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# Tokelau Population Profile

*Based on 1996 Census*



A GUIDE FOR PLANNERS AND POLICY MAKERS

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**TOKELAU POPULATION PROFILE  
BASED ON 1996 CENSUS**

**A guide for planners and policy-makers**

Prepared by

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

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1998

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## FOREWORD

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For almost 15 years, SPC's Population and Demography Programme has assisted Pacific Island countries and territories in the population sector. With generous assistance 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 and 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 SPC Population and Demography Programme emphasis 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 and/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 is the main objective of the SPC Integration of Population Issues into Development Planning Project, which is supported through a generous multi-year financial assistance arrangement with the Australian Agency for International Development (AusAID). The project has two key components:

- to provide training for national and sectoral development planners and project economists in techniques of incorporating population considerations into national planning processes; and
- to pay greater attention to the analytical component in 'demographic analysis', and 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.

While addressing the second objective to provide a brief demographic profile for Tokelau planners and policy-makers, this report differs from other country profiles prepared over the past two years, in that it also includes a more traditional census report, and a brief situational analysis of Tokelauans in New Zealand. We agreed on this approach with the Tokelau Administration, following our involvement in the conduct and analysis of the 1996 Tokelau census, and the Tokelau Administration's request to also have some information included in a Tokelau population profile on Tokelauans living in New Zealand.

To avoid the danger of producing too comprehensive a population monograph that might scare off rather than attract potential users in the Tokelau Administration, the

private sector and the international development community, some concessions had to be made in depth of analysis and coverage. But by regarding a national census as a live database, and with census data stored in a simple commercial spreadsheet (Microsoft Excel) programme already widely used by Tokelau administrative staff, far more detailed and customised information can be readily produced than provided in a general report.

We appreciate the assistance provided by the New Zealand Bureau of Statistics in making available a consultant to the census analysis workshop conducted by the SPC Population and Demography Programme in Apia in July 1997, and we would also like to take this opportunity to thank Ms Elspeth Maclean for her input and for preparing Part II of this report.

We are most indebted to the Tokelau Administration and the people of Nukunonu, Fakaofu and Atafu for their hospitality and generosity during the census operation in Tokelau in November 1996; in particular, we would like to express our gratitude to Zak Patelesio for his wonderful organisation of the entire census operation, and to all Tokelau Administration staff who helped out as enumerators: Lomia Gualofa, Assistant Director, Support Services; Mesepa Gualofa, Personnel Officer; Julie Mateo, Registry Officer; Reupena Leitu, Sergeant; Tolise Liu, Sergeant; Dr Tekie Iosefa, Medical Officer; Sam Sakaria, Student; and Taase Perez, Personal Assistant. And a very special faafetai tele lava goes to Mesepa and Lomia for their friendship, and for hosting us during our stay in Nukunonu and making arrangements with family on Atafu and Fakaofu respectively.

This volume was prepared under the leadership of Mr Andreas Demmke, and involved all members of SPC's Population and Demography Programme, as well as Ms Elspeth Maclean from the New Zealand Bureau of Statistics.

**Gerald Haberkorn**  
Demographer  
Secretariat of the Pacific Community

## ACKNOWLEDGEMENT

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At the publication of the Tokelau Population Profile, arising out of the 1996 Tokelau Census, I wish on behalf of the Tokelau Government to convey our most sincere gratitude to the Secretariat of the Pacific Community, whose generous funding made this project possible.

Furthermore, our appreciation to the SPC Demography Staff, Dr Gerald Haberkorn, Demographer, and Andreas Demmke, Population Specialist, for their tireless efforts, patience and commitment throughout the training of the enumerators, plus their role in the actual implementation of this census in Tokelau. Acknowledgement is also made here of the inputs of SPC Statistics staff to this work.

We also wish to acknowledge Ms Elspeth Maclean, Statistics New Zealand and Magele M. B. Crawley, Statistics Western Samoa for their aid and assistance, and the Department of Support Services & Finance for the very successful coordination of this project. Credit is also not forgotten to the census enumerators for their dedication and hard work in the field.

Last but not least, a special 'Thank you' goes out to the three villages of Atafu, Fakaofu, and Nukunonu for their willing cooperation and impartation of information for this census.



**Honourable Pio Tuia**  
**Minister of Support Services & Finance**

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## SUMMARY

1996 census population (de facto)	1,507
1996 census population (de jure)	1,616
Annual rate of growth (1991–1996)	–0.9 %
Median age, 1996	20.3 years
Sex ratio, 1996	98
Dependency ratio (15–59), 1996	103
Population density, 1996	123.5 per km <sup>2</sup>
Crude Birth Rate (CBR), 1991–1996	33.1 ‰
Crude Death Rate (CDR), 1991–1996	8.2 ‰
Net migration rate, 1991–1996	–34.0 ‰
Annual number of births, 1991–1996	51
Annual number of deaths, 1991–1996	13
Annual number of net migrants, 1991–1996	–52
Total Fertility Rate (TFR), 1991–1996	5.7
Infant Mortality Rate (IMR), 1990	38 ‰
Life expectancy at birth (Eo), males, 1990	67.8 years
Life expectancy at birth (Eo), females, 1990	70.4 years

Tokelau is situated some 500 km to the north of Samoa, 600 km south of the Phoenix Group of the Republic of Kiribati, 600 km west of Pukapuka in the Cook Islands and about 1000 km east of Tuvalu. Tokelau is a non-self-governing territory under the administration of New Zealand.

Tokelau is comprised of three small atolls: Atafu, Fakaofu and Nukunonu, which are 60 to 90 km apart from each other, with a total land area of about 12 km<sup>2</sup>. The entire population of each atoll lives in one village, except on Fakaofu, where there are two villages on two separate islands: Fale and Fanuafale.

The Polynesian population of Tokelau are New Zealand citizens, and as such are allowed to travel freely to New Zealand and back. Today, more than three times as many Tokelauans live in New Zealand as in Tokelau itself. The 1996 Tokelau census counted 1,507 people in Tokelau, while the 1996 New Zealand census counted 4,917 Tokelauans in New Zealand, most of whom (53%) live in the urban areas of Wellington. Sixty per cent of the Tokelauans in New Zealand were born in New Zealand, and only 30 per cent were born in Tokelau.

The population density in 1996 was 123 people per square km and varies by atoll.

During the last 10 years, Tokelau's total population has decreased by about 180 people and has reached its lowest level for 50 years, indicating a more-or-less constant outflow of people.

Migration has been the major component of population change in Tokelau. While there were an average of 51 births and 13 deaths per year during the intercensal period, resulting in a net natural average growth of 38 people per year, about 52 people left Tokelau annually between 1991 and 1996. Without the possibility of migration, the Tokelauan population would grow by 2.5 per cent per annum, and would double about every 28 years.

The Total Fertility Rate (TFR) is estimated to be around five children per woman, which is one of the highest in the Pacific.

Although the presented mortality estimates have to be treated with great caution, an Infant Mortality Rate (IMR) of about 38 and a life expectancy at birth for males and females of about 68 years and 70 years have been estimated.

A total of 254 households were counted, with an average household size of six persons per household; 85 per cent of all household heads were males.

The two main religious denominations are the Congregational Christian Church (63%) and the Roman Catholic Church (35%); 2 per cent were followers of the Jehovah's Witness faith.

School enrolment is compulsory from the age of five to 15, and every child of that age is attending school. There is one Form 5 school in Fakaofu, and 83 per cent of the 16-year-olds and 58 per cent of the 17-year-olds are still attending school. There is no higher education in Tokelau, and those who qualify for government scholarships to study overseas attend schools in Samoa, Tonga, Niue and New Zealand.

Educational attainment has clearly improved during the last few years and is about the same level for males and females. Less than 3 per cent of the total population have received no education at all, and 60 per cent left school without a formal qualification as opposed to 81 and 75 per cent in the 1986 and 1991 censuses.

Of the population 15 years and older, 85 per cent of all males and 52 per cent of all females were in the labour force. Altogether, 68 per cent of Tokelau's population was economically active. This is a decrease of 9 per cent compared to the last census in 1991. However, in 1996 there were 52 more people in the paid labour force than in 1991, and 178 people were permanent salaried members of the Tokelau public service (TPS), which provides the main source of income in Tokelau. Forty-four per cent of all households have at least one member who receives a regular TPS salary, and 60 per cent have at least one person earning an income from casual work for the Taupulega village work force. Remittances received from overseas seemed to be an insignificant source of income in 1996. A further direct or indirect source of income are the 2000 pigs and 3000 chickens raised by Tokelauan households.

The number of expensive and energy-consuming electrical appliances like televisions, video-cassette recorders, freezers and washing machines has increased significantly since the last census in 1991, which might be seen as an indicator of increased available income.

The biggest occupational group in the paid labour force was casual village workers (48%) followed by professional, technical and related workers (14%), tradespersons (10%) and service workers (8%).

The traditional Tokelauan fale has almost disappeared from Tokelau. Almost all houses (98%) have a roof made of roofing iron, 70 per cent have a concrete floor and 50 per cent have concrete walls.

For the majority (93%) of households the main source of water is their personal water tank; 86 per cent use kerosene stoves for cooking and almost all households (97%) are connected to community generators as the main source of lighting.

The majority of households use toilets 'above water', little huts built above the lagoon side. Almost 40 per cent have flush toilets available. Although most households have showers available, only 14 per cent have them inside their dwellings.

The main means of waste disposal were composting and using edible waste as animal food. Otherwise, waste was burned or buried. Some was also thrown into the lagoon or ocean.

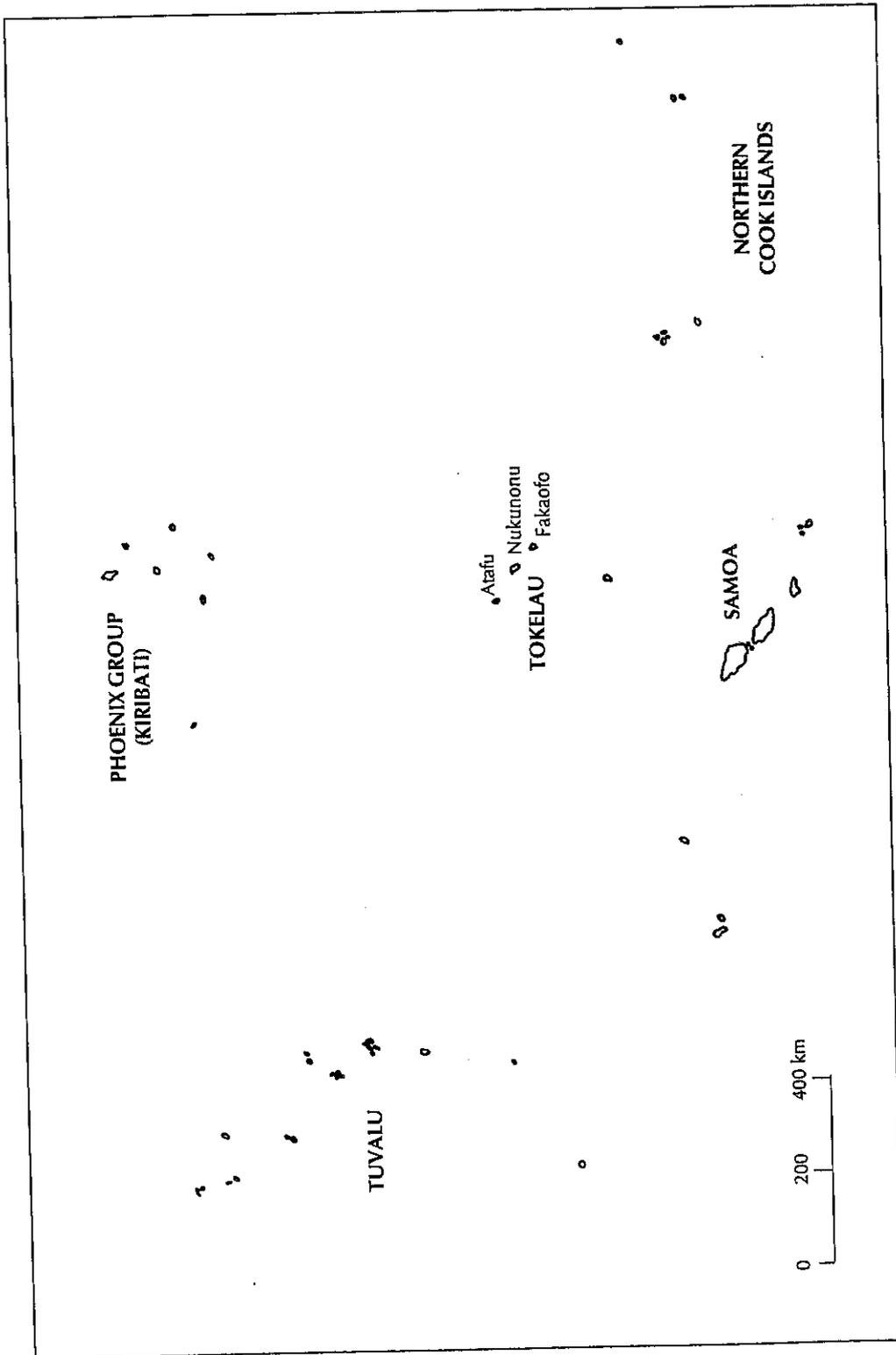
By comparing the overall living conditions of Tokelauans in Tokelau to those in New Zealand, it can be seen that the percentage of people 15 years and older with a formal qualification is higher in New Zealand (48%) than in Tokelau (40%).

