years).

2001 compared with 2006

While it is important to keep in mind the issues around time series comparability discussed in Chapter 1, comparing the age-sex distributions over time can provide some useful insights into the population trends at the high level.

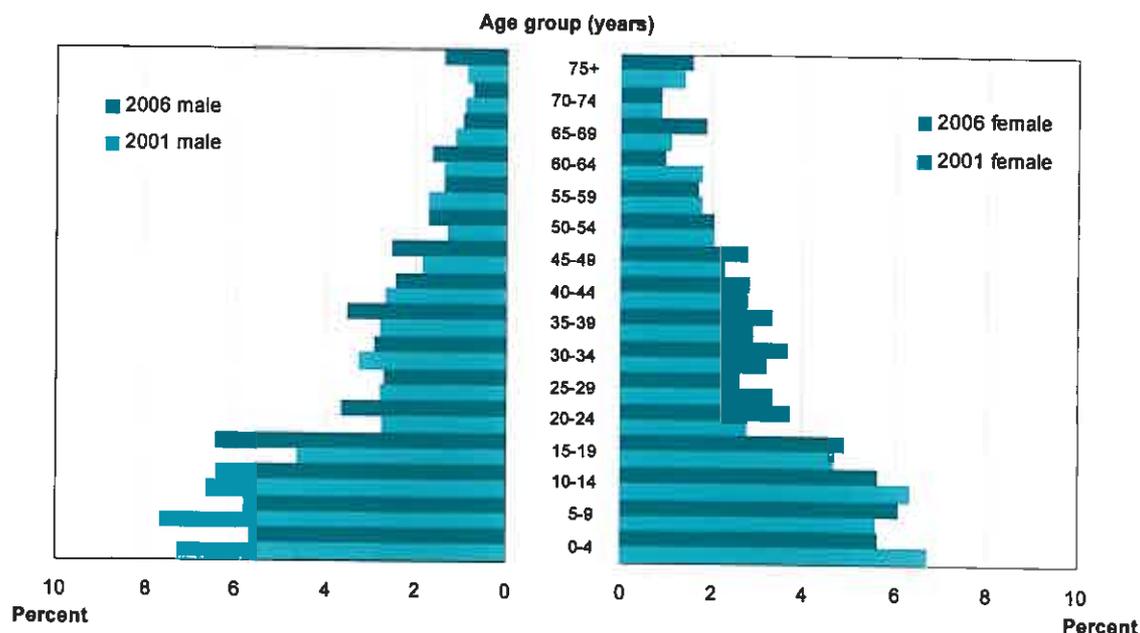
Figure 4.4 compares the age-sex distributions of the Tokelau usually resident population using both 2001 and 2006 Census data. The smaller proportions for 2006 in the youngest age groups, 0 to 9 years, indicates a small

decline in the number of births for the intercensal period between 2001 and 2006.

While still a relatively youthful population, a slight ageing is also apparent when looking at broader age groups. In 2001, 56.4 percent of males were aged 15 years or over. In 2006, this proportion had risen to 64.1 percent. In 2001, 62.1 percent of females were aged 15 years or over – by 2006 this had risen slightly to 65.6 percent.

Figure 4.4

Age-sex distribution – usually resident population of Tokelau 2001 and 2006
2006 Census



Fertility

The census asked women aged 15 years and over how many children they had given birth to, and the date that their last child was born. This information provides insight into the country's fertility patterns.

Figure 4.5 shows the average number of children born to women aged 15 years and over in Tokelau, by the age group of the mother. The graph shows that women who have completed their child-bearing had on average, 4 or 5 children.

The spike evident in the 60 to 64 year age group may be influenced by the small number of women in this age group.

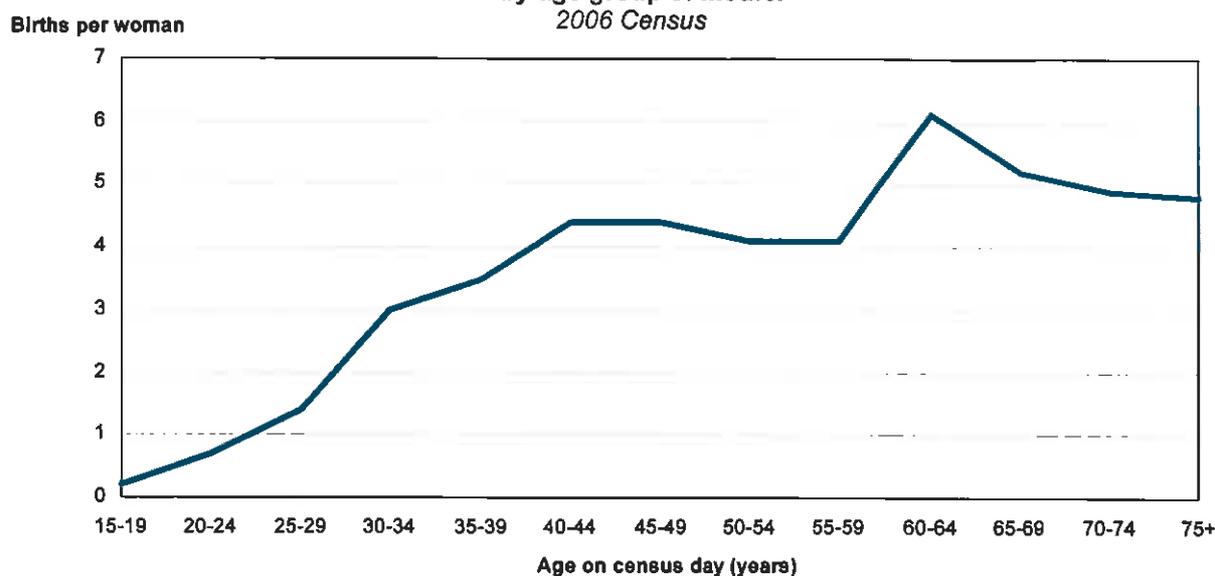
In the 12 months prior to the census, 34 babies were born in Tokelau. Nearly half of these were born in Atafu (15 babies), with 9 in Fakaofu and 10 in Nukunonu. The average age of mothers giving birth in the 12 months prior to the census was 29 years.



Baby born in Tokelau on census day

Figure 4.5

Average number of children born to Tokelau usual residents by age group of mother
2006 Census



Marital status

People aged 15 years and over were asked to indicate their current marital status. Table 4.2 shows the numbers of people in each ten-year-age-group by their marital status at the time of the 2006 Census. The category "Ever been married" combines those who are married, with those who have been divorced, separated or widowed.

The table shows that around two-thirds of the adult population of Tokelau have been married (65.2 percent). If the youngest age group is removed from the equation, the marriage rate stands at 84.1 percent. Marriage rates are very similar across the three atolls.

Table 4.2

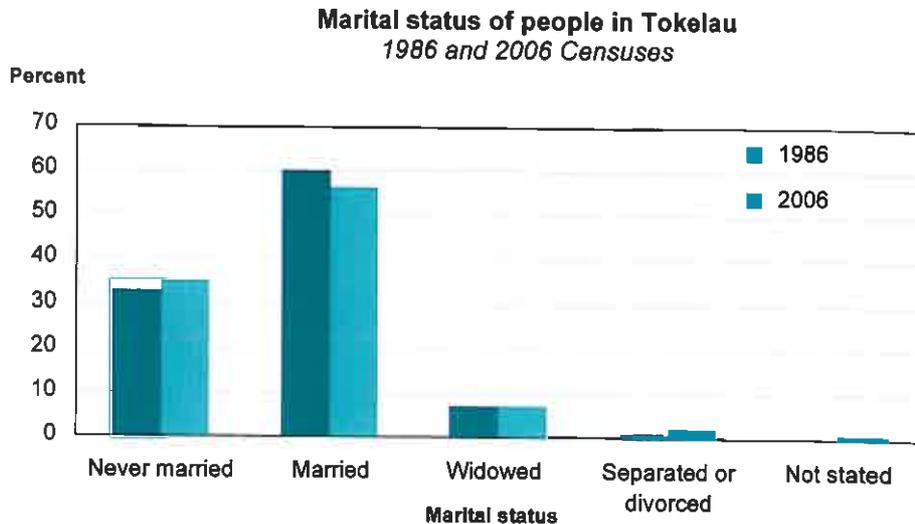
Marital status by age group for the Tokelauan usually resident population aged 15 years and over
2006 Census

Age group (years)	Marital status			Total
	Never married	Ever been married	Not stated	
15 to 24	150	16	3	169
25 to 34	37	65	0	102
35 to 44	13	118	1	132
45 to 54	9	92	2	103
55 to 64	10	55	1	66
65 and over	9	82	2	93
Total	228	428	9	665

As expected, marital status patterns are similar for both males and females. A notable difference is seen in the widowed group. Two-thirds of those in this group were female. This is due to the higher number and proportion of women than men in the older age groups.

A time-series comparison for marital status is shown in Figure 4.7. It is interesting to note that marriage rates have remained very consistent over the past 20 years, with 67.3 percent of adults having been married in 1986, compared with the 2006 rate of 65.2 percent.

Figure 4.6



Migration

Of the usual residents present in Tokelau on census night – almost all were in their village of usual residence. In fact, only 1.5 percent of the population were elsewhere in Tokelau on census night.

The majority (82.3 percent) of the usually resident population of Tokelau were in Tokelau five years ago (at the time of the 2001 Census). Those most likely to have been away from Tokelau five years ago were those in the 20 to 39 year age group – 26.4 percent of people in this age group were overseas in 2001.

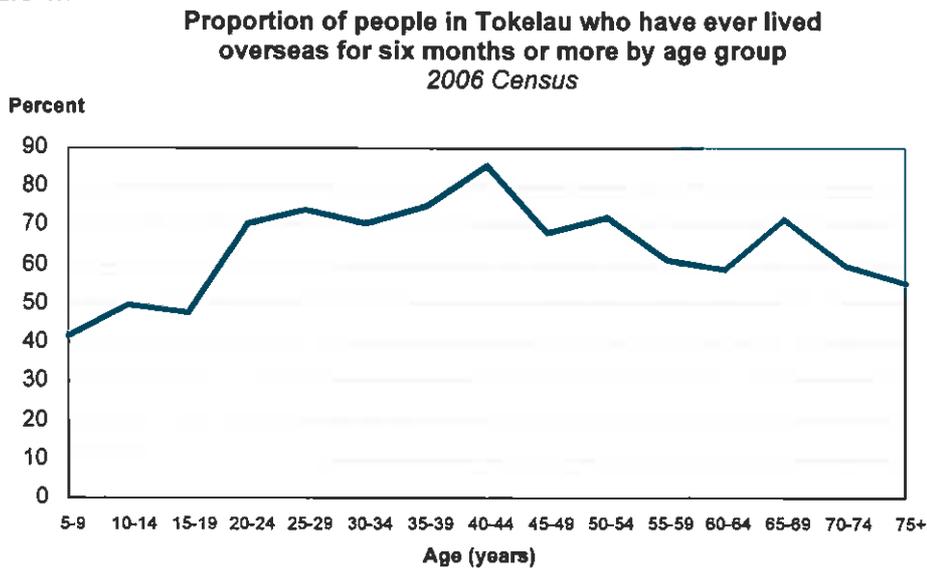
Three-quarters of the Tokelauan population were born in Tokelau (75.8 percent). Of those not born in Tokelau, the most common countries in which they were born were Samoa (9.1 percent) and New Zealand (9.0 percent).