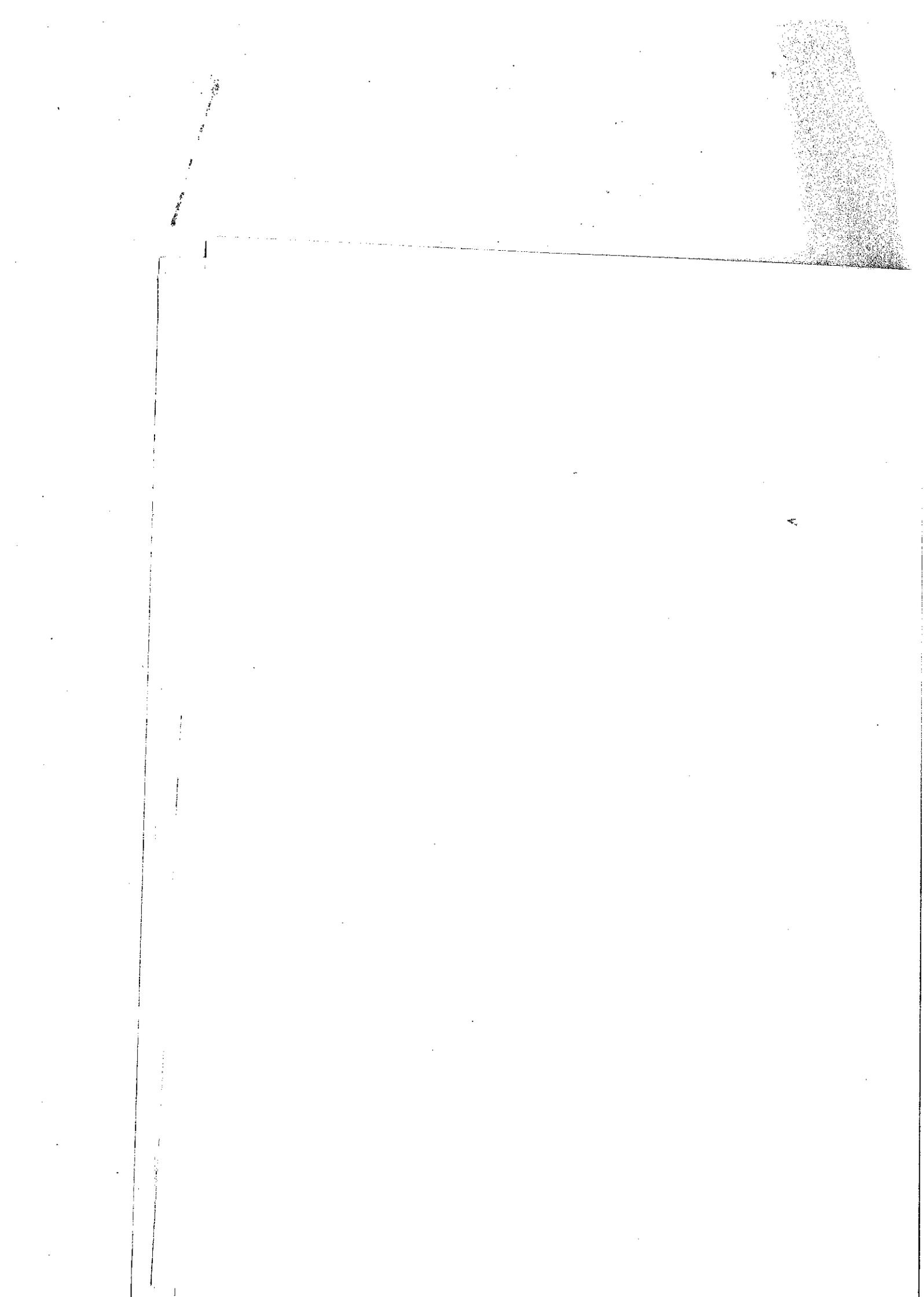
Only 59 per cent of the New Zealand Tokelauans were economically active, compared to 68 per cent of those in Tokelau. Of the Tokelauans in New Zealand, 24 per cent (mainly the young) were unemployed, while unemployment is virtually non-existent in Tokelau.

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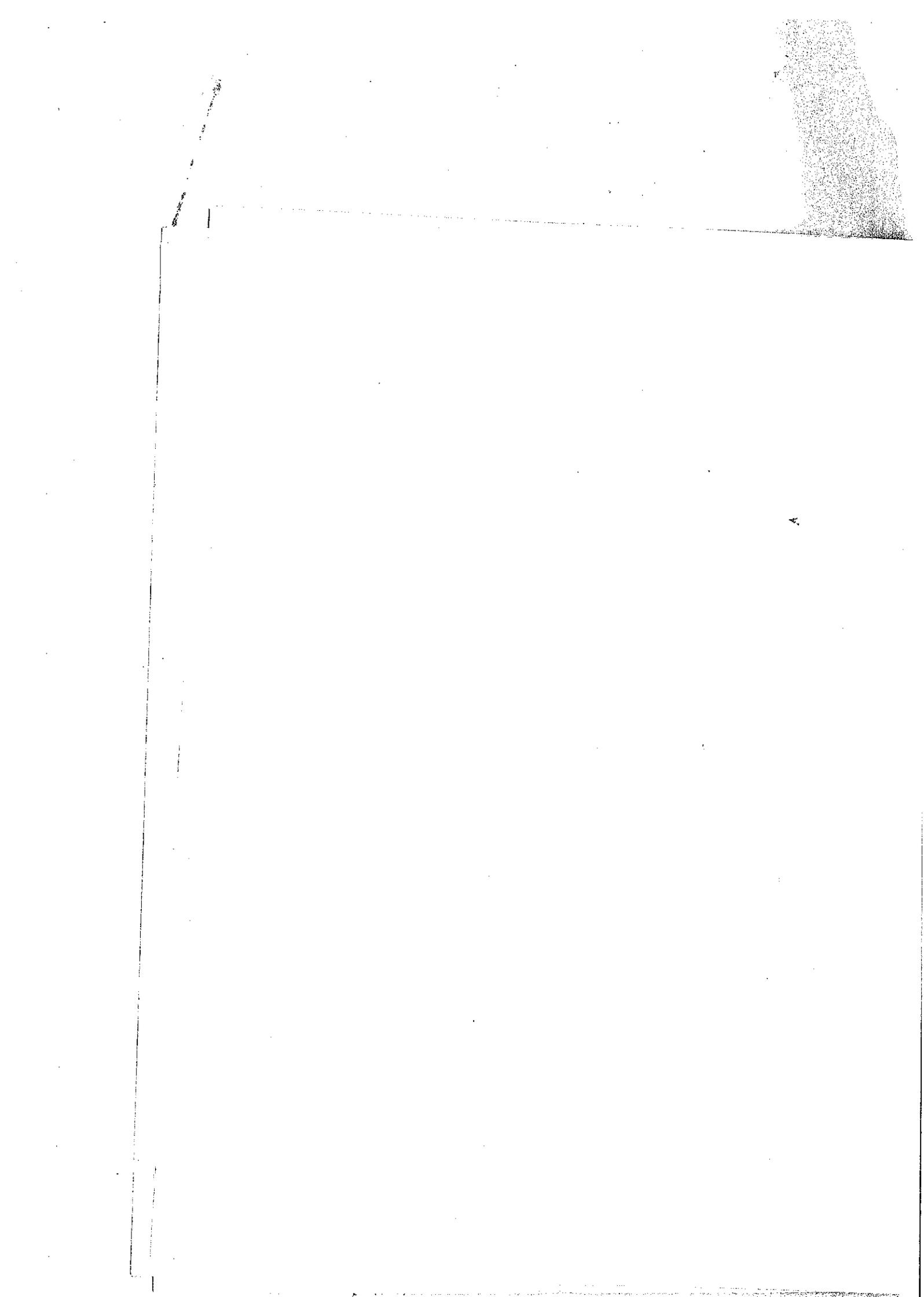


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**PART I ♦ TOKELAUANS LIVING IN TOKELAU**



# 1. INTRODUCTION

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Throughout the various stages of their lifetimes, people make different 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' homes (housing);
- school-leavers search for work (employment opportunities);
- child-bearing is usually confined to women aged 15–49 (maternal and child health and family planning services); and
- elderly people make special demands on health care, transport, housing, welfare, etc.

For governments to effectively cater for 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 and 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 quite evident in situations where policies are incorporated into development plans with the aim of altering specific population variables. For example:

- greater budget allocation to a country's ministry 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;
- promotion, provision and easy access of family planning services may lead through a reduced fertility rate to a lowering of the population's growth rate;
- promotion of rural employment opportunities and accessibility of services may slow down rural–urban drift.

Accepting that population factors are important components of development, and accepting the premise that development is ultimately about people (specifically, about

improving people's lives), it will be clear to everyone involved in planning and policy-making that incorporating population considerations into the planning process is at the very heart of planning and development.

The aim of this census report is threefold:

- 1) to present the major findings of the 1996 census results;
- 2) to do so in a way that familiarises planners and policy-makers with some of the key features of the socio-demographic situation of Tokelau; and
- 3) to discuss some of the key implications for development planning and policy.

Our main objective is to provide a brief overview of some of the key implications of recent population developments and likely future outlooks for Tokelau planners and policy-makers. More detailed analyses of specific sectoral issues and topics (housing, occupation etc.) can be undertaken on request. Considering that most planners and policy-makers have neither the time, desire, nor technical background to digest lengthy demographic analyses, we have attempted to be brief and use as little technical jargon as possible. However, as jargon is not always avoidable, we have appended a detailed glossary.

This population profile draws on the following material:

- the 1996 Tokelau Census of Population and Housing;
- the 1991 Tokelau Census of Population and Dwellings; and
- the 1996 New Zealand Census (Tokelauans in New Zealand).

## 2. THE 1996 TOKELAU CENSUS

---

### *Introduction*

The 1996 Tokelau Census of Population and Dwellings, like the previous censuses, was conducted to provide the administration, planners and policy-makers with up-to-date statistical information on demographic and socio-economic developments. This data is needed for planning purposes, and to evaluate the success and failure of programmes and projects. The 1996 census was conducted according to the Tokelau Census Regulations, 1961. These regulations require a census to be carried out every five years. The previous census was conducted in 1991. One of the main objectives of the 1996 census was to improve the technical and administrative capabilities of the Planning and Statistics Unit of the Department of Support Services and Finance to enable it to plan, design, execute, process and analyse its population censuses.

Preparations for the Tokelau census started in 1995, when the SPC Population and Demography Programme was asked to prepare details of the design, costing, collection and processing of the 1996 census questionnaire. The census questionnaire in its final version was approved by the Tokelau Government in mid-1996.

The 1996 census activities, such as the training workshops, translation and printing of the questionnaires, travel from and to Samoa and in Tokelau, and per diem and accommodation for the project personnel, census supervisors and enumerators were funded by the Tokelau Government.

SPC paid the salary and travel to and from Apia of the two census supervisors, the Demographer and Population Specialist from SPC.

Tokelau officials requested that the final census report titled *Tokelau Population Profile* be consistent with other SPC population profiles, which include a special section on Implications for Planning for each research topic. This section is provided to help planners and policy makers see the possible implications that census results could have for planning and policy-making.

The census was conducted under the supervision of the SPC Demographer and Population Specialist, with census enumerators recruited from former scholarship students and others who had at least reached Form 5 level. A training workshop was conducted for the enumerators at Nukunonu by the SPC Demographer.

### *The enumeration*

During the days before the census, each enumerator visited every household in his or her enumeration district to familiarise people with the census and to check that each dwelling would be occupied on census night. Census night was 11 November 1996.