Nukunonu was the most diverse atoll in terms of country of birth. While 69.9 percent of people usually living in Nukunonu were born there, a further 14.3 percent were born in New Zealand, and 12.6 percent were born in Samoa. Fakaofu had the highest proportion of people born in Tuvalu, at 3.8 percent.

As well as a reasonably high proportion of people born overseas, Tokelau has a large proportion of people who have lived overseas for six months or more (60.6 percent). Two-thirds of the population of Nukunonu have lived overseas for six months or more (67.1 percent). This is very similar to Atafu, where 66.8 percent of the population have lived overseas for six months or more. Fakaofu differs from the other two atolls in that a lesser proportion of the usually resident population have lived overseas (48.6 percent).

Figure 4.7 shows the proportions of people in each five-year age group and whether or not they have ever lived overseas. The graph shows that from the age of 15, people are more likely to have lived overseas at some point. As mentioned earlier – this is often due to moving offshore to further their education. Those in the older age groups are less likely to have lived overseas, but still more likely than those in the youngest age group.

Figure 4.7



CHAPTER FIVE
SOCIAL AND CULTURAL PROFILE



Introduction

Census data on the social and cultural profile of the population gives planners and policy-makers a detailed picture of the make-up of Tokelau. Background information on ethnic groups, languages spoken and religious affiliations is important, as different groups often have different values and beliefs. Census information is used to make informed decisions in areas such as healthcare and education.

Languages spoken

Literacy rates are an important indicator of the social development of Tokelau. One indicator that contributes to the measurement of literacy is languages spoken. The languages spoken question was a new addition to the census form for the 2006 Census.

As expected, the most common language spoken in Tokelau is "Tokelauan", with 96.1 percent of the population able to carry out a conversation in the native tongue (see Table 5.1). English is the second most commonly spoken language, with 58.4 percent of the population able to carry out a conversation in English.

Table 5.1

Languages spoken in Tokelau (total responses)¹
2006 Census

Languages spoken	Frequency	Percent
Tokelauan	1,023	96.1
English	622	58.4
Samoan	447	42.0
Tuvaluan	77	7.2
Kiribati	11	1.0
Other(s)	15	1.4
None	32	3.0
Not stated	9	0.8

¹ Several census variables allow people to provide more than one response to the question. Where a person provides more than one response, they are counted in each group they reported.

Many people in Tokelau are able to speak more than one language. Approximately two-thirds of the population responding to this question were able to speak two or more languages (66.4 percent). Furthermore, a large proportion of the population (35.9 percent) is able to converse in three or more languages.

There are differences when looking at the number of languages spoken by age. For example, those in the younger age groups are the most likely to speak only one language. Two-thirds of those who can speak only one language are aged between zero and nine years (66.9 percent). Those who can speak three or more languages are more likely to be in the middle age groups – 51.8 percent of those who speak three or more languages are aged between 30 and 59 years.



Preparing to load passengers onto the MV Tokelau in Fakaofu

Ethnic groups

In the 2006 Census, respondents were asked to identify their ethnic origin. Respondents were able to state that they identified with one or more ethnic group(s). For example, a person may be Tokelauan or part-Tokelauan / Samoan. On census day, the majority of people usually living in Tokelau and present on census night identified solely with the "Tokelauan" ethnic group (73.7 percent). A further 19.3 percent stated being part-Tokelauan. Table 5.2 gives a breakdown of the ethnic groups for the usually resident population present in Tokelau on census night.

Table 5.2

Ethnic groups for the usually resident population present in Tokelau on census night 2006 Census

Ethnic group	Total
Tokelauan	791
Part Tokelauan / Samoan	115
Part Tokelauan / Tuvaluan	49
Part Tokelauan / Other Pacific Islander	17
Part Tokelauan / European	26
Samoan	30
Tuvaluan	15
Other Pacific Islander	4
European	2
Other ethnic group	24
Not stated	1
Total	1,074

The atoll of Nukunonu was the most ethnically diverse in Tokelau with only 60.6 percent identifying solely with "Tokelauan" as their ethnicity. The second largest ethnic group in Nukunonu was "Part-Tokelauan / Samoan" (20.2 percent), while the third was "Other ethnic group" (7.3 percent). This other ethnic group category was largely made up of people with a mixture of three ethnic groups (such as "Tokelauan / Samoan / European"). Fakaofu had the highest proportion of people identifying solely with the "Samoan" ethnic group (4.3 percent), as well as the largest proportion of people identifying with the "Tuvaluan" ethnic group (3.3 percent).



Passengers on the MV Tokelau

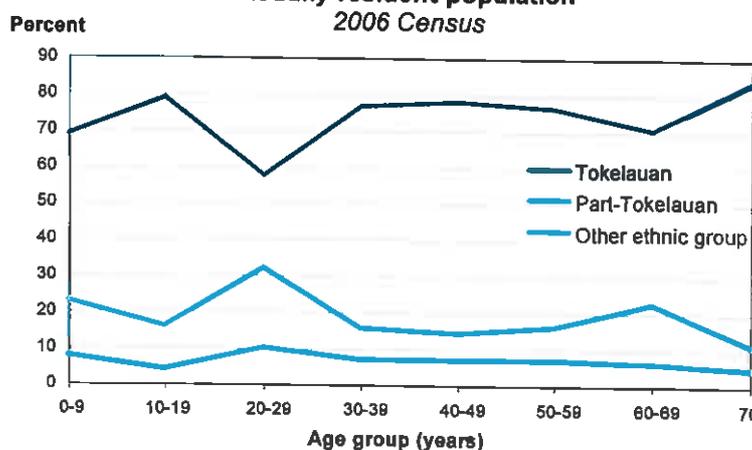
Not surprisingly, the majority of those who specified that they were "Tokelauan" or "Part-Tokelauan" were born in Tokelau (84.2 percent and 65.6 percent, respectively). Conversely, the majority of those who gave another ethnic group were likely to be born outside of Tokelau (85.3 percent).

Comparing 2006 Census figures with 2001 data shows that Tokelau is becoming more ethnically diverse. Whereas in 2001, 88.8 percent of people who responded to the ethnicity question were "Tokelauan", in 2006 this proportion was 73.7 percent. A much higher proportion of people in 2006 were of mixed ethnicity, that is, part-Tokelauan and another ethnic group (19.3 percent, compared with 6.7 percent in 2001).⁶

Figure 5.1 shows "grouped" ethnic groups by ten year age groups. The graph shows that those in the younger age group (20 to 29 years) are more likely to be of either "Part-Tokelauan" or "Other" ethnic groups (57.6 percent of people in this age group are full Tokelauan, compared with the national average of 73.7 percent). Also, the youngest age group, 0 to 9 years, are slightly more likely to be of mixed or other ethnicity. The oldest age group are the most likely to be of sole Tokelauan ethnicity (83.6 percent).

Figure 5.1

Age group by ethnic group for the Tokelau usually resident population 2006 Census



⁶ As mentioned elsewhere in the report – these comparisons should be used cautiously due to the many differences in census collections in 2001 and 2006.

Religion

Religion is a significant part of the *faka Tokelau* (the Tokelauan way of life). The vast majority of people in Tokelau are Christians – therefore the census question included three major denominations: Congregational Christian, Presbyterian and Roman Catholic. In fact, all people who answered the religion question gave a Christian denomination as their religion.

Religious affiliation in Tokelau generally varies by location. The vast majority of those in Atafu (95.4 percent) and Fakaofu (70.7 percent) are of the Congregational Christian faith, whereas the major denomination in Nukunonu was Roman Catholic (96.9 percent). Fakaofu has a second major religious group, affiliated with Roman Catholic – with 22.2 percent of the usually resident population affiliated with the denomination.



Church in Nukunonu

Cigarette smoking

The cigarette smoking questions were a new addition for the 2006 Census. The first question asked whether respondents aged 15 years and over were current regular smokers of tobacco cigarettes (that is, a smoker of one or more cigarettes a day). The second question asked if the respondent had ever been a regular smoker of cigarettes in the past. Of those who responded to the first question, 324 people (51.1 percent) in Tokelau were currently regular smokers of cigarettes. Just under five percent of the population did not answer the cigarette smoking questions.

As shown in Figure 5.2, Nukunonu residents had the highest proportion of people smoking cigarettes regularly, with 56.4 percent of usual residents present in Tokelau on census night being regular smokers. Fakaofu had the lowest proportion of current regular smokers (46.5 percent). Atafu residents were the most likely to have given up smoking cigarettes regularly, with 11.6 percent of the population being ex-smokers.

Differences in cigarette smoking rates are even more apparent when the age breakdown is examined (see Figure 5.3). Almost three-quarters of people aged between 20 and 24 smoke cigarettes regularly in Tokelau (74.1 percent). This is much higher than the national rate of 51.1 percent. The next highest proportion of regular smokers by age group is those aged 30 to 34, with 69.0 percent. The older age groups were the least likely to be regular smokers, with 27.0 percent of those aged 65 years and over being regular cigarette smokers at the time of the census.

Figure 5.2
Cigarette smoking status in Tokelau by atoll of usual residence
2006 Census

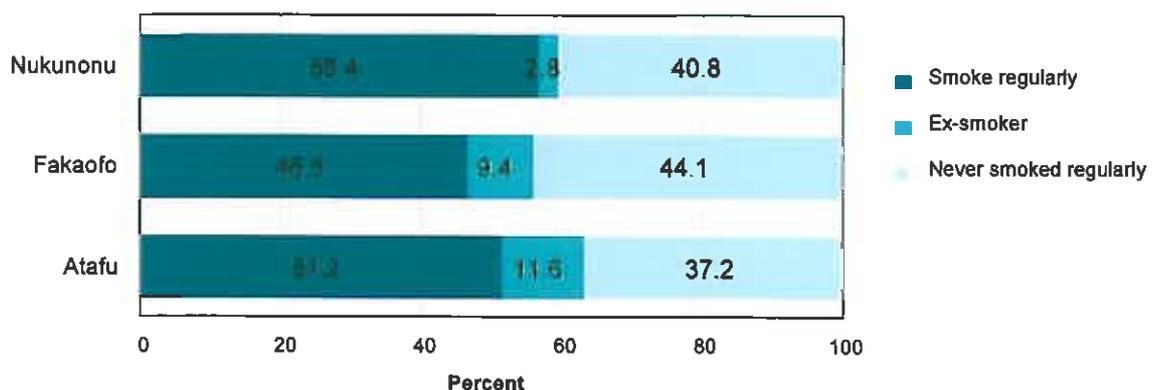
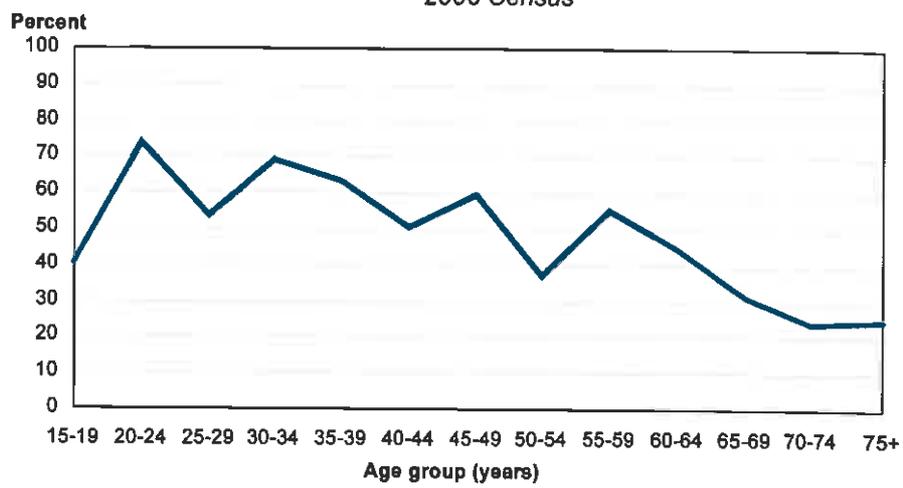


Figure 5.3

Proportion of current regular smokers in Tokelau by age group
2006 Census



CHAPTER SIX EDUCATION



Introduction

The education system performs a key role in the development of a country. The level and duration of education provided is a primary determinant of skill levels of the population. This chapter examines the level of education of Tokelauan usual residents, and how this differs by sex, age groups, occupations and locations.

It is important to note that information on educational qualifications was not collected for a large part of the public service – due to their being located in Apia, Samoa. It is probable this has resulted in qualification levels of Tokelauan usual residents being slightly underestimated.

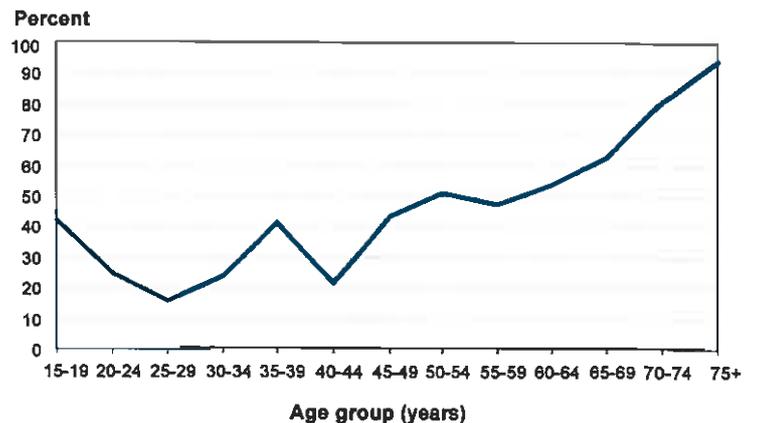
Qualifications by age and sex

Secular education was introduced to Tokelau in the early 1950s, after the introduction of the Tokelau Act 1948. By the early 1960s, scholarships were available to New Zealand to allow students to further their education.⁷

The development of the education system in Tokelau is evident in Figure 6.1. Those aged 60 years and over are much less likely to have any formal qualifications than their younger counterparts. Only 27.9 percent of those aged 60 years and over stated having a formal qualification, whereas 69.3 percent of those aged between 15 and 59 years stated having gained a formal qualification. Furthermore, three-quarters of those aged between 20 and 39 years have a formal qualification (75.6 percent). These figures show the increasing importance placed on formal qualifications in Tokelauan society. There is a spike evident in Figure 6.1 in the 35 to 39 year age group with no qualifications. Had the Tokelauan Public Service employees been included in this count, this peak may not have occurred.

Today, Tokelau has a free, compulsory education system for primary and secondary students up to the age of 16. A small number of scholarships abroad beyond the fifth form level are also available to Tokelauan students in Samoa, Fiji and New Zealand⁸.

Figure 6.1
Proportion of usual residents in Tokelau with no school qualifications, by age group
2006 Census



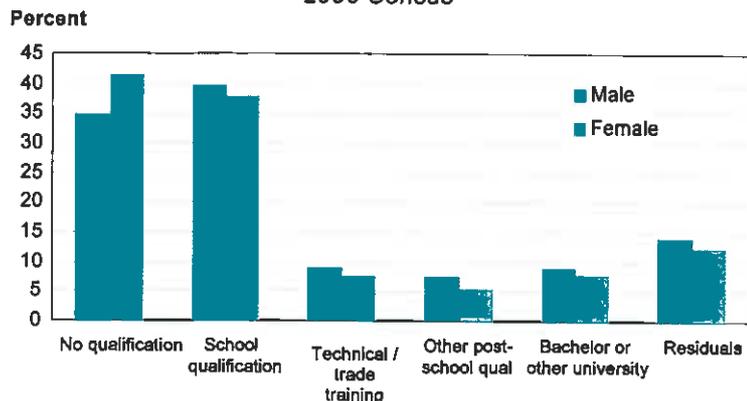
Males are more likely to have a formal qualification than females – 34.7 percent of males aged 15 years and over reported having no qualification, compared with 41.4 percent of females. Accordingly, males were marginally more likely than females to hold all levels of formal qualifications – with the biggest difference evident in school qualifications, with 39.7 percent of males having a school qualification, compared with 37.7 percent of females.

⁷ Tokelau: A Historical Ethnography, Huntsman, J. and Hooper, A. (1996)

⁸ Source: Tokelau Information Bulletin - New Zealand Ministry of Foreign Affairs and Trade <http://www.mfat.govt.nz/Foreign-Relations/Pacific/Tokelau/0-tokelaubooklet.php>

Figure 6.2

Highest qualification gained by sex for the Tokelau usually resident population
2006 Census



Non-response rates to the qualifications questions were relatively high compared with other census variables (13.2 percent). This shows there was difficulty for some respondents, possibly being unsure of others' qualifications when answering on behalf of others in the household.

Qualifications by usual residence atoll

A regional difference can be seen in the level of qualifications gained by people in Tokelau. Those in Atafu were less likely to have a formal qualification than those on other atolls, with 51.6 percent of the population formally qualified (compared with 63.3 percent in Fakaofu and 73.3 percent in Nukunonu).

Nukunonu residents were more likely to have undertaken some form of post-school study (such as at a university or technical / trade training institution) with 35.1 percent. This compares with 20.6 percent in Fakaofu and 16.5 percent in Atafu.

Having said that, Fakaofu residents had the highest proportion of university-gained qualifications (10.1 percent, slightly higher than Nukunonu (9.1 percent) and Atafu (6.6 percent)).



School children in Fakaofu

Qualifications by employment

The level of educational qualifications gained is often related to the type of occupation an individual works in. Table 6.1 displays occupation by the highest qualification gained (for employed, usual residents who were present in Tokelau on census night, aged 15 years and over).

As expected, those in the less technical / skilled jobs were less likely to have formal qualifications than those in more highly-skilled employment – 69.7 percent of those with no qualifications worked in the “Labourers, agriculture and fisheries workers” occupation group.

In contrast, 67.0 percent of those with a post-school qualification worked in the “Legislators, administrators and managers” and “Professionals” occupation groups.

Figure 6.3 shows the proportions of people who were in paid employment in the week prior to the census with each level of qualification. The most noticeable feature of the graph is the difference in proportion for those with no qualifications.

Over half of those who did not work in paid employment (54.9 percent) had no formal qualification. In contrast, the proportion of those with no qualification who had worked in paid employment was only around a quarter (24.5 percent). Related to this, those who had worked in paid employment in the week prior to the census were more likely to hold each of the qualifications listed, than those not in paid work.

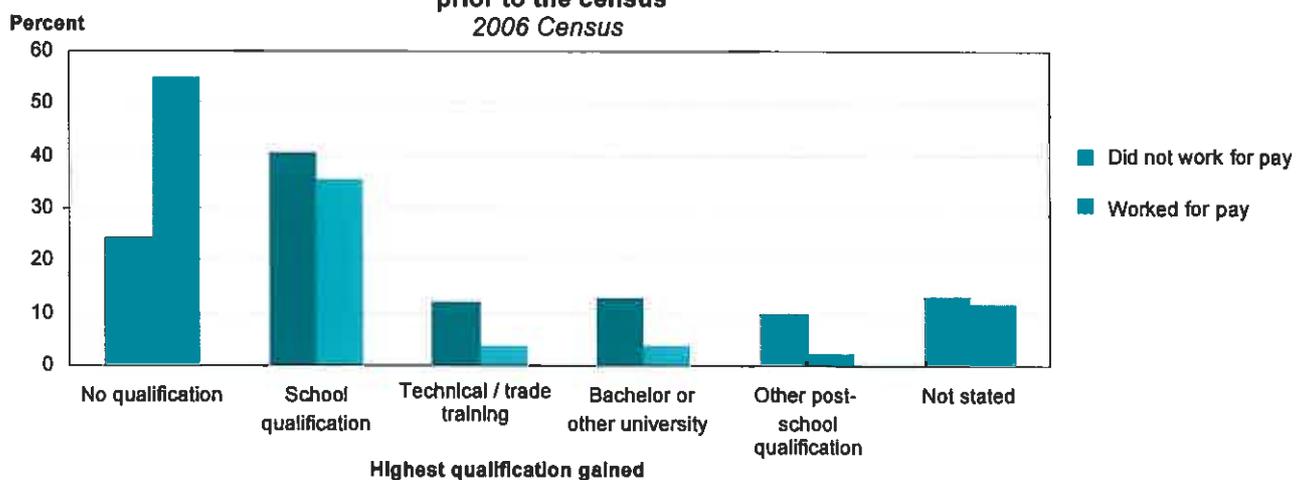
Table 6.1

Occupation (1-digit level) by highest qualification gained for the Tokelau employed usually resident population aged 15 years and over
2006 Census