**Table 1: Population size, growth, distribution and density by atoll, 1986-1996**

Atoll	Population in			Population distribution 1996	Growth rate		Area (km <sup>2</sup> )	Population density in 1996
	1986	1991	1996		1986-1991	1991-1996		
Atafu	603	543	499	33.1	-2.1	-1.7	3.5	142.6
Fakaofu	661	597	578	38.4	-2.0	-0.6	4.0	144.5
Nukunonu	426	437	430	28.5	+0.5	-0.3	4.7	91.5
<b>Tokelau total</b>	<b>1,690</b>	<b>1,577</b>	<b>1,507</b>	<b>100</b>	<b>-1.4</b>	<b>-0.9</b>	<b>12.2</b>	<b>123.5</b>

Although the population of each atoll has declined since 1991, the biggest decrease has been in Atafu, where there were 44 fewer people in 1996 compared to 1991, with Fakaofu and Nukunonu representing much smaller declines of 19 and seven residents respectively.

Of the 1507 people enumerated at the time of the census, 20 persons were temporary visitors (14 men and 6 women). This leaves a total of 1487 Tokelauan usual residents. The following analyses of the Tokelauan population are based on information given by the 1487 usual residents.

#### IMPLICATIONS FOR PLANNING

- The small size, remoteness and isolation of Tokelau makes the establishment of services expensive and cost-ineffective. Sophisticated medical equipment and tertiary education will probably never be available in Tokelau, and may remain a reason for the departure of local people. Therefore, provisions need to be in place to allow an efficient transportation system between Tokelau and its nearest urban centre (Apia).
- However, health service delivery, education and communication facilities should be of the highest possible level in order to ensure a quality standard of living for those who wish to live and enjoy Faka-Tokelau, Tokelau's unique way of life.

### 3.2 Age and sex

Development and planning objectives are often formulated with respect to population groups. The characteristics of these groups are usually associated with age, such as infants, children and adolescents, students, workers and elderly persons. Therefore, the age distribution of a country's population is a very important consideration in planning.

The sex ratio of a population and its age groups is the result of the sex ratio at birth (number of male versus female births) and gender differences in mortality and migration.

Regarding the gender make-up of Tokelau's population, the distribution of males and females, described by the total sex ratio, was 98 (98 men for every 100 women), which means that there were about as many men as women. The relative balance of men and women can be seen on all three atolls, although there were slightly more men than women in Nukunonu, most likely because the Administration was based there in 1996.

In general, sex ratios tend to decline with age, reflecting the presence of more women than men and the higher mortality of males. This, in general, is also the case in Tokelau (Figure 2 and Appendix Table 1). The rather irregular pattern of the age-specific sex ratios in Tokelau can mainly be explained by the very small numbers involved, but also by age- and sex-specific migration.

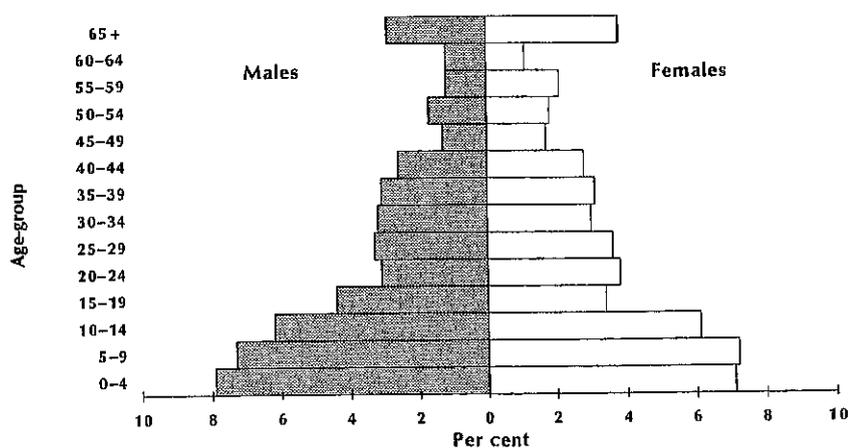


Figure 2: Population pyramid, Tokelau, 1996

The median age of the Tokelauan resident population in 1996 was 20.3 years. The median age of a population tells us the age above which half of the people are older, and below which half are younger. Of the atolls, Nukunonu has the oldest median age at 24 years, while the median age in Atafu is 20, and 18.4 in Fakaofu. This means that the Tokelau population has a very young age structure, as shown in Table 2, which gives the proportion of people in different age groups for each atoll and for Tokelau as a whole. Between 1991 and 1996, the population of Tokelau has become a little more concentrated in the 15-59 age group, from 47 per cent in 1991 to 49 per cent in 1996. However, when the atolls are looked at individually, it can be seen that this was the case mainly in Fakaofu.

**Table 2: Distribution of people by age, median age and dependency ratio, Tokelau: 1991 and 1996**

Age group	Atafu		Fakaofu		Nukunonu		Tokelau	
	1991	1996	1991	1996	1991	1996	1991	1996
0-14	44%	44%	45%	42%	38%	38%	43%	42%
15-60	47%	48%	44%	49%	51%	52%	47%	49%
60 +	9%	8%	11%	9%	11%	10%	10%	9%
Median age	19.8	20.1	20.1	18.4	19.6	23.8	19.8	20.3
Dependency ratio	112	109	127	104	97	94	113	103

These broad age groups are also useful for producing dependency ratios, which are a common way to describe a population's age structure. They measure the proportion of the economically-dependent component of a country's population to its productive component. This is conventionally expressed as the ratio of the young (0-14) plus the old (60+), to the population in the working ages (15-59). Tokelau's dependency ratio decreased from 113 in 1991 to 103 in 1996. In other words, for every 100 persons in the working ages, there were 103 persons in the dependent ages. The higher the dependency ratio, the higher the number of people that need to be cared for by the working age population and, it needs to be added, of this group only by those who actually work and earn a living. Tokelau has one of the highest dependency ratios in the Pacific behind the Marshall Islands (124) and the Solomon Islands (108).

#### 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 life cycle. For example:
  - \* the number of young children and infants affects the need for immunisation and child health programmes;
  - \* the size of the school-age population determines the demand for primary education (venues, teachers, materials etc.);
  - \* the number of women of childbearing age 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;
  - \* manpower planning depends on the size of the working-age population; and
  - \* budgeting pension entitlements depends on the number of elderly people.

### 3.3 Household characteristics

Knowledge about household characteristics is important for planning and policy purposes, to help establish, for example, demands for housing, and assess related requirements for land allocation, energy and water consumption, waste disposal and sewage connections, telephones and general infrastructure.

The size and composition of a household depend mainly on the socio-economic and cultural factors of a country, and are shaped mainly by the structure of the families (whether nuclear or extended), but also by the age of young people leaving their parents' house in order to form their own household, and whether they do this with or without family (single household, couples with or without children). The housing market (availability and costs of suitable housing) and the availability of land to build upon also have a big impact on the composition of the household.

#### 3.3.1 Household size

The 1996 census counted 254 households, including two households in a hotel in Nukunonu. This is one more than in 1991. While the number of occupied households has decreased in Atafu (-2) and in Fakaofu (-9), Nukunonu recorded an increase of 12 households between 1991 and 1996 (Table 3).

Table 3: Total number of occupied households by atoll, Tokelau: 1966-1996

Atoll	1966	1972	1976	1981	1986	1991	1996
Atafu	79	85	80	87	89	94	92
Nukunonu	88	71	66	77	80	63	75
Fakaofu	85	107	98	122	99	96	87
<b>Total</b>	<b>252</b>	<b>263</b>	<b>244</b>	<b>286</b>	<b>268</b>	<b>253</b>	<b>254</b>

The average number of (de facto) persons per household in Tokelau was about 6 people (5.9), which is the same as in 1986 and 1991. If the de jure population was taken into account (those people who normally live in the household, but were absent during census night), the average household size would be 6.4 people per household (Table 4).

There are marked differences in (de facto) household size by atoll. It ranges from 5.4 in Atafu and 5.7 in Nukunonu to 6.5 persons per household in Fakaofu. From the difference between the de facto and the de jure household size, it can be seen that in Atafu a relatively high proportion of usual household members were absent during the census enumeration. In Atafu, on average one person per household who usually resides there was overseas or temporarily residing on one of the other atolls (e.g. there were 16 Form 5 students on Fakaofu).

**Table 4: Household size, de facto and de jure, Tokelau, 1996**

	Atafu	Fakaofu	Nukunonu	Tokelau
Number of households	92	87	75	254
Number of persons (de facto)	497	564	426	1,487
Number of persons (de jure)	584	589	441	1,614
De facto household size	5.4	6.5	5.7	5.9
De jure household size	6.3	6.8	5.9	6.4
Difference between the de facto and the de jure household size	0.9	0.3	0.2	0.5

While the average household size has not changed since 1991, the distribution of households by size has changed considerably (Table 5).

In 1996 there were nine more single-person households recorded, and 18 more households with only two persons occupying a dwelling. Furthermore, there were 11 fewer households with four-to-five persons per household, 14 fewer households with six-to-seven persons per household and five fewer households with eight-to-nine persons per household than in 1991. On the other hand, there were four more households counted with more than 10 occupants in 1996 than in 1991. There were two households in Atafu and Fakaofu with 13 occupants, one household with 18 occupants in Nukunonu and one household in Fakaofu with 21 occupants. These few large households are responsible for the fact that the average household size has remained relatively stable, despite a noticeable increase of the number of households with one or just two-to-three occupants. Therefore, it can be concluded that less people lived together per household in 1996 than in 1991.

**Table 5: Number of households by household size and atoll, Tokelau, 1991 and 1996**

Household size	Atafu		Fakaofu		Nukunonu		Tokelau	
	1991	1996	1991	1996	1991	1996	1991	1996
1	0	3	4	5	1	6	5	14
2-3	15	23	11	14	8	15	34	52
4-5	29	19	24	17	13	19	66	55
6-7	32	29	28	19	19	17	79	65
8-9	14	10	17	17	9	8	40	35
10 or more	4	8	12	15	13	10	29	33
<b>Total</b>	<b>94</b>	<b>92</b>	<b>96</b>	<b>87</b>	<b>63</b>	<b>75</b>	<b>253</b>	<b>254</b>

### 3.3.2 Household composition

Data on household composition were established by identifying a head of household, who served as a reference person. The relationship of all other persons in the household to the head of household, in terms of family membership, was recorded.

Eighty-six per cent of all heads of household were men and 14 per cent were women (Table 6).

Tokelauans referred to the head of household as the oldest male person living in the household, regardless of his ability to support the household members economically. This is supported by the fact that there were no male spouses recorded in the census, and the female heads of households seemed to be either never married, widowed or divorced or the heads of single-person households.

The relatively large proportion of grand- and great-grand children per household (18%) can be explained by the fact that a large proportion of the children in a household are adults already and have children themselves.

From the table presented below, it is clear that on average several generations live together in one household, and an extended family structure seems to be the rule in Tokelau. While 64 per cent of the people of an average Tokelauan household were either heads of household, spouses or children, one third of the household members were other family members.

**Table 6: Household composition (relationship to head of household), Tokelau, 1996**

	Number of HH members			% Distribution		
	Male	Female	Both	Male	Female	Both
Head of Household	207	35	242	13.9	2.4	16.3
Spouse	0	174	174	0.0	11.7	11.7
Child (includes adopted children)	250	291	541	16.8	19.6	36.4
(great-) grandchild	138	127	265	9.3	8.5	17.8
Brother or sister	2	17	19	0.1	1.1	1.3
Brother- or sister-in-law	14	10	24	0.9	0.7	1.6
Nephew or niece	50	27	77	3.4	1.8	5.2
Son- or daughter-in-law	34	19	53	2.3	1.3	3.6
Other family	25	37	62	1.7	2.5	4.2
Non-family	16	14	30	1.1	0.9	2.0
<b>Total</b>	<b>736</b>	<b>751</b>	<b>1,487</b>	<b>49.5</b>	<b>50.5</b>	<b>100</b>

Note: - 12 heads of household were absent during the time of the enumeration,  
 - non-family household members include 'Form 5 students' in Fakaofu.

#### IMPLICATIONS FOR PLANNING

- With the provision of quality and cyclone resistant housing, a major concern of the Tokelauan Administration, the Tokelau Government needs to be aware of any changes in household size and composition, and their impact on different demands for dwellings, to set aside a housing scheme budget that can finance a sufficient number of quality houses. The different demands for housing are closely linked to demands for land allocation, energy and water consumption, waste disposal and sewage.
- As has been shown, it is not only the growth of a population which contributes to an increased demand for housing, water and energy supply, but an increase of the number of households through a decrease of the average household size.
- Households and families that are not economically capable of sustaining an acceptable, healthy lifestyle may need the extra attention of the government or community, since unhealthy living environments affect everybody in the long run. In particular, the following minimum housing conditions should be in place: availability and access to safe and clean water, public electricity, hygienic waste disposal and, last but not least, a safe housing structure, that is capable of withstanding cyclones of average strength.

## 4. SOCIAL PROFILE OF THE POPULATION

Ethnic, cultural and social differences of people and their different values and beliefs often explain differences in levels of fertility and mortality, social status and the distribution of wealth and the accessibility of economic resources. The social profile of a population provides planners and policy-makers with information on its uniqueness compared to other parts of the same population.

### 4.1 Ethnic composition

The term 'ethnic origin', as used in the 1996 census, refers to an ethnic group the respondents felt most closely affiliated or associated with.

From the data presented in Table 7, it seems that there were differences in the understanding of the definition of 'ethnic group' (especially in regard to single and multiple ethnicity) between the different censuses.

However, the proportion of the Tokelau population defining themselves as Tokelauan or Part Tokelauan was about 95 per cent in 1996, compared to 98 per cent in 1991. This points to a slight increase of Tokelau residents with an ethnic origin other than Tokelauan. The largest single ethnic groups besides Tokelauan or Part Tokelauan were Samoan (2.4%) and Tuvaluan (1.5%).

Table 7: Ethnicity, Tokelau, 1986, 1991 and 1996

Ethnic group	Number			Per cent		
	1986	1991	1996	1986	1991	1996
<b>One Group</b>						
Tokelauan	964	926	1,209	57.0	58.7	81.3
Samoan	27	12	36	1.6	0.8	2.4
Tuvaluan	7	9	23	0.4	0.6	1.5
European	8	6	6	0.5	0.4	0.4
Other	5	1	14	0.3	0.1	0.9
<b>Total</b>	<b>1,011</b>	<b>954</b>	<b>1,288</b>	<b>59.8</b>	<b>60.5</b>	<b>86.6</b>
<b>Part Tokelauan</b>						
Tok./Samoan	329	305	137	19.5	19.3	9.2
Tok./Tuvaluan	128	152	46	7.6	9.6	3.1
Tok./European	106	61	6	6.3	3.9	0.4
Tok./Other	107	94	10	6.3	6.0	0.7
<b>Total</b>	<b>670</b>	<b>612</b>	<b>199</b>	<b>39.6</b>	<b>38.8</b>	<b>13.4</b>
Other mixed groups	9	5	0	0.5	0.3	0.0
Not specified	0	6	0	0.0	0.4	0.0
<b>Total Tokelau</b>	<b>1,690</b>	<b>1,577</b>	<b>1,487</b>	<b>100</b>	<b>100</b>	<b>100</b>

The ethnic composition per atoll showed some differences in 1996 (Table 8).

The highest percentage of people classifying themselves as sole Tokelauan were living in Atafu, where 90 per cent of all people regarded themselves as 'single ethnic Tokelauans'. Only 74 per cent of the people in Fakaofu described themselves as 'single ethnic Tokelauans', while this percentage was 81 per cent in Nukunonu.

The highest percentage of Part Tokelauans were living in Fakaofu, where about 19 per cent fell into this category; 12.7 per cent and 7.2 per cent described themselves as Part Tokelauan in Nukunonu and Atafu, respectively.

About 6.5 per cent of the population in Fakaofu and Nukunonu were from an ethnic group other than Tokelauan (mainly Samoan and Tuvaluan). This percentage was only 2.5 per cent in Atafu.

**Table 8: Ethnic group by atoll, Tokelau, 1996**

Ethnic group	Number			Per cent		
	Atafu	Nukunonu	Fakaofu	Atafu	Nukunonu	Fakaofu
Tokelauan	448	344	417	90.1	80.8	73.9
Part Tokelauan	36	54	109	7.2	12.7	19.3
Other	13	28	38	2.6	6.6	6.7
<b>Total</b>	<b>497</b>	<b>426</b>	<b>564</b>	<b>100</b>	<b>100</b>	<b>100</b>

## 4.2 Religious denomination

Sixty-three per cent of the Tokelauan population belonged to the Congregational Christian Church and 35 per cent to the Roman Catholic Church (Table 9). The remaining 2 per cent were either followers of the Jehovah's Witness faith, other religious denominations, or did not state their religious denomination. In 1986, 10 years ago, 67 per cent belonged to the Congregational Christian Church and only 30 per cent to the Roman Catholic Church. There has also been a decrease in absolute numbers of people belonging to the Congregational Christian Church since 1986 (mainly in Fakaofu, which has lost almost 13% of its followers, and Atafu, with a decrease of more than 6%) and an increase of Roman Catholics (mainly in Fakaofu). This increase of people belonging to the Roman Catholic Church is quite remarkable, considering the overall population decline in Tokelau.

**Table 9: Religious denomination, Tokelau, 1966–1996**

Religious denomination	1966	1972	1976	1981	1986	1991	1996
Congregational Christian	1,187	1,122	1,083	1,067	1,136	1,035	931
Roman Catholic	712	453	445	452	506	504	525
Jehovah's Witness	N/A	N/A	N/A	N/A	27	13	15
Seventh Day Adventist	N/A	N/A	N/A	N/A	7	8	0
Other, NS	2	24	47	53	14	17	16
<b>Total</b>	<b>1,901</b>	<b>1,599</b>	<b>1,575</b>	<b>1,572</b>	<b>1,690</b>	<b>1,577</b>	<b>1,487</b>

N/A: The response was either not possible (prefer not to disclose) or was coded as 'other' in these censuses.

Church membership by atoll shows a very distinctive pattern (Table 10). While almost all people of Atafu are Congregational Christians (98%), the Nukunonu population is almost entirely Roman Catholic (94%). Although the majority of people in Fakaofu are also followers of the Congregational Christian Church (76%), 21 per cent are Roman Catholic.

**Table 10: Religious denomination by atoll, Tokelau: 1996**

Religious denomination	Number				Per cent			
	Atafu	Nukunonu	Fakaofu	Total	Atafu	Nukunonu	Fakaofu	Total
Congregational Christian	486	17	428	931	97.8	4	75.9	62.6
Roman Catholic	5	401	119	525	1	94.1	21.1	35.3
Jehovah's Witness	3	0	12	15	0.6	0.0	2.1	1
Seventh Day Adventist	0	0	0	0	0.0	0.0	0.0	0.0
Other/NS	3	8	5	16	0.6	1.9	0.9	1.1
<b>Total</b>	<b>497</b>	<b>426</b>	<b>564</b>	<b>1487</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### 4.3 Marital status

All persons 15 years and older were asked to answer the question on their current marital status. De facto unions were regarded as married couples, regardless of whether they were legally married by law or by church.

The main reason for including a question on marital status in a census questionnaire is that marriage patterns can be important determinants of fertility, especially in societies where the use of modern contraceptives is limited, and marriage is the entry into sexual union. The proportion of the population being married, and the pace at which marriage occurs, together with the frequencies of widowhood and divorce, have an impact on the number of children born.

Although age at first marriage is frequently used as a determinant of fertility by demographers world wide — as it is closely linked to age at cohabitation and child-bearing, as people usually start to form a family after marriage — some caution is advised when using this concept uncritically in Pacific Island countries where childbirth is not as directly linked to marriage as in some other societies. This may be illustrated by the fact that in Tokelau, 29 per cent of all unmarried women older than 19 years of age have had at least one child.

The 1996 Tokelau census data show that no men or women have been married before the age of 20 (Table 11). A higher proportion of women compared to men are married at young ages (20–24 years), but the proportion of married women at older ages is generally lower than that of men. The average age at first marriage (the singulate mean age at marriage, or SMAM) is calculated at about 25 years for men and 25.4 years for females. At first sight it seems contradictory that the SMAM for females is higher than for males, although a higher proportion of women is married at younger ages (20–24). The lower SMAM for females can be explained by the fact that a higher proportion of women than men remains single thereafter.

**Table 11: Proportion of population 15 years and older by marital status and age and sex, Tokelau, 1996**

Age group	Males				Females			
	Single	Married	Widowed	Divorced Separated	Single	Married	Widowed	Divorced Separated
15–19	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0
20–24	76.1	23.9	0.0	0.0	71.9	28.1	0.0	0.0
25–29	32.7	67.3	0.0	0.0	37.0	61.1	1.9	0.0
30–34	14.6	85.4	0.0	0.0	11.4	88.6	0.0	0.0
35–39	15.2	84.8	0.0	0.0	13.0	80.4	0.0	6.5
40–44	2.6	97.4	0.0	0.0	14.6	85.4	0.0	0.0
45–49	15.0	80.0	0.0	5.0	15.4	76.9	0.0	7.7
50–54	7.7	84.6	3.8	3.8	7.4	85.2	7.4	0.0
55–59	0.0	100.0	0.0	0.0	6.5	83.9	9.7	0.0
60–64	5.6	88.9	5.6	0.0	6.3	68.8	25.0	0.0
65–69	6.3	68.8	25.0	0.0	0.0	76.5	17.6	5.9
70–74	6.3	75.0	18.8	0.0	21.1	47.4	31.6	0.0
75+	0.0	81.8	18.2	0.0	10.0	25.0	65.0	0.0
Total	33.5	63.4	2.6	0.5	32.1	59.5	7.1	1.3

Another feature of the Tokelauan population is the higher number of widowed females compared to males. The reasons are the lower mortality rates for females, enabling them to outlive their spouses, and the fact that males are more likely to remarry after the death of a spouse or divorce. Divorce and separation, however, occur rarely in Tokelau, with less than 1 per cent of the population falling into this category.

#### 4.4 Educational characteristics

A population's level of formal education is a key indicator in the development and quality of life of a country. Education is a factor in the development of well-being, through its links with demographic, economic and social factors. There is a close and complex relationship between education, fertility, morbidity, mortality and mobility.

For example: when mothers are better educated, their children's health status seems to be better and their survival rate tends to increase. In addition, a broader access to education (overseas scholarships) shapes the composition of a country's working population.

The 1996 Tokelau census contained two questions on education: school enrolment, as asked in question 12, and level of educational, technical and professional attainment, as asked in questions 13 and 14.

##### 4.4.1 School enrolment

School attendance in Tokelau is compulsory from age five to age 15 (Form 4).

Before that age, most if not all children attend pre-school or kindergartens, and Sunday school.

Three government schools in Tokelau offer classes until Form 4 — one on each atoll — and all children aged five to 15 years of age attend school, with very few exceptions (Figure 3). There is one Form 5 level in Fakaofu, and all Form 4 students in Tokelau are given equal opportunities to attend this national Form 5. Eighty-three per cent of the 16-year-olds and 58 per cent of the 17-year-olds were still attending school.

There were as many males as females enrolled in school. After the age of 17, there were only one 18-year-old and two 21-year-old students, with the rest of the eligible population no longer attending school.

Those who pass for government scholarships overseas attend schools in Samoa, Tonga and Niue. Students who qualify for higher education and training attend tertiary institutions in Fiji and New Zealand. It should be noted that students attending educational institutions overseas were of course not included in this census, which focused on the resident population only.

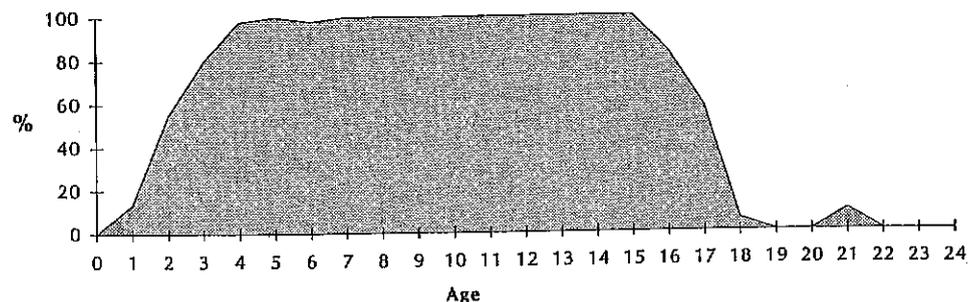


Figure 3: Percentage of population aged under 25 years by school enrolment, Tokelau, 1996

#### 4.4.2 Educational attainment

There has been a clear improvement in the level of educational attainment in recent years (Appendix Table 2). The younger the population, the higher the highest school level achieved. Seventy per cent of the 20–24-year-olds attended school from Form 5 to Form 7, which compares to 53 per cent of the 30–34-year-olds, 20 per cent of the 40–44-year-olds and only 5.7 per cent of the 50–54-year-olds. It has to be kept in mind, however, that older people with good educations could have left the country to find suitable employment opportunities.

Females score a little bit better than males. Thirty per cent of all females attended school from Form 5 to Form 7 against 29 per cent of all males.

Overall, less than 3 per cent of the population 15 years and older has never been to school, and those are mainly persons older than 60 years of age.

The proportion of the population 15 years and older with tertiary or polytechnic education was only 3.6 per cent. This figure, however, is misleading, as all those Tokelauan students currently enrolled in tertiary educational institutions were not present in Tokelau during the census enumeration, and were therefore not included in this analysis.