Occupation	Highest qualification gained						Total
	No qualification	School qual	Technical training certificate	Bachelor or other university	Other post-school qual	Residuals	
Legislators, administrators and managers	2	3	3	8	3	2	21
Professionals	7	33	20	24	13	13	110
Technicians and trades workers	10	15	5	3	6	6	45
Clerical and administrative workers	4	18	1	2	4	4	33
Labourers, agriculture and fisheries workers	53	57	8	2	4	23	147
Residuals	1	2	1	1	1	0	6
Total	77	128	38	40	31	48	362

Figure 6.3

Highest qualification gained by worked in paid employment in the week prior to the census
2006 Census



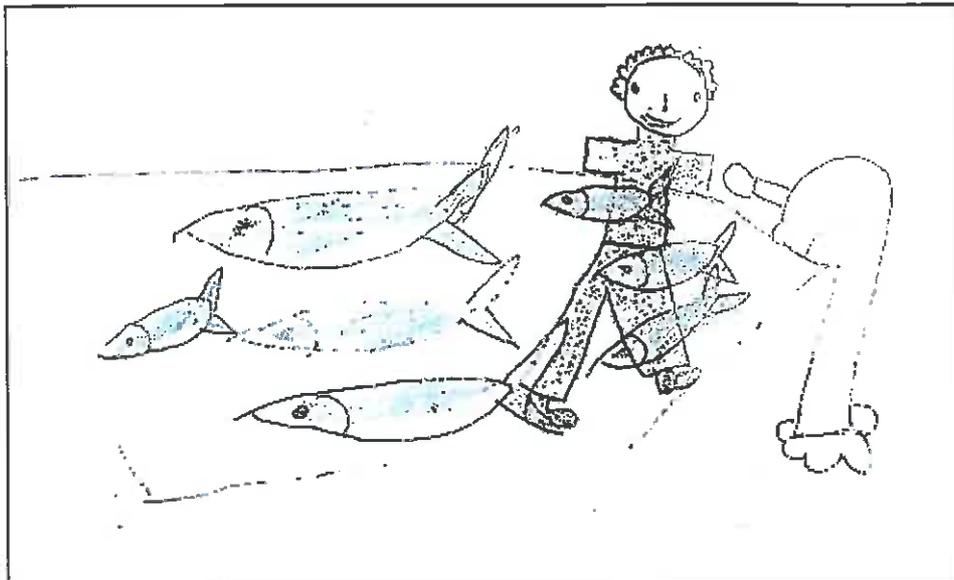
Qualifications gained at school

More than half of Tokelau usual residents have gained a school qualification (58.4 percent). However, as previously discussed, this figure is largely affected by the age distribution, with younger residents having higher school qualification rates. Of those who responded that they have a school qualification, 223 people (58.4 percent) had gained "School Certificate" or higher. Only around eleven percent (10.9 percent) of the population had reached form 2 and gained a "Leaving Certificate", as their highest school qualification.

The level of school qualification reached varies by gender. Only 56.4 percent of females have a school qualification, compared with 60.7 percent of males.

Note that 6.8 percent of the population are still at school, so are excluded from the above proportions. In addition to this, many young people are absent from Tokelau in order to further their education. In fact, this is the second-most common reason for absence from Tokelau on census night.

CHAPTER SEVEN
PAID AND UNPAID WORK



Introduction

The census can be a good source of information on the work force of a country. For the Tokelau census, an extensive revision of the labour market series of questions was carried out – to collect detailed information on both paid and unpaid work.

There are a number of variables used when analysing the working age population. Those used here combine concepts from international standards as well as a specifically tailored model to help explain the work situation in Tokelau. The western concept of unemployment, for example, is difficult to apply in the Tokelau situation – therefore alternative measures were developed.

People aged 15 years and over are considered to be in Tokelau's working age population. These people were asked a series of questions about the types of work they carried out (with or without pay) in the week prior to the census.

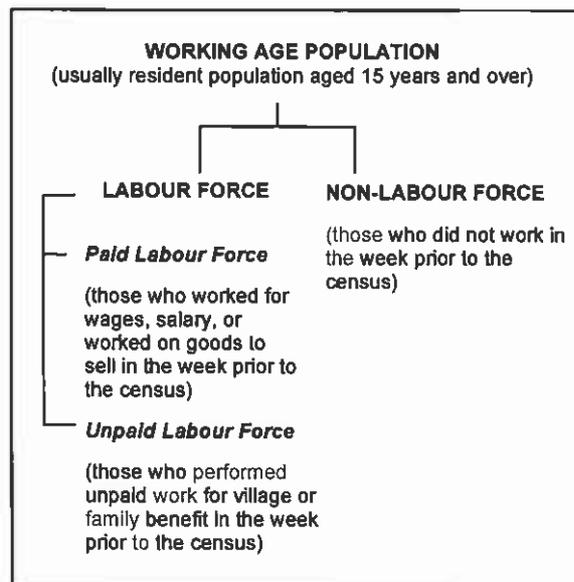
Information gained from these questions has been combined to provide a picture of the "labour force" of Tokelau.

Figure 7.1 displays a labour force model developed to explain the labour force status of people in Tokelau. The model divides the working-age population into two major groups: those who are working; and those who are not.

While some people may be doing certain unpaid activities as detailed in the *Unpaid activities* section of this chapter, they may not be in the labour force. For a person to qualify to be included in the labour force, the unpaid work must be producing goods or catching fish for selling for the household's direct benefit. Activities such as 'helping with village weaving' or 'housework' do not fall into this category.

Figure 7.1

Labour force status model for Tokelau



Labour force status

Table 7.1 shows the labour force status of people in Tokelau – with a break-down of each atoll, based on the model in Figure 7.1. The figures show that over half of the working-age population of Tokelau are in the paid labour force (362 people or 54.4 percent). A further 191 people (or 28.7 percent) are in the unpaid labour force, and the smallest group is the non-labour force with 112 people (or 16.8 percent of the population).

Nukunonu has a much higher proportion of people in the paid labour force on census day. This is due to a relatively high number of contract village workers on this atoll on census day.

Nukunonu also has the lowest proportion of people in the non-labour force group – 11.4 percent, compared with 16.1 percent for Atafu and 22.1 percent for Fakaofu. This non-labour force group is made up of those who did not work in the week prior to the census (with or without pay).

Labour force status proportions vary with age. For example, those in the older age groups are more likely to be non-labour force or in the unpaid labour force. Those aged between 20 and 54 are more likely to be in the paid labour force. Both of these results are as expected. It is interesting to note that those in the youngest age range are almost equally likely to be in each of the three labour force status groups. That is, around one-third of those aged 15 to 19 years are in each group.

Figure 7.2 shows the proportions of working-age people who worked for pay in the week prior to the census. It clearly shows that the older age groups and the very young are less likely to work for pay, and therefore also more likely to be non-labour force.

Table 7.1

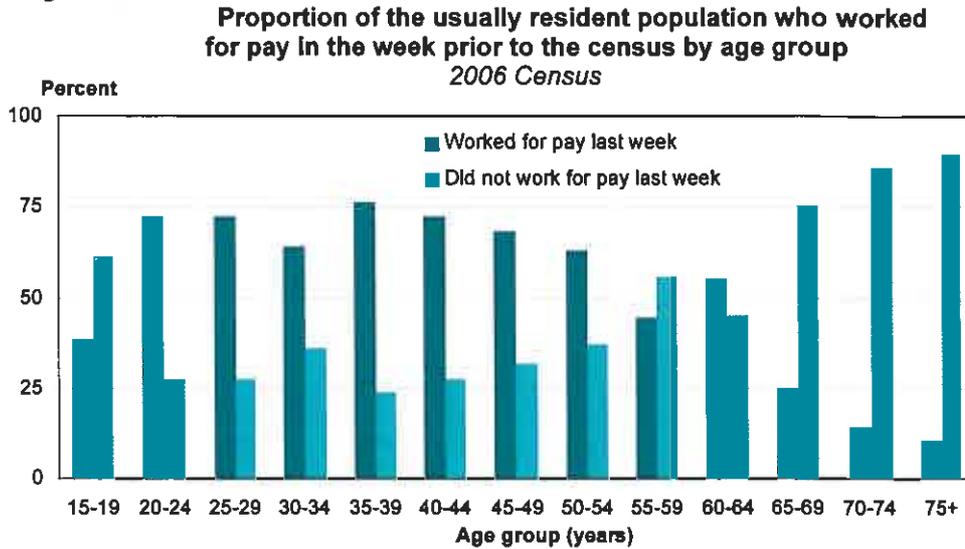
Labour force status for the usually resident population of Tokelau by atoll of usual residence
2006 Census

Labour force status	Atoll of usual residence			
	Atafu	Fakaofu	Nukunonu	Total
Paid labour force	127	104	131	362
Unpaid labour force	87	72	32	191
Non-labour force	41	50	21	112
Total	255	226	184	665

Men and women contribute in different ways in terms of providing for the household. Therefore, labour force status varies significantly by sex. Males are much more likely than females to be in paid work. In contrast, females are more likely to be non-labour force and in the unpaid labour force.

Around five percent of the adult population are seeking paid work. Half of these are already in the paid labour force, and a further 38.2 percent are in the unpaid labour force.

Figure 7.2



Occupation

The following section looks at occupations of those in Tokelau's paid labour force, as enumerated on census day, including those working for the Tokelau Public Service (TPS), in Apia, Samoa. An occupational classification was developed specifically for the Tokelau situation to include the types of occupations carried out in Tokelau, but was based on an international model. A copy of the detailed occupation classification can be found in Chapter 9.