Compared to the 1986 and 1991 censuses, when 81 and 75 per cent of the population older than 15 years finished their education without any qualification, educational attainment has improved significantly. In 1996, only 63 per cent of Tokelau's population 15 years and older had not gained school certificate or any other degree or diploma of an educational institution (Table 12 and Appendix Table 3). This number includes 73 people who were still at school at the time of the census enumeration. Almost all of them were in the 15–19 year age group. Excluding them from the calculations would leave 60 per cent of the population 15 years and over who have left school or any other educational institution without a formal qualification.

**Table 12: Proportion of population 15 years and older and highest qualification gained, Tokelau, 1996**

	Males	Females	Total
No certificate	59.3	66.4	63.0
Primary or Form 2	12.9	10.9	11.9
Leaving Certificate	10.0	5.6	7.7
School Certificate	7.4	10.0	8.8
University Entrance	2.4	1.6	2.0
Diploma	4.3	4.5	4.4
Degree	2.4	0.4	1.4
Post-graduate diploma	0.2	0.0	0.1
Post-graduate degree	0.7	0.2	0.5
NS	0.2	0.4	0.3
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

A higher percentage (66.4%) of the female population was without a qualification compared to the male population (59.3%), and a slightly higher proportion of males had achieved a university entrance qualification or higher qualification than the females: 10 per cent versus 6.7 per cent.

Seventy-one per cent of Tokelau's population older than 15 years of age have never gained any technical or professional training. This percentage was higher for females (74.4%) than for males (66.7%).

More men than women have had training in technical and trade areas, while more women than men have been in a nursing school (Appendix Table 4).

#### IMPLICATIONS FOR PLANNING

- Although it seems from information on educational attainment that men achieve more highly on average than females, it has to be kept in mind that data on educational attainment mainly refer to developments of the past, those people who have left school years ago. In contrast, information on school enrolments shows a more recent picture: males and females were equally represented at school in 1996.
- Changes in a country's demographic structure affect educational needs. The higher a country's level of fertility (number of births per year) the larger is its school age population relative to the total population. The birth of 45 children in 1995 means that there will be 45 pupils entering primary school in the year 2000 (minus those who won't be present through death or migration, and plus those who arrive from overseas).
- Those who are able and willing to seek higher education should also have the opportunity in the future to gain the highest qualifications possible, as better educated people will have the knowledge to care for themselves, their family, community and country. Higher-educated people usually have fewer and healthier children, and earn a higher income than people with a lower educational background.
- However, people leaving to seek higher education overseas might not return to Tokelau, as appropriate job opportunities will not be available, remuneration levels are much lower than in comparable positions in New Zealand, and a professional life on an atoll might appear less appealing after many years abroad.

## **4.5 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 by the size of the working-age population and the educational and skill levels of the labour force, but also by the economic resources available to a country. Integrating population into economic and development strategies is vital in achieving the desired results, such as sustainable development and an improved quality of life for all people.

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

### **4.5.1 Labour force**

Every person aged 15 years and over was asked whether he or she did any work in the week before the census, whether it was paid work for wages and salary, or the production of goods to sell for a profit.

The so-called labour force consists of people who were economically active in the week before the census: people who worked for wages or salaries, those who worked on goods to sell for their own profit, those who did unpaid work for the benefit of their family or village, including subsistence activities, and those who were unemployed but 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 considered not economically active and not part of the labour force: people who did housework, students, retired people, and people who were sick or disabled.

All villages in Tokelau have employees, both permanent and casual, of the TPS (Tokelau public service). Employees of the TPS are involved in public works schemes, health, education and agriculture. Every male person in Tokelau, who is not otherwise employed, too old, sick or disabled, can join the Taupulega village work force.

Females working for the Taupulega are mainly unpaid workers. Activities include work as temporary cooks for national occasions (General Fono) and for special visits. The Taupulega is the village council on each atoll; the local or internal decision-making body. The membership of each village council includes: Faipule (Member of Parliament), Pulemuku (Mayor) and Matai (representative from each family — normally the head of household). Its role is to make decisions on all village matters. This includes planning for village activities and work programmes for the local people. It employs paid and unpaid workers. Its members are supposed to work eight hours a day for a wage of NZ\$1.65 an hour. Supervisors receive NZ\$1.92 an hour.

In 1996 there were 867 people 15 years and older, 418 men and 449 women. Sixty-eight per cent of them were economically active (in the labour force), 85 per cent of the male and 52 per cent of the female population (Table 13). These percentages were considerably higher in 1991, when 77 per cent of the population 15 years and above were in the labour force (89 per cent of males and 66 per cent of females).

Compared to 1991, there has been a decrease of 105 people in the labour force, 20 men and 85 women less. On the other hand, the number of people being not economically active increased by 64 people between 1991 and 1996, 11 more men and 53 more women.

The number of people in the unpaid labour force has decreased significantly during the intercensal period, by 57 men and 111 women. This is due to the re-empowerment of the Taupulega in 1994, which included an increase in its work force and the transfer of TPS unskilled workers to become employees of the Taupulega.

Therefore, the number of persons in the paid labour force has increased between 1991 and 1996 by 62 persons, from 424 to 486 people (36 men and 26 women), which has to be associated with an increase of paid job opportunities, such as paying people for sweeping the village and collecting garbage.

**Table 13: Labour force status, Tokelau, 1991 and 1996**

	Males		1991		Total		Males		1996		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Labour force</b>	377	89	318	66	695	77	357	85	233	51.9	590	68
paid labour force	294	69	130	27	424	47	330	79	156	34.7	486	56
unpaid labour force	83	20	188	39	271	30	26	6.2	77	17.1	103	12
unemployed	-	-	-	-	-	-	1	0.2	0	0	1	0.1
<b>Non labour force</b>	48	11	162	34	210	23	59	14.1	215	47.9	274	32
<b>NS</b>	-	-	-	-	-	-	2	0.5	1	0.2	3	0.3
<b>Population</b>												
15 years and older	425	100	480	100	905	100	418	100	449	100	867	100

A comparison by gender reveals that 60 per cent of the labour force were men and only 32 per cent of the paid labour force were women. On the other hand, 75 per cent of the unpaid labour force and almost 80 per cent of those not in the labour force were women.

Of the 274 people not in the labour force, classified as not being economically active, 151 are women doing housework. In the 1996 census, there was no man who mainly did housework.

#### **4.5.2 Occupation**

From Table 14, it can be seen that the major change in occupational groups between the last two censuses took place in categories of agricultural workers, tradespersons, village craftspersons and other village workers. These changes can be explained by the

fact that to keep the people in Tokelau, the Council of Faipule has increased Taupulega's work force and introduced a system of paying people for activities that were in previous years carried out by unskilled workers of the TPS on a voluntary basis. For example, people who classified themselves as agricultural workers in 1991 because their only (cash) income came from subsistence activities, classified themselves as village workers in 1996 as they received (casual) payments for public works. Therefore, people who described themselves as 'other village workers' in the 1996 census were divided as agricultural workers, tradespersons and village craft workers in 1991. By comparing these groups together, it can be seen that there were 33 more people (all men) in these categories in 1996 than in 1991. Otherwise, in 1996, there were slightly more service, sales, and administrative and managerial workers than in 1991. On the other hand, there were less professional and technical workers, and also less clerical and related workers.

**Table 14: Occupation by sex of those in the paid labour force, full time or part time, Tokelau, 1996**

	1991			1996		
	Males	Females	Total	Males	Females	Total
<b>Paid labour force</b>	<b>294</b>	<b>130</b>	<b>424</b>	<b>330</b>	<b>156</b>	<b>486</b>
Professional, technical, related workers	23	56	79	27	43	70
Administrative/managerial workers	12	2	14	13	9	22
Clerical and related workers	15	14	29	5	17	22
Sales workers	4	6	10	8	5	13
Service workers	16	18	34	20	20	40
Agricultural workers	114	5	119	3	0	3
Tradespersons	100	6	106	45	2	47
Village craftspersons	5	21	26	1	0	1
Other village workers	-	-	-	203	30	233
Not stated	5	2	7	5	30	35

One hundred and seventy-eight (36%) of the paid labour force were permanent, salaried employees of the TPS, 105 men and 73 women (Table 15). This is an increase of 50 people compared to 1991. Most of the TPS members were professional and technical people (37%) and tradespersons (17%), including supervisors of public works and skilled workmen. Although men outnumber females in the TPS, there were more female professional and technical workers and clerical and related workers.

**Table 15: Occupation of permanent salaried members of the TPS by sex, Tokelau, 1996**

Occupation	Male	Female	Total
Professional, technical, related workers	24	42	66
Administrative/managerial workers	13	8	21
Clerical and related workers	5	14	19
Sales workers	5	2	7
Service workers	16	5	21
Agricultural workers	2	0	2
Tradespersons	28	2	30
Village craftspersons	0	0	0
Other village workers	11	0	11
Not stated	1	0	1
Grand total	105	73	178

#### IMPLICATIONS FOR PLANNING

- The number of people in the labour force has not only decreased in numbers between 1991 and 1996 (-105), but also proportionately for the population 15 years and older. The economically active population of the people 15 years and above has decreased by 9 per cent in five years, from 77 per cent in 1991 to 68 per cent in 1996.
- This decrease, however, was only reflected in a decrease of people in the unpaid labour force. People working without pay (unpaid village or family work) have decreased by 168, from 271 in 1991 to 103 in 1996. This development was due to the previously described re-empowerment of the Taupulega when it decided in 1994 to increase its work force.
- The decline of people in the labour force is not reflected in a reduction of paid jobs, as illustrated by the increase of people in the paid labour force. Between 1991 and 1996, 62 more paid jobs have been created! The proportion of the population 15 years and older in the paid labour force has increased from 47 per cent in 1991 to 56 per cent in 1996.
- The decrease of the proportion of people in the labour force has by definition to be accompanied by an increase of the proportion of people in the non-labour force. It is interesting to see that this increase is mainly due to an increase of women defined as not being economically active. While only 34 per cent of all women in 1991 were not economically active, this percentage has increased to 48 per cent in 1996! This development can only be explained by the fact that many women who did paid or unpaid work in 1991 are doing mainly housework in 1996, which is defined as a 'non-economic' activity.

### 4.5.3 Household income

The main source of income in Tokelau is from the Tokelau public service in the form of permanent salaries or wages (Table 16). Another important source of income is the old age pension that is provided by the Tokelau Government to all people over 60 years of age. Furthermore, government superannuation is also paid by the Tokelau Government to retired permanent members of the TPS. The Tokelau Government also pays allowances to persons attending local or national meetings. Eleven per cent of all households have at least one member receiving such allowances on a regular basis.

However, when analysing income in Tokelau, it must be kept in mind that the production system is based predominantly on traditional subsistence activities, which include fishing, agriculture (coconuts, copra, breadfruit, taro, banana, pandanus etc.), raising and selling of chicken and pigs, and the sale of handicrafts.

As no questions were asked on the level of income in the 1996 census, only the source(s) of income per household can be established.

Forty-four per cent of all households have at least one member who receives a regular TPS salary, and 60 per cent of households have at least one person earning an income from casual work for the Taupulega village work force. Thirty-five per cent of the households have at least one household member who receives a pension (a pension of NZ\$27.50 per month is paid to every person older than 60 years of age). Eleven per cent of all households get some sort of regular financial support from other households, and an additional 7 per cent are sometimes supported by other households. Regular income from the sale of subsistence activities seems to be minimal compared to all other income sources. However, 33 per cent sometimes (several times a year) earn money from the sale of handicrafts or pigs and chickens. Only 2.4 per cent of all households receive regular overseas remittances, yet 32 per cent occasionally receive overseas remittances.

**Table 16: Source of household income, Tokelau, 1996**

	Regularly		Sometimes/rarely		Never		Total total HH
	total HH	% of all HH	total HH	% of all HH	total HH	% of all HH	
Regular TPS salary	111	44.0	0	0.0	141	56.0	252
Wages from Taupulega work force	150	59.5	4	1.6	98	38.9	252
Allowances*	28	11.1	5	2.0	219	86.9	252
Remittances from overseas	6	2.4	80	31.8	166	65.9	252
Contributions from other households	27	10.7	22	8.7	203	80.6	252
Sale of							
copra	0	0.0	1	0.4	251	99.6	252
handicrafts	13	5.2	55	21.8	184	73.0	252
pigs/chickens	4	1.6	29	11.5	219	86.9	252
fish	3	1.2	2	0.8	247	98.0	252
Pensions	87	34.5	0	0.0	165	65.5	252
Government superannuation	14	5.6	0	0.0	238	94.4	252
Other	30	11.9	14	5.6	208	82.5	252

\* Allowances are mainly paid for attending meetings.

Another direct or indirect source of income is raising animals, such as chickens and pigs. Appendix Tables 5–7 show the number of households raising animals per atoll, the proportion of households raising animals, the total number of animals and the average number of animals per animal-raising household. Almost 2000 pigs (sows and boars) and 3000 chickens were counted in the 1996 census.

By far the most animals (pigs and chickens) are raised in Fakaofu, followed by Nukunonu and Atafu. In Fakaofu, a much higher proportion of all households raises livestock. About 80 per cent of all households in Fakaofu raise pigs and 69 per cent have chickens. This percentage is considerably lower in Nukunonu, and even more so in Atafu, where only about 58 per cent of all households raise pigs and 61 per cent raise chickens.

Although there does not seem to be a significant difference in the average number of livestock per household, Fakaofu has the most animals per household. Comparing the average number of animals per household in 1991 to 1996, it seems that the number of livestock has increased during the intercensal period.

#### IMPLICATIONS FOR PLANNING

- As the main provider of income in Tokelau is the Tokelau Government (TPS), the disposable household income depends predominantly on whether and how many people per household are employed with the TPS.
- Apart from the TPS, another source of income is the Taupulega village work force. Every male person can join it and every member is entitled to a payment. As long as this system is in place, all people who are able and willing to join the Taupulega work force will have at least a small cash income. This system might be regarded as one of the important means and reasons for young people to stay in Tokelau, as they otherwise have to look for alternative employment opportunities overseas, which may be hard to find.
- The only other direct or indirect sources of income are the sale of handicrafts, remittances from overseas and the sale of natural resources Tokelau has to offer: fishing, agriculture and livestock (pigs and chickens).
- In contrast to Tokelau's image of being a very rural and traditional society, a traditional lifestyle, which is usually based on rural subsistence activities, is not reflected in income-generating activities.

## 5. POPULATION DYNAMICS

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### 5.1 Population growth

There are two ways for demographers to describe population growth. We speak of *natural increase*, when describing population increase as the result of births and deaths only. Growth occurs when the number of births in a given time period (such as a calendar year) exceeds the number of deaths. Negative growth, or population decline, occurs when the number of deaths exceeds the number of births. In other words:

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

Throughout the world and throughout time, population growth is and has been shaped by a further component: migration. In most countries, and particularly in many island countries of the Pacific, migration is a major contributing factor to a country's population dynamic. In such circumstances we cannot only look at natural increase. Overall population growth defines the change in a country's population as the result of births, deaths and migration. Migrants are those people who come into the country in order to settle or seek residency (whether or not permanent), the immigrants, and those who leave the country to seek residency (permanent or not) in a foreign country, the emigrants.

The term 'net migration' refers to the sum of the immigrants minus the emigrants.

This relationship is readily summarised in what is commonly referred to as the 'balancing equation':

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

The most basic demographic measures 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.

For Tokelau a total of 256 registered births during the intercensal period 1991–1996 translates into an average CBR of 33.1. A total of 64 registered deaths during the same period translates into an average CDR of 8.2. By subtracting the number of deaths from the number of births, the total natural increase is obtained:  $256 - 64 = +192$ . This means that the population of Tokelau has shown a natural increase of 192 people between 1991 and 1996 (Table 17 and Appendix Table 8). By subtracting the CDR from the CBR, the *rate of natural increase* is obtained as stated above:  $\text{CBR (33.1)} - \text{CDR (8.2)} = 24.9$  per 1000, or, expressed in the more frequently-used percentage term: 2.49 per cent per year.

Despite Tokelau's positive rate of natural increase, the population declined from 1577 to 1507 between 1991 and 1996, a decrease of –70 people, which translates into an overall population growth rate of –0.9 per cent per annum.

The number of total net migrants of the intercensal period can be calculated by subtracting the natural growth of the population (+192) from the overall difference in population change between 1991 and 1996 (–70):

$$\text{Total net migration} = -70 - (256 - 64) = -262$$

In other words, between 1991 and 1996, 262 more people have left Tokelau than have arrived. This is an average of 52 people a year.

By applying the corresponding rates in the intercensal period to the balancing equation, we obtain the *crude net migration rate* (immigration–emigration):

The intercensal growth rate has been –0.9 per cent and the average CBR and CDR of the intercensal period were 33.1 and 8.2 (per 1000), respectively:

$$\text{Net migration rate} = -0.9 - (3.31 - 0.82) = -3.4 \text{ (or 34 per 1000)}$$

The calculations can be done for every single atoll as well, of course, as shown in Table 17 and Appendix Table 9.

**Table 17: Number of births, deaths and net-migrants and overall population change between 1991 and 1996 in Atafu, Nukunonu, Fakaofu and Tokelau**

	Atafu	Nukunonu	Fakaofu	Tokelau
Births	95	61	100	256
Deaths	22	23	19	64
Net migrants	-117	-45	-100	-262
Overall change	-44	-7	-19	-70

#### IMPLICATIONS FOR PLANNING

- The negative population growth rate of Tokelau is brought about by a relatively high natural growth and a high negative net migration rate. Without migration, the population of Tokelau would double in 28 years. The high natural growth is the result of a relatively high birth rate. Tokelau's women bear on average about five children, as will be shown in the next section. However this high rate of natural growth is more than counterbalanced by the high rate of negative net migration. While 256 births were registered between 1991 and 1996, 262 people have left Tokelau during the same time. Together with 64 registered deaths, this amounts to a total population decline of 70 people during the five-year intercensal period.
- The most extreme in this regard has been Atafu with a high birth rate of 36 per 1000 and a very high migration rate of 45 per 1000, which explains the highest negative growth of all Tokelauan atolls (–1.7%).
- As the Tokelau population has steadily declined during the last 10 years despite its high birth rates, the Government might want to evaluate these developments to find out the reasons why its people leave (lack of employment opportunities, education, possible general dissatisfaction with life in Tokelau etc.) and determine ways to address the situation. As the main destination area will be New Zealand, the people of Tokelau can compare their situation with the Tokelauans in New Zealand with the help of this profile.

## 5.2 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 number and age of women; populations without many women, particularly women in child-bearing ages, will have fewer births than a population with a large number of women in child-bearing ages);
- fecundity (biological or physiological ability to reproduce);
- age at cohabitation or marriage (as child-bearing, in most countries, is usually closely linked to marriage or cohabitation, the age when men and women begin to live together has an obvious bearing on fertility);
- availability and use of family planning (populations that have access to, and regularly use, family planning methods have lower fertility rates than those where access is limited or denied, thus interfering with regular and efficient use);
- psycho-social and cultural context (this includes practices such as post-partum abstinence and breastfeeding, as well as value and belief systems concerning concepts of ideal family size, and the perceived 'value' of children);
- economic development; and
- status of women (place in society, level of education, work status; based on 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, besides migration, the demographic component which has the biggest impact on a country's age-sex composition, as the composition and size of different age-groups depend largely on birth rates. Populations become older with falling birth rates, since these reduce the proportion of children.

All women older than 15 years of age were asked in question 21 about how many live births they have ever had, how many boys and girls, how many of those were still living at the time of the census, their age at time of their first birth and the date of their last birth, and whether their child was still alive.

In the 1996 Tokelau census, 52 children were counted under one year of age. At the same time, 56 children were reported to be born in the year before the census, of which two have been recorded as dead. By cross-checking the data it seems quite possible that two of the reported births in the year prior to the census might have already been older than one year due to age *mis-reporting*<sup>1</sup>, and another three were either not in the country during the census enumeration or were not reported to have died. Three of those children under one year of age enumerated in the census have not been reported born, due to the fact that their mothers were either not present at the time of the census or they did not state their birth.

These cross-checks were possible by comparing the date of birth of enumerated persons with the date of last birth as reported by mothers.

During the intercensal period 1991–1996, 256 births were registered in Tokelau, which is an average of 51 per year. By comparing the reported number of births in the year before the census (56) with those registered, this appears to be too high, especially as there has been a decrease of births during recent years (Appendix Table 8). However, the number of births reported in the census includes those which took place overseas, and therefore were not registered in Tokelau. Five of the 52 children younger than one year of age were born overseas: two in New Zealand, two in Samoa and one in Fiji.

Another way to cross-check the reported number of births in the census is by comparing it to the enumerated population under five years of age. In the 1996 census, 223 children in the age group 0–4 years were counted, which means that on average at least 45 children must have been born per year during the last five years to account for the population five years and younger. This number, however is already affected by migration and mortality, and therefore must be regarded as the absolute minimum.

From the number of children ever born and the calculated average parities (average number of children ever born by each age group of women), it seems that childbearing in Tokelau more or less stops at age 40, and women are no longer going to have more than four children (Table 18 and Appendix Table 10). From the ASFR, however, it can be seen that this is not the case. From the birth history of the year before the census, it can be seen that women older than 40 still gave birth.

The demographic indicator most commonly used to describe a country's fertility situation is called the *Total Fertility Rate* (TFR). This measure is an indication of the average number of children a woman would give birth to during her reproductive life (15–49 years of age) if she was subject to the present fertility level and pattern during her entire reproductive life. It is calculated from the number of live births by age of women in a given year, the *Age Specific Fertility Rates* (ASFRs). 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. Data usually come from vital or registration systems. Where such information is not available or considered incomplete or untimely, data of censuses or specific surveys are used.

For Tokelau, a TFR of 5.67 for the intercensal period 1991–1996 is estimated. This estimate is based on the average *fertility pattern* (ASFRs) as reported in the 1991 and 1996 censuses, and the estimated mid-period number of women by age. The *level of fertility* (TFR) is chosen in order to match an estimated average annual number of 56 births for the intercensal period (Appendix Table 11). This estimate is based on the registered number of births for the years 1991 to 1996 plus an estimated 10 per cent accounting for births which might have taken place overseas (five children younger than one year of age and living in Tokelau were born overseas). The registered number of births is not used because it is considerably lower than the number of births reported to have occurred in the year prior to the census (56) and also lower than the population younger than one year of age (52) which were born in the year before the census, either in Tokelau or overseas. As can be seen from Appendix Table 8, only 44 and 45 births were registered in 1996 and 1995, respectively.

**Table 18: Average number of children ever born by age of women (average parities) and estimated ASFRs and TFR, Tokelau, 1996**

Age of women	Average parities 1996	ASFRs and TFR 1991/1996
15-19	0.000	0.0825
20-24	0.702	0.2112
25-29	1.926	0.2961
30-34	3.000	0.2937
35-39	3.935	0.1508
40-44	3.976	0.0819
45-49	3.962	0.0182
<b>TFR</b>		<b>5.67</b>

From the ASFRs it can be seen that childbearing mainly takes place at ages 25 to 35. Even though no births were reported by women younger than 20 years of age in the census, some births are estimated to have occurred in this age group of women, as can be seen from the reported age at first birth (Appendix Table 12). More than 12 per cent (55 women) of all women have had their first birth when they were younger than 20 years of age.

By comparing the number of births by atoll to their respective total population (CBR) and to their respective number of women at childbearing age (GFR), it can be seen that Atafu and Fakaofu have a considerably higher fertility level than Nukunonu. In Appendix 13, the CBRs and GFRs are displayed. They show a comparison of the number of births in relation to the total number of people (CBR) and to the total number of women in their childbearing ages (GFR). Generally it can be said that the higher the CBR and GFR, the higher is the level of fertility (although the age structure of the population is not accounted for).

#### IMPLICATIONS FOR PLANNING

- Although the Tokelau population is declining despite the high level of fertility, the high birth rate might be the reason that people emigrate, as a high natural growth rate puts pressure on Tokelau's land and resources. It might not be a coincidence that the number of births and the number of migrants are of similar size (Table 17).
- A continued high fertility of more than five children per woman would have the following consequences for Tokelau and on its population and development planning and policies:
  - \* a continued high natural growth rate which, in the absence of migration, would cause the Tokelau population to double in less than 30 years;
  - \* the country's population would remain very young (as it produces a high proportion of children);
  - \* a continued high number of school children (involving teachers, school classes and teaching materials etc.); and
  - \* in the long term, a continued pressure on the Tokelau Government to provide jobs for school leavers.
- If the Government wishes to promote a reduced number of children per woman, in light of the continued high fertility, provisions need to be made for easy access to family planning services by both males and females in order to raise the contraceptive prevalence rate. This would include:
  - \* improving the awareness, knowledge, acceptability, availability and degree of satisfaction of family planning methods and services, especially amongst men and women of childbearing age and adolescents. In order to raise the level of contraceptive usage; this would involve information and counselling services throughout the villages offered by community and health workers.

### 5.3 Mortality

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

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

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

Two questions in the 1996 census were related to mortality:

1. whether the real father and mother of the respondent were still alive; and
2. recorded number of live-born children, and whether or not they were still alive.

Although the possibility of random fluctuations is very high when dealing with very small numbers, as is the case with the Tokelau data, in general it can be said that Tokelau women have a higher probability of surviving to certain ages than men. Comparing data of children ever born and surviving, 93 per cent of all females were still alive compared to only 91 per cent of all males. Although the percentage of children alive seems very high, it has to be kept in mind that these numbers are only based on responses of surviving mothers (Appendix Table 14).