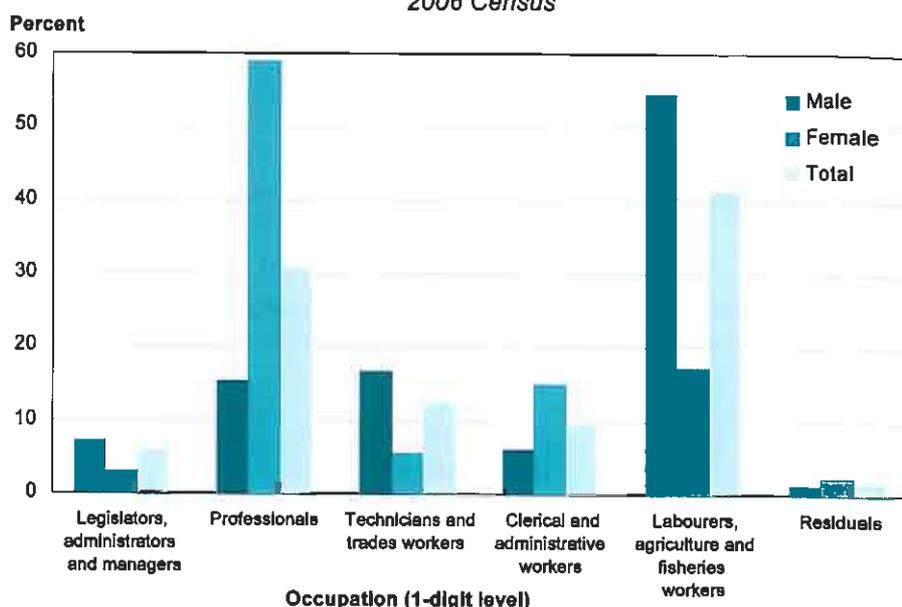
Figure 7.3 displays the proportions of people in each occupational group, with a breakdown by sex. There are two occupational groups with particularly notable gender differences.

Despite the difference in numbers of men and women in paid employment, women are much more likely to be "Professionals". Seventy-five women (57.7 percent) are in this group compared with 35 men (15.1 percent). In contrast, men are much more likely than women to be "Labourers, agriculture and fisheries workers" (53.9 percent of men, compared with 16.9 percent of women).

The most common occupation for women was "Teacher / teaching professional", while the most common occupation for men was "General village worker". The graph also shows that women are more likely than men to work in the clerical and administrative-type roles, while men are more likely to work in technical and trade occupations.

Figure 7.3

**Occupation for the employed usually resident population of Tokelau by sex
2006 Census**



Occupation also varies by age group. For example, all of those who worked in the “Legislators, administrators and managers” group are over the age of 35. Conversely, those in the “Labourers, agriculture and fisheries” occupational group were likely to be in the younger age groups – 40.1 percent of workers in this group were aged between 15 and 29 years.

Proportions of people employed in each occupational group were similar across the three atolls of Tokelau. The majority of people in paid employment being in the “Labourers, agriculture and fisheries workers” group in all three atolls, with the most common occupation being “General village worker”. In Samoa, as would be expected, the majority of TPS workers fell into the “Professionals” category.

Status in employment

The vast majority of people in paid employment in Tokelau are either a salaried member of the TPS, or a casual / contract worker for the village council (94.6 percent) (see Table 7.2). Consistent with the occupation groups mentioned above, women are more likely than men to be salaried members of the TPS, whereas men are more likely to be casual / contract workers for the village council.

There were very few people who described themselves as self-employed in their main job, although males were more likely than females to give this status in employment. The proportions of people in each status in employment were very similar across the three atolls – with around 57 percent being village council workers and 37 percent being TPS employees on each atoll.

Table 7.2

**Status in employment for the employed usually resident population of Tokelau
by atoll of usual residence
2006 Census**

Status in employment	Atoll of usual residence							
	Alafu		Fakaofu		Nukunonu		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Salaried member of TPS	49	38.9	36	36.4	47	36.2	132	37.2
Village worker	72	57.1	57	57.6	74	56.9	203	57.2
Self-employed	3	2.4	0	0.0	4	3.1	7	2.0
Other employee	2	1.6	6	6.1	5	3.8	13	3.7
Not stated	1	0.8	5	7.1	1	0.8	7	1.9
Total	127		70		131		362	

Unpaid activities

Unpaid work contributes a great deal to the daily running of Tokelauan society. The vast majority of usual residents (87.2 percent) aged 15 years and over were involved in some form of unpaid work, in the week before the census. Many of those who did not carry out unpaid work were in the older age groups (43.4 percent of those aged 60 years or older carried out some form of unpaid work).

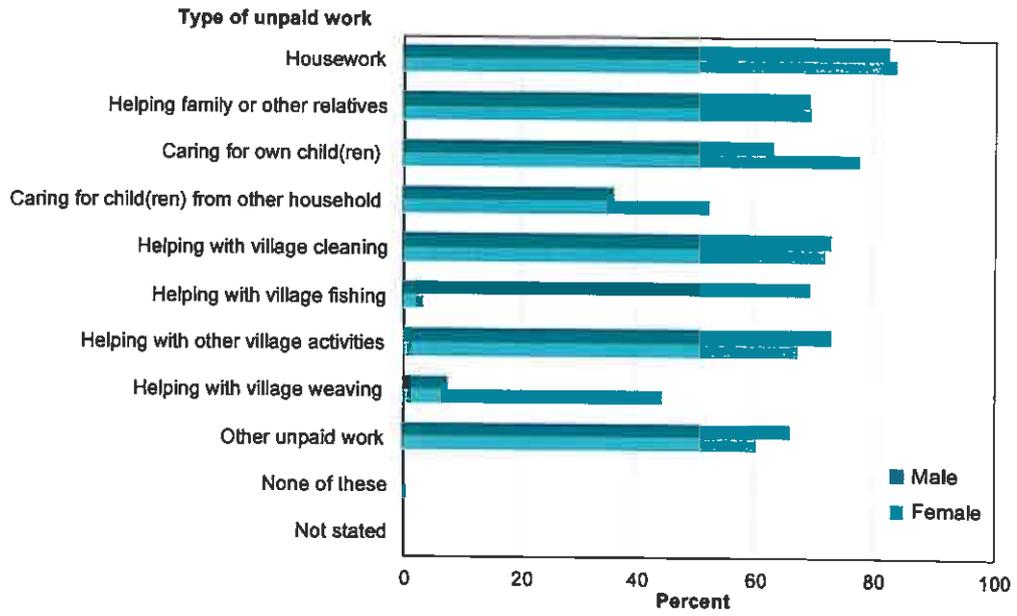
Of those who carried out some form of unpaid work, the most common types of unpaid work done in the week prior to the census were: housework (97.7 percent), village cleaning (84.6 percent) and caring for children in their own household (82.5 percent).

Figure 7.4 shows the proportions of Tokelauan adults by sex, who performed each type of unpaid work in the week prior to the census⁹. There are some interesting gender role differences in the types of unpaid work done. There are traditional roles evident in the census data – for example, males are much more likely than females to help with village fishing (69.2 percent compared with 3.6 percent). Whereas, females are more likely to contribute to village weaving (44.4 percent compared with 7.6 percent for males). Females were also more likely to care for their own and others' children.

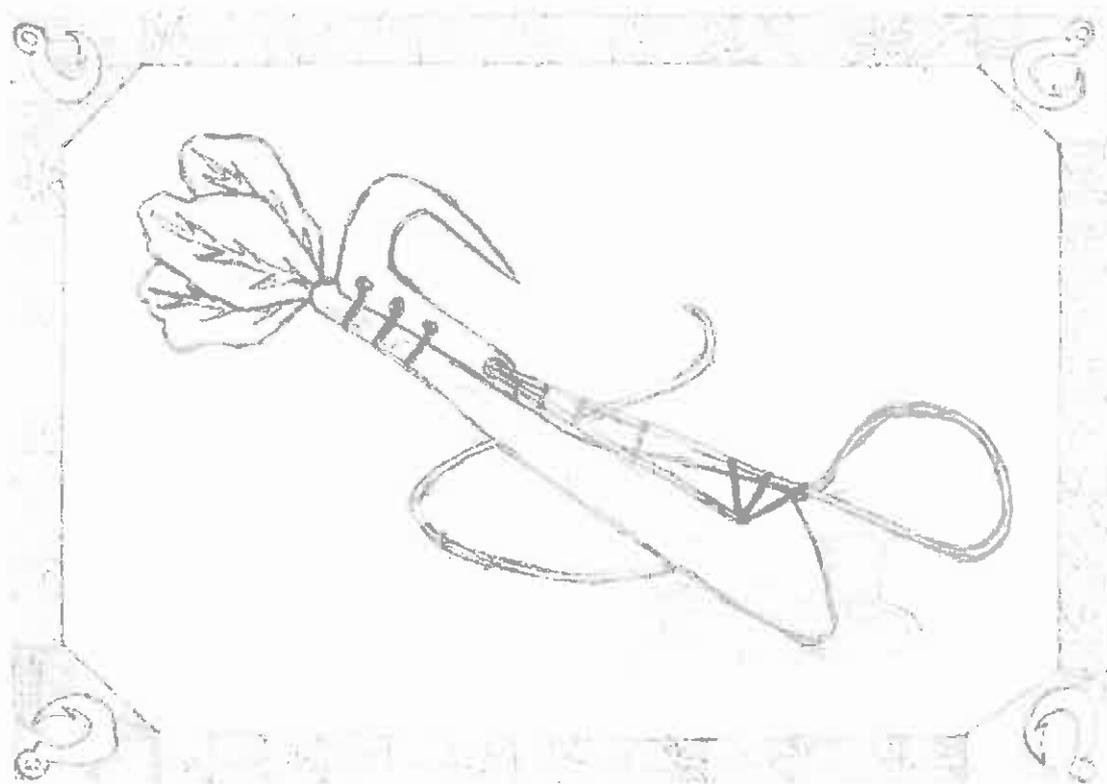
⁹ Note that these are the proportions of people in the age group 15 years and over, whereas the proportions given in the previous paragraph are those aged 15 years and over who did some form of unpaid work.

Figure 7.4

Types of unpaid work by sex
2006 Census



CHAPTER EIGHT
DWELLINGS AND HOUSEHOLDS



Introduction

The 2006 Census of Tokelau collected information on dwelling types, dwelling facilities, ownership of household items, and household income. Information in this chapter can be used to inform policies on housing standards and regulations, effective use of land, and so on. Data on the items owned by households, sources of lighting and water usage can be used to plan future energy requirements for Tokelau. Dwelling and household information can contribute to an understanding of the standard of living in Tokelau.

Throughout the 2006 Census survey development process, considerable effort was put into developing concepts that truly represented the culture and conditions in Tokelau. Many western concepts do not adequately fit the Tokelauan situation – especially with regard to dwellings and households. For example, respondents were asked for their *main means* of washing, cooking and so on. This can be difficult to determine, as often several means are regularly used in Tokelauan households.

The 2006 Census of Tokelau collected information only for occupied dwellings, that is, those that usually have people living (sleeping) in them. A dwelling can be described as either private (where an individual or family lives – and not available for public use) or non-private (where occupants generally stay temporarily, for example, a hospital or guest-house). For the following sections, only information collected from private dwellings is included.