Comparing data on the survival of parents, 78 per cent of the people have reported that their mothers were still alive, compared to only 74 per cent of their fathers (the difference has to be partly explained by the fact that mothers are usually younger than fathers (their spouses) (Appendix Table 15).

The Infant Mortality Rate (IMR) is the most common and basic measurement of early age mortality. It measures the number of deaths of children under one year-old in relation to 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 in the year before the census and the number of deaths having occurred of those born. Two women reported the deaths of their infants in the 1996 census. Applying them to the total of 56 births would give an IMR of about 36. This number should be regarded as a low estimate, as

there might have been more unreported deaths, and the real number of births has probably been slightly lower than 56, as this possibly includes births of children older than one year (age mis-reporting). Information on the number of infant deaths during the last few years is only available from Nukunonu, where four infant deaths were reported between 1991 and 1996. During the same time, 61 births have been registered. Four infant deaths out of 61 births translates into an Infant Mortality Rate (IMR) of 66, which is quite high.

Mortality indicators can be estimated by using the information gathered during a census and calculating the proportion of persons by sex and age-group who have survived until a certain age. In a very small population such as Tokelau, however, the available methodologies are not very suitable to be applied to such a small data set, and the mortality indices have to be treated with great caution. However, indirectly estimating childhood mortality by using data on children ever born and children surviving (by age group of mother), the following mortality indices have been obtained using the UN's software package MORTPAK3.0 (Appendix Table 16): The estimated IMRs for males and females around 1990 were 42 and 33 (about 38 for both sexes combined), and the estimated life expectancy at birth for males and females were about 67.8 and 70.4 years.

Although the indices obtained by using indirect estimation techniques are far from perfect (considering the very small data set), the values show some inherent consistency and are comparable to those of neighbouring countries such as Tuvalu and Samoa.

#### IMPLICATIONS FOR PLANNING

- The foremost consequence of improved mortality rates is healthier people living longer lives. To achieve this goal the following efforts should be made:
  - \* improving infant, child and maternal health by improving primary health care programmes;
  - \* expanding programmes of immunisation and improved nutrition; and
  - \* providing a hygienic and safe living environment.

## 5.4 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. The people involved are referred to as migrants. We speak of immigration if they are moving into a country and emigrants 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 this spatial consideration, time plays a major role. 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 a particular person qualifies as a migrant or not can only be established *post facto* (after the fact). Planners need to base their decisions on past and projected movements of people.

### 5.4.1 Internal migration

More than 98 per cent of the Tokelauan population's usual place of residence was at the place of enumeration. Internal migration in Tokelau seems to be restricted to students from Atafu and Nukunonu attending Form 5 classes in Fakaofu, the annual rotation of the Fono/Faipule, and at marriages the movement of the spouse to join her or his newly-wed.

### 5.4.2 International migration

The declining trend of the total population since 1986 reveals that the net balance of emigrants + immigrants during the last 10 years must have been negative. Applying the growth balance equation, section 4.1 has shown that 262 more people left Tokelau than arrived during 1991 and 1996, about 52 people a year. The 1996 New Zealand census states that 258 people arrived in New Zealand during the five years before the census, which is also an average of 52 people! The New Zealand census has shown that 84 of them came in the year before the census. The trend shows an increase of migrants from Tokelau during recent years.

Table 19 attempts to reveal age and sex-specific migration rates of the Tokelauan population. The migration rates show the proportion of certain age groups that have migrated during certain periods, in this case between 1991 and 1996. This has been done by simply comparing the different birth cohorts of the 1991 and 1996 censuses. For example: the 15–19-year-old people in 1991 are, five years later in 1996, 20–24-year-olds. By subtracting the number of the 20–24-year-olds as enumerated in 1996 from the 15–19-year-olds as enumerated in 1991, the net growth or decline of this group of people can be established. As deaths by age were not available, these could not be taken into consideration, which normally should be done, as a certain number of people in every age-group would have died during the intercensal period. Normally, in certain age-groups deaths occur more than in others, for example the youngest age-group including the newly-born infants with a high rate of mortality, and of course the older age-groups.

Often adolescent boys and men are exposed to greater risk factors related to dangerous and unhealthy behaviour. However, by assuming that deaths have occurred evenly distributed throughout the population, the net migration rates as displayed in Table 19 have been calculated.

Even if the exact rate might not be accurate, at least a pattern can be shown. The distribution by males and females is fairly even. As might have been expected, it is mainly the 15–19-year-olds who have left Tokelau, probably for educational purposes. The relatively high rate of 5–14-year-olds points to the importance of family migration, as children of that age usually do not travel alone.

**Table 19: Estimated percentage distribution of 262 net migrants of the period 1991–1996 by age and sex, Tokelau, 1991–1996**

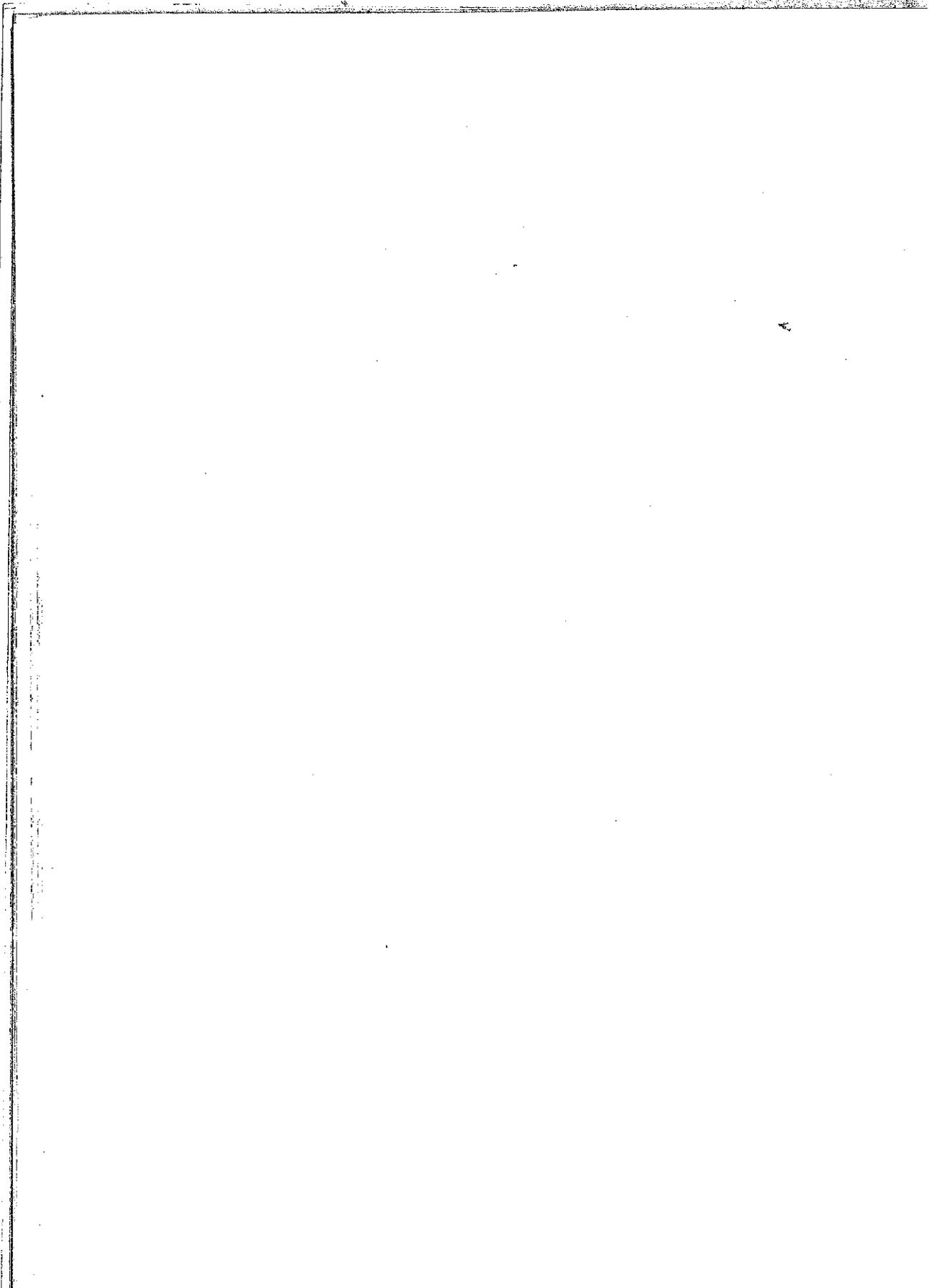
Age group	Males (%)	Females (%)	Both (%)
0–4	–6	–4	–10
5–9	–8	–6	–14
10–14	–5	–7	–12
15–19	–14	–12	–26
20–24	–4	–2	–6
25–29	–4	0	–4
30–34	–1	–2	–3
35–39	–2	0	–2
40–44	–1	–3	–4
45–49	0	–4	–5
50–54	0	0	0
55–59	–1	–1	–2
60–64	–2	–2	–4
65–69	–3	–5	–8
<b>Total</b>	<b>51%</b>	<b>49%</b>	<b>100%</b>

Note: the migration rate of the very young and old population might be overestimated, as the estimation procedure did not account for the number of deaths, which mainly occur in these age groups.

People, however, have also moved into Tokelau from other countries. About 16 per cent of Tokelau's population have not been born in Tokelau. Six and 7 per cent were born in New Zealand and Samoa respectively, and the rest somewhere else (Appendix Table 17). Forty-three people who have lived overseas before (most of them from Samoa and New Zealand), arrived in Tokelau in 1996, during the 10 months before the census. These data, however, reveal little about whether these people have returned from a visit overseas or are arriving for the first time.

#### IMPLICATIONS FOR PLANNING

- With a continued high natural growth rate, Tokelau's population decline since 1966 in general and 1989 in particular (Figure 1), is due to a high net-emigration of Tokelauans, primarily to New Zealand. There seems no immediate indication that this trend is going to reverse in the near future.
- While the people who leave Tokelau offset the consequences of a high natural growth, those who leave are mostly people in their working ages and could be considered as a loss of human resources for Tokelau.
- On the other hand, people who migrate seeking better employment opportunities might send home remittances which could contribute to improving living standards at home. However, migrants in the country of destination usually compete for low-paid jobs, which do not leave much income to remit.
- As not much return migration occurs from New Zealand back to Tokelau, Tokelauan migrants in New Zealand seem to prefer New Zealand despite their seemingly disadvantaged situation compared to the overall New Zealand population.



## 6. HOUSING CHARACTERISTICS

### 6.1 Housing structure

Three main types of dwellings were recorded in the census: the traditional Tokelauan fale, the European style house, or a mixture of both.

The main materials used for the floors are: concrete (72%), wood (15%) and coral pebbles (11%). The main materials used for the walls are: concrete (50%), wood (45%) and open posts or blinds (3%). The roofs in Tokelau are almost universally made of roofing iron (98%), a necessity to collect rainwater given the absence of a wider water supply system (see 5.2).

**Table 20: Main materials used for walls and floors, Tokelau, 1996**

	Open posts/blind		wood		Walls concrete		other		total	
	total	%	total	%	total	%	total	%	total	%
<b>Floor</b>										
coral pebbles	4	1.6	22	8.7	3	0.4	2	0.8	29	11
concrete	1	0.4	59	23	121	48	1	0.4	182	72
wood	3	1.2	33	13.0	1	0.4	0	0	37	15
other	0	0	1	0.4	5	2.0	0	0	6	2.4
<b>Total</b>	<b>8</b>	<b>3.1</b>	<b>115</b>	<b>45</b>	<b>128</b>	<b>50</b>	<b>3</b>	<b>1.2</b>	<b>254</b>	<b>100</b>

Only nine (4%) of all dwellings were described as Tokelauan fales. However, from Table 20 and 21 it can be seen that 65 dwellings were built using exclusively non-concrete materials for their walls and floor, representing 26 per cent of all houses. Eighty-two per cent of all dwellings were described as European and the rest were a mixed style.

The reason for the large number of European or mixed style houses is that houses destroyed by cyclones have been rebuilt using European or mixed designs. The Tokelau Government has agreed to pay up to NZ\$ 9000 of the costs of the materials and construction of a house. This is part of the housing scheme in Tokelau.

While 72 per cent of all houses have concrete floors and half of all houses have concrete walls, only 48 per cent are made of 'permanent' materials and have concrete floors and concrete walls.

The rest of the houses, 68 or 27 per cent, were made of a combination of wooden, concrete or coral pebble floors and wooden or concrete walls.

There are some distinct differences between the three atolls in materials used for the houses. Only 62 per cent of all houses in Nukunonu have concrete floors compared to 72

and 79 per cent in Atafu and Fakaofu. Seventy-eight per cent of all walls in Fakaofu are made of concrete. This percentage is only 29 and 43 per cent in Atafu and Nukunonu.