Cookhouse In Nukunonu

Dwelling structure

A conceptual issue arose with the number of rooms question. The western concept of a room means that one open-plan room is often counted as multiple rooms. However, rooms in the Tokelauan context are more difficult to define.

For example, open-plan homes in Tokelau often do not have the same types of living area divisions that are common in the west. Consideration of the local situation resulted in a Tokelau-specific definition of a room. As such, 6 out of 10 traditional fale (or houses) had only one room, while almost one-third of European-style houses had three or more rooms (29.8 percent).



Meeting house in Fakaofu

There are three main types of dwelling in Tokelau – the traditional Tokelauan fale, the European-style house, and a mixed-style incorporating elements of both. Many properties have both a house and a fale. However, in the census, respondents were asked to refer to the main structure (the building in which they sleep), when answering the dwelling questions.

In 2006, the majority of households in Tokelau lived in a European-style house (90.0 percent). This is a very similar proportion to 2001 (87.1 percent). It is to be expected that these proportions are similar given that few dwellings have been constructed since 2001. In 2006, 4.3 percent of households slept in traditional Tokelauan fale. This is an increase since 2001, at which time 1.2 percent of households slept in a traditional fale. However the change could be due to the varied definitions of "main building" used across censuses.

A housing scheme began in the early 1980s, funded by the New Zealand Government. Households in Tokelau apply to their local Taupulega (local government) for funding to improve their own housing. The scheme still runs today, and two or three houses a year are approved for funding.

Approximately half (50.4 percent) of all occupied dwellings in Tokelau were built in the ten years from 1980 to 1989, with 114 private dwellings built in this decade. A further 55 dwellings (24.3 percent) were constructed in the 1990s.

The vast majority of dwellings in Tokelau have concrete flooring (87.8 percent), and concrete outer walls (64.6 percent). A further 34.1 percent of households have timber outer walls. All respondents answering the dwelling questions stated that the primary roofing material was corrugated iron.

Facilities available to people in the dwelling

In 2006, 83.4 percent of dwellings sourced drinking water from a private, household water tank. There is, however, an interesting regional difference. In Atafu and Fakaofu, the vast majority of households used a private, household water tank (90.2 percent and 92.6 percent, respectively), whereas in Nukunonu this proportion was just 63.6 percent. Over one-third (36.4 percent) of households in Nukunonu sourced drinking water from a water tank shared with other households.

The village of Nukunonu also differs slightly in the use of shower facilities, with 10 households (15.1 percent) using facilities shared with other households. This compares with only four households sharing shower facilities in Atafu and none in Fakaofu. On all three atolls the majority of dwellings (135 or 59.2 percent) use a private, household shower facility that is located outside the dwelling.

In terms of electricity and fuel use, all households in Tokelau use a community generator as their main source of lighting. An increasing number of households are using a gas stove (34.6 percent in 2006, compared with 19.1 percent in 2001). However, kerosene stoves remain the most common means of cooking with 129 households (56.6 percent) primarily using this method.

Households in Nukunonu were more likely to dispose of their household waste themselves by burying, burning or disposing of it elsewhere (37.9 percent). In comparison, households in Atafu and Fakaofu were much more likely to have waste collected and disposed of by village workers (90.2 percent and 88.9 percent respectively, compared with 54.5 percent for Nukunonu).

Items owned by household

The following section covers assets / items available to the household, as well as income received. In order to better reflect the situation in Tokelau, items counted in the census can be owned in shared ownership with other households.

Time-series comparisons with 2001 for items owned by households prove difficult for a number of reasons. In the 2001 Census, Tokelauan residents living in Samoa were required to answer the dwelling questions (but were not in 2006). Also, non-response and “undefined” responses to many of the dwelling questions were much more prevalent in the 2001 Census than in 2006. In addition, in 2001 the questionnaire only asked for items owned (not necessarily partial or shared ownership – as it did in 2006).

One indicator of standard of living, is the number of items available to the household. 2006 Census data shows that ownership rates of various items have improved markedly in the past 20 years. For example, in 1986, 6.3 percent of households in Tokelau had access to a washing machine. By 2006, this proportion had increased to 63.4 percent of households.

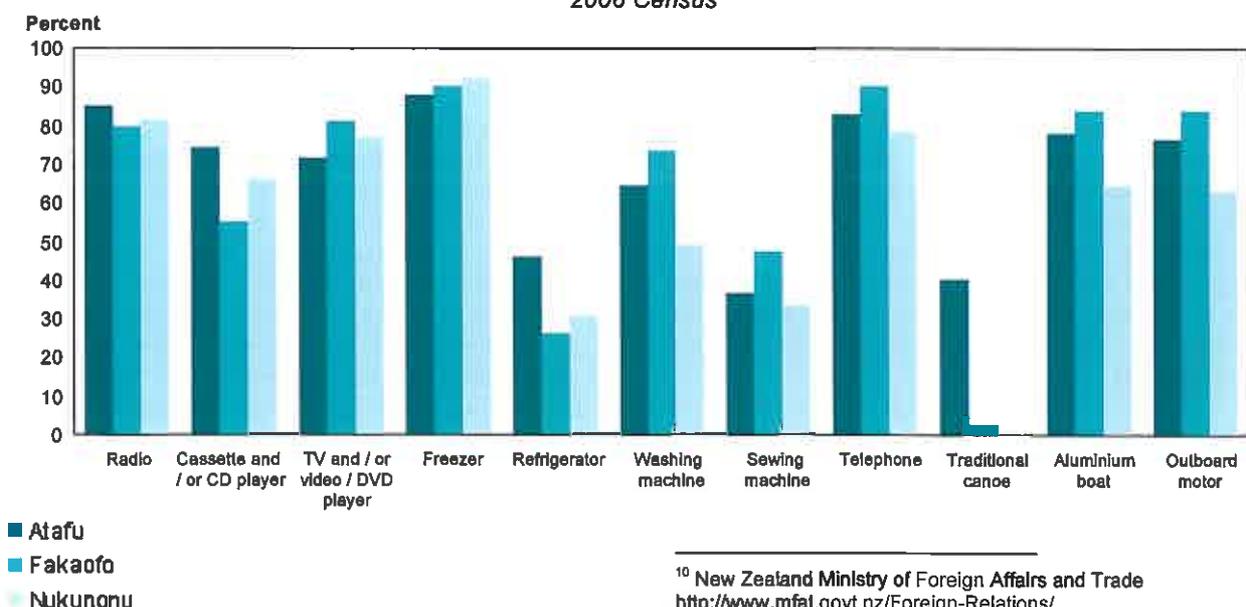
Figure 8.1 shows the proportions of households that own or share ownership of various items, comparing each of the three atolls. The three atolls all show similar proportions of ownership of radios (around 80 percent), televisions (including video and DVD players, at around 75 percent) and freezers (around 90 percent).

Improved transportation can also be measured with census data. In 1991, 44.3 percent of households owned or shared ownership of an aluminium dinghy – by 2006 this proportion had reached 76.2 percent. Furthermore, in 1991, outboard motors were owned (or jointly owned) by half of all households (50.2 percent). In 2006, three-quarters of all households (75.3 percent) in Tokelau had access to an outboard motor.

Access to telephones is similar across the three atolls, with Fakaofu residents having greater access to a telephone (90.0 percent compared with 78.5 percent in Nukunonu and 82.9 percent in Atafu). This access is particularly high given the fact that government-regulated the telephone (voice and fax) service (TeleTok) was only established in 1997.¹⁰

Figure 8.1

Items owned by households in Tokelau (total responses) by atoll
2006 Census



¹⁰ New Zealand Ministry of Foreign Affairs and Trade
<http://www.mfat.govt.nz/Foreign-Relations/Pacific/Tokelau/0-tokelaubookletsummary.php>

Households in Atafu are more likely than households on the other two atolls to own a refrigerator (46.3 percent compared with 30.8 percent in Nukunonu and 26.3 percent in Fakaofu). Atafu households are also much more likely to have retained a traditional canoe with 33 households (40.2 percent) owning or

sharing ownership of a traditional canoe, compared with only 2.5 percent of households in Fakaofu and 1.5 percent in Nukunonu. Although they were asked about in the census, no households in Tokelau owned a wooden boat.



Freshly caught fish on Fakaofu



The local store in Nukunonu

Household income

In 2006, the household income sources question did not include "sale of copra" as a response option. Due to cyclone damage to coconut palms in the late 1980s, this was no longer a viable income source. In the 1986 Census, 52 percent of households received this source of income. By the following census in 1991, this proportion was only 0.4 percent of households. The decision to remove this response option was made in consultation with local representatives.

Respondents were asked to count all sources of income received by any member of the household who usually lives there (note that household members did not have to be present in the dwelling on census day, or be aged 15 years or over (as is common for income questions)).

The majority of households in Tokelau (73.3 percent) receive "Casual / contract village worker wages" as a primary source of income with Nukunonu having the highest proportion of this income source (83.3 percent) (see Figure 8.2). This is to be expected, as the most common status in employment for each of the three atolls is "Contract worker for village council", at 57.2 percent.

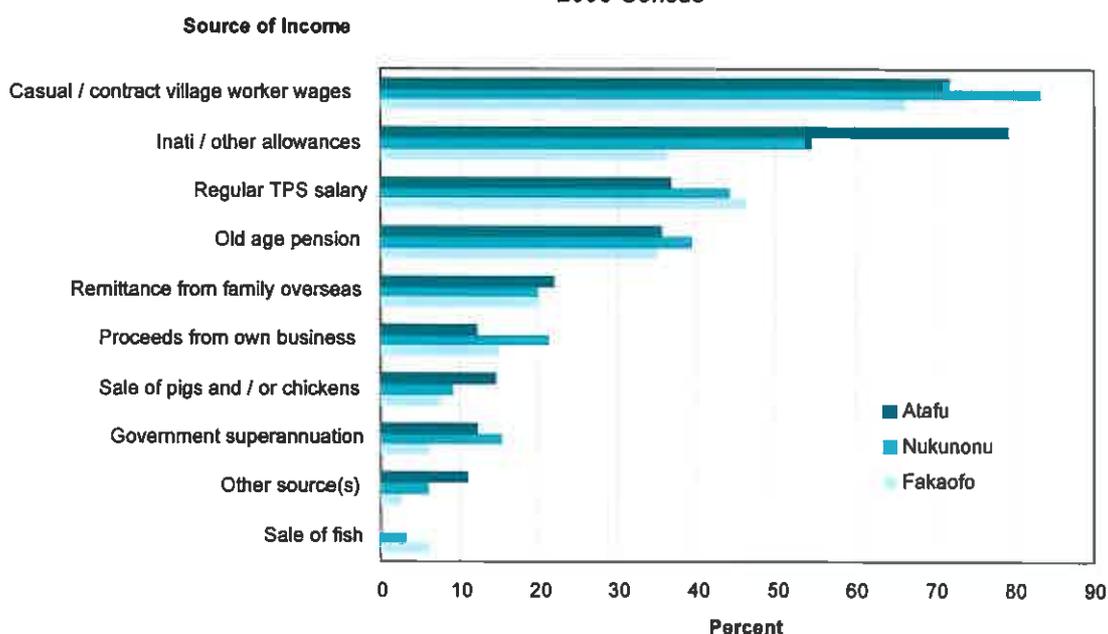
The next most common source of income is "Inati / other allowances", with 130 households (57.0 percent) receiving some income from this source in the year ending on census day. The inati system ensures that every household in Tokelau receives a share of the community catch of fish (or whatever resource is being distributed). Inati is generally distributed on an atoll/village basis, therefore, if one village distributes money one year, the others may not necessarily do the same.

Atafu shows the highest count and proportion of households receiving inati or other allowances in the year ending on census day (65 households or 79.3 percent). Nukunonu has the highest number and proportion of households receiving "Proceeds from own business" (14 or 21.2 percent). Related to this, people in Nukunonu were more likely to have a status in employment of "self-employed" than in the other two atolls.

While many countries collect income data in their censuses, data quality is often an issue and this proved to be the case in the 2006 Census of Tokelau. Asking the head of the household to recall and combine annual income for very large households was difficult for some respondents, in particular where there were a large number of absentees. Income ranges were provided in the question and respondents were encouraged to estimate if required.

Figure 8.2

Sources of income received by households in Tokelau (total responses) by atoll
2006 Census



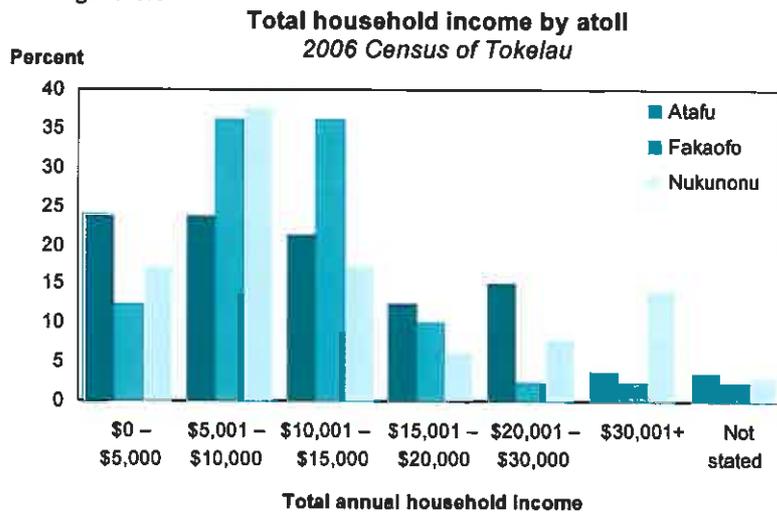
Income statistics are internationally recognised as important components in the measurement of standard of living. Household income was collected for the first time in the 2006 Census. Cultural considerations meant that household, rather than personal income was a more appropriate measure to better reflect the communal lifestyle of Tokelau's people.

When answering the total household income question Tokelau respondents were asked to combine income from all of the sources received in the 12 months ending on census day. As with income sources, respondents were asked to count all income received by any member of the household who usually lives there, including absentees.

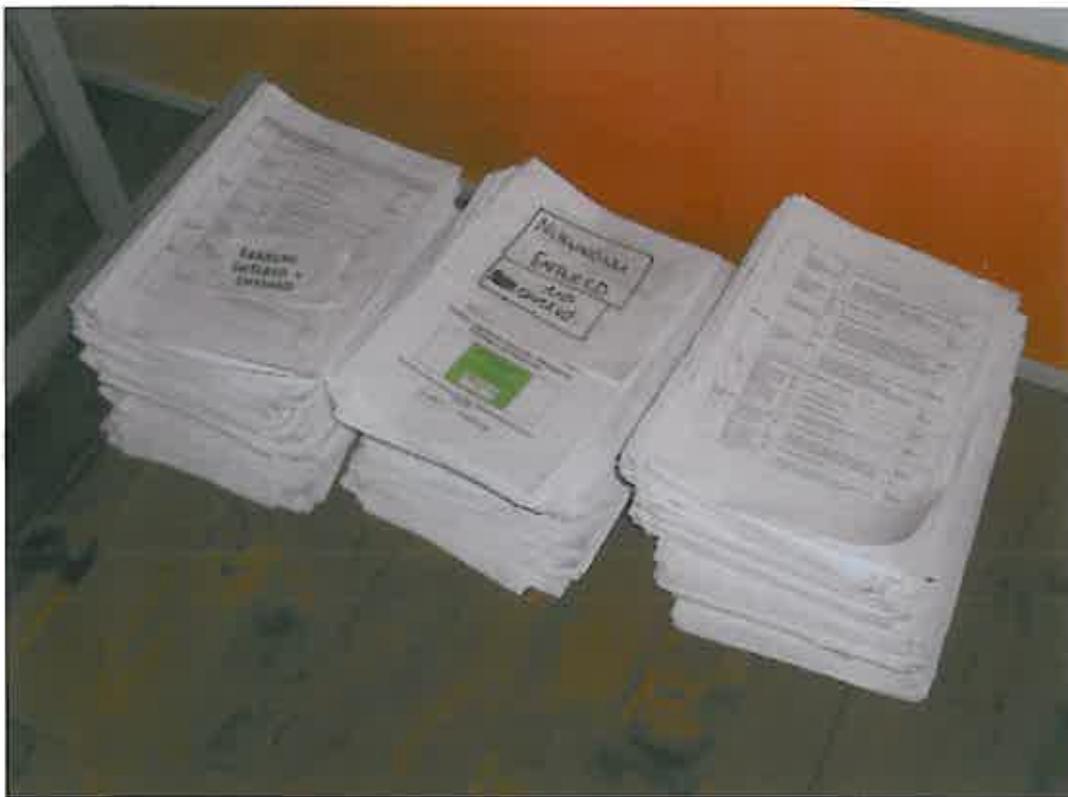
Three-quarters of all households in Tokelau (75.5 percent) earned a total of \$15,000 or less in the year ending on census day (19 October 2006). Households in Nukunonu, earned slightly less, on average than those on other atolls – with 54.7 percent of households earning less than \$10,000 compared with 47.5 percent of households in Atafu and 48.8 percent in Fakaofu. However, Nukunonu had the highest proportion of households earning more than \$30,000 at 14.1 percent – much higher than the national average of 6.3 percent.

This household income information is potentially misleading when viewed in isolation. For example, if we examine the number of usual residents in each household contributing to the total income we see that generally – the more usual residents per household, the higher the total household income. Nukunonu had the highest average number of usual residents at 6.4 per household, and as mentioned above, the highest proportion of households earning over \$30,000 – the two details are likely to be related.

Figure 8.3



SECTION NINE
THE CENSUS PROCESS



Introduction

This chapter summarises the methodologies and processes used in the development, operational and output phases of the 2006 Census of Tokelau. Operational activities, experiences and outcomes are noted where appropriate.

Planning

The Tokelau census manager and the Statistics New Zealand project manager attended a census planning conference in Fiji in March 2006. The conference was organised by the Secretariat of the Pacific Community (SPC) in conjunction with United Nations Population Fund (UNFPA) and was specifically designed to help Pacific Island nations plan their censuses.

For the 2006 Census of Tokelau there was a high level plan and three stage plans were developed. The stage plans covered the development, operational and output phases of the census. The approach for the census planning was to undertake good quality preparation, and to fully document the census processes. The census questionnaire was adapted for local needs. Census outputs were planned to be as comprehensive as possible and people from Tokelau were involved in the process throughout the census. To facilitate the inclusion of the Tokelauan perspective throughout the process the Tokelau census manager translated all high level planning documents and used them to consult with the Taupulega.

The questionnaire

The 2006 Census questionnaire was based on a standard form developed by SPC, designed specifically for Pacific nations, with some modifications where appropriate for Tokelau.

A thorough review of the employment and work sections of the questionnaire was undertaken to ensure the unique work force in Tokelau was represented, while at the same time ensuring international comparability. Questions on languages spoken, cigarette smoking and household income were added.

The English version of the questionnaire was reviewed using cognitive testing with four Wellington-based Tokelauan families. The near-final English version of the questionnaire was then tested in Tokelau in July 2006.

Consultation about the content of the census forms was also undertaken in Tokelau and Samoa, with Tokelau government representatives and decision-makers. This consultation was an opportunity to determine what information was required by various data users and how it could best be delivered. After the July visit to Tokelau, the questionnaire was finalised and translation into Tokelauan was carried out.

The census questionnaire was a paper-based, interviewer-administered questionnaire available in two languages (English and Tokelauan).



Census consultation in Fakaofu

Data collection

The Tokelau census was a *modified de jure census*. A *de jure census* counts people where they usually reside. The census was undertaken in this way to ensure Tokelauan employees of the Tokelau Public Service (TPS) based in Samoa were also included in the census count. The concept of the *modified de jure census* is used by Statistics Canada to allow for the enumeration of government employees who are stationed overseas and included as part of the census population count.

To ensure that local people were aware of census and the importance of participating in census the Tokelau census manager worked closely with the village councils, the 2001 Tokelau census manager, and Tokelau-based government and non-government organisations.

Tokelau census day was 19 October 2006. On that day every person in Tokelau was interviewed. Tokelauan employees of the TPS based in Apia, Samoa (and their immediate families) were also interviewed.

The census forms and data collection methodologies used in the Tokelau and Apia, Samoa were different as they were altered to meet local requirements. The following paragraphs discuss the process used in each location.

In Tokelau, people from each atoll were recruited to work as supervisors and interviewers. In total, there were three supervisors and 26 interviewers in the field force. The field staff were trained over the course of five days in Fakaofu.

The recruitment of field staff for each atoll and the Tokelau-based training of the field staff was identified by the field collections staff as very successful. The Tokelau-based training and atoll-based field collection staff provided a method of gaining local engagement in the census process.

Respondents in Tokelau were interviewed at their homes by a person from their own atoll. The household questionnaire was completed

by the head of the household and the individual questionnaires were answered by

either the individual or the head of the household. Careful consideration was given to the use of the head of the household concept. It was decided to use this concept as it was appropriate in Tokelau. Each household nominated their own head of household, and while in most cases it was a man, sometimes it was a woman.

The Samoa field team was comprised of two people: a TPS employee and a member of the census management team from Statistics New Zealand. Interviewer training was completed within one day, and interviews were undertaken at the two TPS offices in Apia. The TPS employee was interviewed about each member of his / her immediate family. A summary version of the full census form was used, and only basic demographic questions were asked about each member of the household. No dwelling questions were asked in Samoa.

On each of the Tokelauan atolls and in Samoa a member of the census management team oversaw field operations and undertook quality monitoring on census day. After census day, field staff debriefings were conducted in Tokelau and Samoa.

Supervisors helped the census management team to conduct quality checks of every census form. This quality check helped to ensure that essential information had been gathered, and codes were assigned to open-ended questions. It also provided information used to produce the provisional count.



Nukunonu Interviewers on training week in Fakaofu

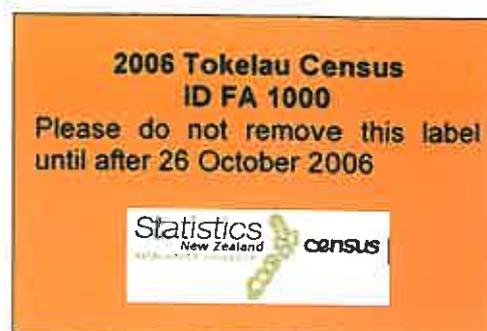
Identification numbers and household lists

Conventional censuses often rely upon commercially-produced maps to subdivide interviewer areas and help to assign identification numbers. However, commercially-produced village maps of Tokelau are not readily available.

Given the lack of these conventional methods of locating respondents, it was decided to subdivide interviewer areas in Tokelau using a list of households. Household lists were created for each atoll by the census manager and confirmed by the relevant supervisor.

Each interviewer was provided with stickers that contained the identification number for each household. A three-part sticker system was used. The first sticker was placed on the census form, the second sticker was placed on the door of the respondent's house and the third sticker was used for households that would require a continuation form (ie households with more than six usual residents).

This sticker method allowed supervisors and interviewers to easily distinguish between houses that had and had not yet been interviewed. A different coloured sticker was used for each location to allow easy identification of the island that the census form came from. The census management team noted that the sticker system was very successful.



Sample ID sticker

Classifications

The majority of classifications used for the census were based on the tick-box options from each question on the questionnaire. Several questions allowed for open-ended responses to questions and code files were built for these text-based questions. Residual codes were created for each variable to allow non-response to be accurately recorded.

A coding dictionary was developed for the questions that allowed open-ended responses including: usual residence, address five years ago, place of birth, religion, citizenship, and occupation questions.

Wherever possible the classifications were based upon New Zealand standard classifications. Often these classifications have multiple levels of detail where the most detailed version covers all of the countries or religions in the world and the least detailed version covers the main groups or areas.

Classifications were tailored for the Tokelau situation. Knowledge and experience of Tokelau suggested that there were some categories which would likely be responses to the questions, while others were unlikely and were included only to ensure exhaustive classifications.

Usual residence and address five years ago

A generic classification was used for usual residence and address five years ago. This classification was based on the New Zealand classification. *NZSCC4N99 – Country – New Zealand Standard Classification 1999.*

The least detailed version of the classification was as follows:

- 10 At this address
- 20 Elsewhere in Tokelau
- 31 American Samoa
- 32 Australia
- 33 Cook Islands
- 34 Fiji
- 35 New Zealand
- 36 Samoa
- 37 Tonga
- 38 Tuvalu
- 39 Other Oceania and Antarctica
- 40 North-West Europe (United Kingdom)
- 41 Southern and Eastern Europe
- 42 North Africa and the Middle East
- 43 South-East Asia
- 44 North-East Asia
- 45 Southern and Central Asia
- 46 The Americas
- 47 Sub-Saharan Africa
- 95 Refused
- 99 Not Stated

To make the coding process easier and more accurate a detailed list for the classification was provided but only the less detailed codes were used.

It is important to note that the information collected was sometimes aggregated at the output stage to ensure that output categories had sufficient numbers to support their release.

Place of birth and citizenship

The classifications used for place of birth and citizenship varied only slightly from the one used for usual residence and address five years ago. The category descriptors used for codes 10 and 20 were changed to reflect subtle changes in the questionnaire. The remaining codes and category descriptors were unchanged.

Religion

This classification was based upon the following New Zealand classification: *RELIGAFF – Religious Affiliation – New Zealand Standard Classification 1999*

- 1 Congregational Christian
- 2 Presbyterian
- 3 Roman Catholic
- 4 Other Christian
- 5 Buddhist & Hindu
- 6 Islam/Muslim & Judaism/Jewish
- 7 Spiritualism and New Age Religions
- 8 No Religion
- 9 Not Stated
- 0 Refused

Occupation

This classification was based on the following two standard classifications:

NZSCO99 – New Zealand Standard Classification of Occupations 1999 and *ANZSCO – Australian and New Zealand Standard Classification of Occupations*.

Data for the occupation categories was available at two levels of detail but only the high-level summary categories have been turned into output tables due to the small numbers of people in each of the detailed categories.

100 Legislators, Administrators and Managers

- 101 Director
- 102 General Manager
- 103 Assistant Director
- 104 School Principal and Deputy Principal
- 105 Human Resources Development Manager
- 106 Deputy Manager TALO
- 107 National Budget Coordinator
- 108 Office Manager
- 109 Health Programme Coordinator
- 110 Retail Manager
- 111 Youth and Sports Coordinator

200 Professionals

- 201 Communications Officer
- 202 Medical Officer
- 203 Finance Officer
- 204 Stores Officer
- 205 Education Officer

206 Health Educator
 207 Policy/Advisory Officer
 208 Advisory Officer TALO
 209 Doctor
 210 Nurse/Nursing Professional
 211 Teacher/Teaching Professional
 212 Dentist
 213 Dental Nurse
 214 Radio Announcer
 215 Librarian
 216 Police Officer
 217 Travel Agent
 218 Sportsperson

300 Technicians and Trade Workers

301 IT Technician
 302 Laboratory Technician
 303 X-ray Technician
 304 Electrician
 305 Mechanic
 306 Plumber
 307 Builder
 308 Cook

400 Clerical and Administrative Workers

401 Personal Assistant
 402 Clerk
 403 Secretary
 404 Typist
 405 Registry/Records Clerk
 406 Postal Worker
 407 Retail Worker

500 Labourers, Agriculture and Fisheries Workers

501 Foreman
 502 Leading Hand
 503 Village Worker (General)
 504 Village Worker (School Leaver)
 505 Machine Operator
 506 Driver
 507 Fisherman
 508 Gardener
 509 Cleaner

995 Refused

999 Not Stated

Mandatory variables

Prior to the 2006 Census of Tokelau, a list of mandatory variables was created. This approach was based on Statistics New Zealand's Quality Management Strategy (QMS) with the mandatory variables being roughly equivalent to the "foremost variables" identified in the QMS, and were required by the Tokelau Census Act, 1961.

Variables were considered essential if they were required for the calculation of the usually resident count or if they assisted in detecting duplicates. The following list identifies the variables that were considered essential information for each person counted by the census.

Dwelling form

None

Individual form

Q1 Name
 Q2 Sex
 Q3 Relationship
 Q4 Born
 Q5 Usually live
 Q8 Date moved to Tokelau
 Q9 Ethnic origin

Absentee form

All questions

Samoa form

All questions

When a mandatory variable was not completed, the answer was determined by one of the following methods:

- the interviewer returned to ask the respondent,
- the supervisor asked the respondent
- the supervisor determined the answer using personal knowledge of the respondent,
- the supervisor conferred with the General Manager of the Taupulega office.

Where a person's exact birthday was unknown a careful estimate was made of their age. For any variable not listed on the mandatory variable list non-response in the form of "not stated" was accepted.

Multiple responses to single response questions

Thorough training and quality checking resulted in very few multiple responses to single-response variables. In the cases where it did occur the supervisors or the census manager resolved the inconsistency.

Editing

The vast majority of editing was done on the dataset rather than on the raw data. Data evaluation identified cases that needed editing, the resolution was researched by the census manager, and any changes were recorded. This approach was taken to allow for a record to be kept of how many changes (consistency edits) have been undertaken, allowing the process to be defensible.

Imputation

In some cases a respondent's birth day or month was imputed. In these cases the date was randomly selected from one to thirty one and the birth month was randomly selected (from January to December). Any imputed dates were checked to ensure they were valid dates eg not 31 February.

Overall the census management team felt that the editing, imputation and mandatory variables methods used were successful.

They provided a good balance between quality and practicality for a small census.

Data processing and verification

Census data processing was done using CPro v 3.0 (Census and Survey Processing System). The program was downloaded at no cost from the US Census Bureau at <http://www.cspro.org>. The Secretariat of the Pacific Community (SPC) endorsed CPro as the standard processing system for all population statistics in the Pacific. For the census of Tokelau, CPro was used for key entry, editing, and verification of the census data.

The processing system key-entry screens were designed to closely resemble the census forms. The system allowed range edits and auto-tabbing to be added to aid the key-entry process.

Three Apia-based key entry operators and four members of the census management team were trained to use the key-entry system and subsequently spent four days doing the initial key entry of data. Three further days were spent verifying that the information entered into the system was accurately recorded.

The census data was then exported to Microsoft Excel for evaluation, and imported into the program SAS (Statistical Analysis System) for detailed data analysis.



Census data processing

Output consultation

In October 2006, output consultation was undertaken with representatives and decision-makers from the Tokelau Government. The approach used was similar to that used in the questionnaire content consultation and sought to determine what information was needed by the various data users and how it could best be delivered.

In this consultation round, it was proposed to have four key census outputs. This approach was agreed upon and the respective output products were produced and released. The following census data releases have been completed:

23 October 2006 – *Provisional population count*

20 December 2006 – *2006 Census Tabular Report*

15 February 2007 – *Atoll Profiles* (for Atafu, Fakaofu and Nukunonu)

28 February 2007 – *2006 Census of Tokelau Analytical Report*.

2006 Census of Tokelau – quality and confidentiality rule

To offer a degree of confidentiality protection and ensure that Tokelau census tables are of good quality, a confidentiality calculation was used to control the size of tables that were produced for the census outputs. The confidentiality rule, called the “mean cell size rule”, states that there must be on average more than two observations per cell before the information for a geographic area can be released.

For the Tokelau census there are three output geographies: national, atoll and village. The smallest geography is the village (as Fakaofu atoll has two villages).

The main purpose of these rules is to prevent tables from becoming sparse, ie with many cells containing zeros and ones. In the output tables, some categories within variables were aggregated to ensure tables complied with the confidentiality rule.