**Table 21: Number and proportion of dwellings with concrete, non-concrete and a mixture of styles of materials used for floors and walls, Tokelau, 1996**

	Atafu		Fakaofu		Nukunonu		Tokelau	
	total	%	total	%	total	%	total	%
<b>Floors and walls</b>								
concrete	26	28.3	63	72.4	32	42.7	121	47.6
non-concrete	25	27.2	13	14.9	27	36.0	65	25.6
mixed style	41	44.5	11	12.6	16	21.3	68	26.8
<b>Total</b>	<b>92</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>75</b>	<b>100</b>	<b>254</b>	<b>100.0</b>

The highest percentage of houses made of 'permanent materials' (concrete floors and walls) was in Fakaofu with 72 per cent (Table 21). This was significantly lower in Nukunonu and Atafu where it was only 43 and 28 per cent, respectively. The highest percentage (36%) of houses built of non-concrete materials was in Nukunonu. This was 27 per cent in Atafu and only 15 per cent in Fakaofu.

## 6.2 Water

Ninety-three per cent of all households in Tokelau have their own rain water tank as the main source of water, and 4 per cent share a water tank with another household. Three per cent have no direct access to a water tank and get their water from other households.

While almost all households (95%) in Nukunonu and Fakaofu have their own water tank, only 87 per cent of households in Atafu own a water tank. About 13 per cent share a tank with another household.

### 6.3 Energy

Eighty-six per cent of the Tokelauan households use a kerosene stove as the main source of energy for cooking. Four per cent use a gas stove and 9 per cent the Tokelauan umu. This overall picture is misleading as the Tokelauan umu is almost exclusively used in Fakaofu, where 22 per cent of all households use it for cooking, compared to 2 and 3 per cent in Atafu and Nukunonu, respectively. Seven per cent of all households in Nukunonu use gas stoves, while kerosene is the prime source of energy in Atafu (95%).

A community generator is used by 97 per cent of all Tokelauan households as the main source of electricity for lighting and for powering other household appliances such as freezers and videos. This service is usually only available for several hours in the early evening. The remaining households use their own generator. The very few households not being connected to the community generator use a Coleman or hurricane light. This overall picture does not vary by atoll.

## 6.4 Sanitation and hygiene

### 6.4.1 Toilet

Thirty-nine per cent of all Tokelauan households have a flush toilet available, either inside or outside of their dwelling (Table 22). The water for flushing the toilets is provided by their tank.

Another 9 per cent have a 'pour-flush' toilet (all of which are found in Fakaofu), inside or outside of their dwelling, into which water is poured to flush it. The majority however (52%) uses toilets 'above water', little huts built above the lagoon sides.

Table 22: Toilet facilities, Tokelau, 1996

	Atafu	Fakaofu	Nukunonu	Tokelau
Tank flush	27.2	57.4	32.8	39.3
private—inside dwelling	23.9	41.4	12.3	26.6
private—outside dwelling	2.2	14.9	20.5	11.9
public—share with others	1.1	1.1	0.0	0.8
Pour flush	0	26.4	0	9.1
private—inside dwelling	0	8.0	0	2.8
private—outside dwelling	0	18.4	0	6.3
Over water	72.8	16.1	67.1	51.6
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

As can be seen from Table 22, there are marked differences between atolls. The highest percentage of households using 'above water' toilets are in Atafu (73%) and in Nukunonu (67%), while the vast majority of households in Fakaofu have a tank or pour-flush toilet available. There are no pour flush toilets in Atafu and Nukunonu.

Fakaofu also has the highest proportion of households with a private toilet inside their dwelling (49%), the result of extreme land scarcity and fairly crowded living conditions. Only 24 and 12 per cent of households in Atafu and Nukunonu have their own private toilet.

### 6.4.2 Showers

Nearly all households in Tokelau have a shower available, whether inside or outside their dwellings or whether they share a shower with another household. Eighty-five per cent of all showers are private but outside of the dwelling, and 14 per cent of all households have a shower inside their dwelling.

The highest percentage of showers located inside dwellings is in Fakaofu, where 24 per cent of households have a shower inside their dwelling. This percentage is 11 in Atafu and 7 in Nukunonu.

### 6.4.3 Waste disposal

In order to assess an important environmental consequence of population growth, a question on 'waste disposal' was added for the first time to a Pacific Island census, and each household in Tokelau was asked what they do with their garbage. Six different ways of waste disposal were recorded: burning or burying, throwing it into the lagoon or ocean, public garbage collection, food for animals, or composting it.

Each household was able to identify several ways that they dispose of their waste. The results are summarised in Table 23.

**Table 23: Means of waste disposal as percentage of all households, Tokelau, 1996**

	Atafu	Fakaofu	Nukunonu	Tokelau
Burning	35.9	47.1	16.4	34.1
Burying	45.7	0.0	20.5	22.6
Lagoon/ocean	6.5	19.5	0.0	9.1
Public collection	44.6	0.0	98.6	45.2
Animal food	17.4	80.5	90.4	60.3
Compost	58.7	63.2	72.6	64.3

While each atoll has different ways of treating garbage, recycling in the form of composting and as animal feed plays a prominent role throughout Tokelau (Table 23). Although it seems that garbage collection is almost universal in Nukunonu, there is no garbage collection in Fakaofu. In Fakaofu the garbage is used as animal food, composted, burned or thrown into the lagoon or the ocean. In Atafu, a lot of the garbage is buried and burned and some of it is collected.

Households in Nukunonu do not seem to throw any of their garbage into the lagoon or ocean, the result of the well-organised garbage collection system.

## 6.5 Household goods and appliances

The availability of household appliances is often used as an indicator for the standard of living. Not only do the people have to have the financial means to purchase them, the use of electrical appliances can also be used as a measurement for energy consumption.

The overall number of appliances seems to have decreased since 1991 (Table 24). Nevertheless, the number of expensive and energy-consuming appliances like televisions and videocassette recorders, refrigerators and washing machines has significantly increased during the intercensal period. Furthermore, it seems that traditional canoes have been increasingly replaced by aluminium canoes.

**Table 24: Number of household goods and appliances per household, Tokelau, 1991–1996**

Goods/appliances	1996				1991	Difference 1991–96
	Atafu	Fakaofu	Nukunonu	Tokelau	Tokelau	
Radio	57	55	44	156	223	-67
Tape recorder	33	33	26	92	159	-67
TV and video	27	30	25	82	56	+26
Refrigerator/freezer	59	66	52	177	91	+86
Washing machine	33	35	29	97	77	+20
Sewing machine	29	42	36	107	112	-5
<b>Total</b>	<b>238</b>	<b>261</b>	<b>212</b>	<b>711</b>	<b>718</b>	<b>-7</b>
Traditional canoe	26	5	7	38	59	-21
Aluminium canoe	31	58	38	127	112	+15
Wooden boat	1	0	0	1	2	-1
Fibreglass boat	0	0	3	3	4	-1
Outboard motor	33	55	36	124	127	-3
<b>Total</b>	<b>91</b>	<b>118</b>	<b>84</b>	<b>293</b>	<b>304</b>	<b>-11</b>

As can be seen from Table 24 and 25, all the listed appliances (except fibreglass boats) are available on every atoll. However, the number of appliances per household vary by atoll (Table 25). Atafu has the least appliances per household (except traditional canoes) and Fakaofu has the most. The reason for the high number of aluminium canoes in Nukunonu and especially in Fakaofu can be explained by the fact that there are not enough suitable trees to build wooden ones.

Seventy per cent of all households in Tokelau have a refrigerator available, almost 40 per cent have a washing machine, and about half of all households have an outboard motor.

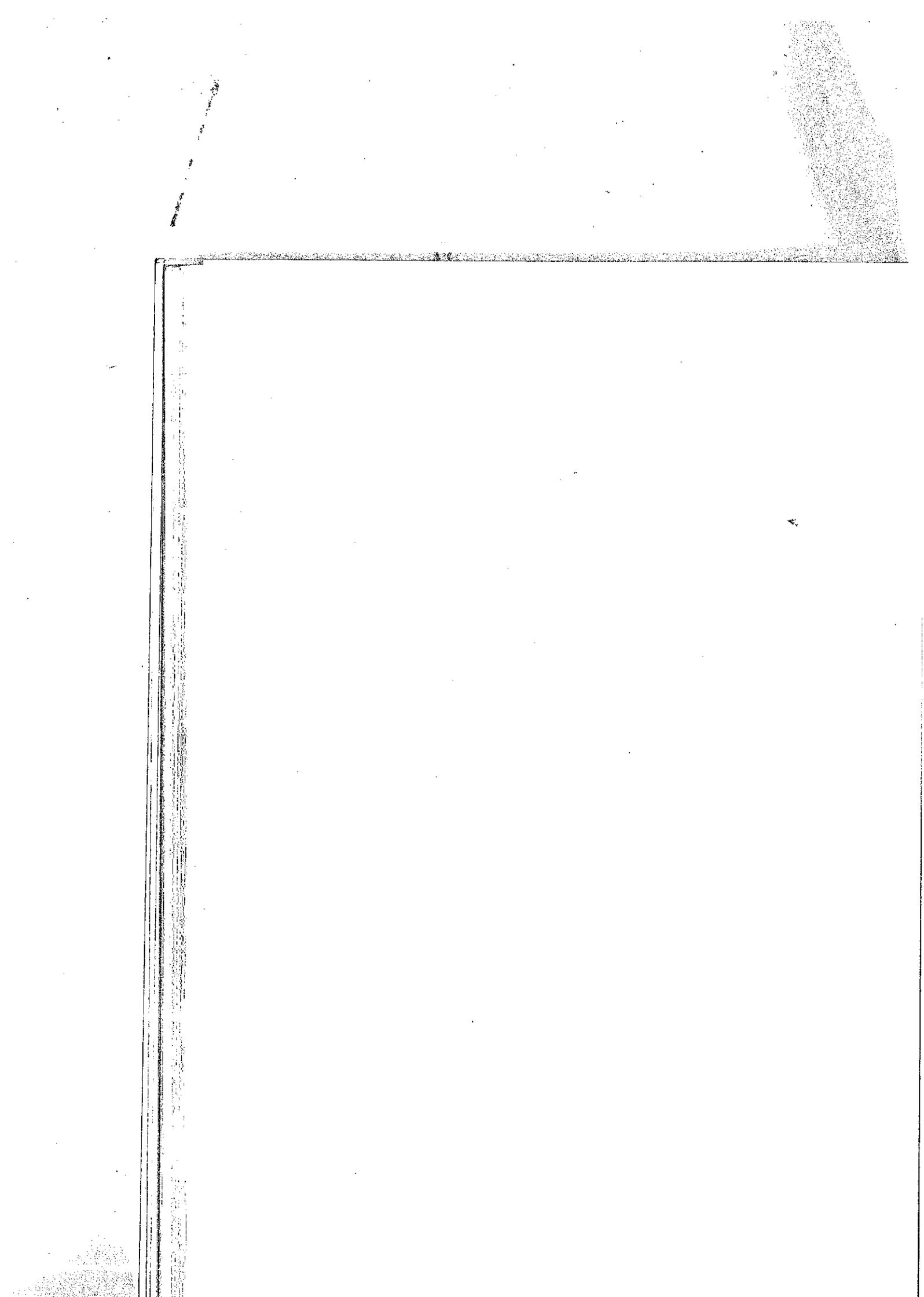
**Table 25: Number of household goods and appliances as a percentage of all households, Tokelau, 1996**

Goods/appliances	Atafu	Fakaofu	Nukunonu	Tokelau
Radio	62.0	63.2	60.3	61.9
Tape recorder	35.9	37.9	35.6	36.5
TV/video	29.3	34.5	34.2	32.5
Refrigerator	64.1	75.9	71.2	70.2
Washing machine	35.9	40.2	39.7	38.5
Sewing machine	31.5	48.3	49.3	42.5
Traditional canoe	28.3	5.7	9.6	15.1
Aluminium canoe	33.7	66.7	52.1	50.4
Wooden boat	1.1	0.0	0.0	0.4
Fibreglass boat	0.0	0.0	4.1	1.2
Outboard motor	35.9	63.2	49.3	49.2

#### IMPLICATIONS FOR PLANNING

- Given Tokelau's vulnerability in terms of small land area, exposure to periodic cyclones and sea-level rise, population and environment considerations assume a more critical importance here than almost anywhere in the Pacific.
- The very high percentage of houses made of 'permanent materials' (concrete, cement bricks, treated timber, corrugated iron sheeting) appears not so much an indication of wealth, or of a wish to display wealth, but a matter of necessity, considering both the regular exposure to cyclones and the absence of domestic timber resources. The big difference in housing styles between Fakaofu and Atafu, for example, reflects both very high-density living conditions and the absence of construction timber on Fakaofu.
- Availability of water affects everyone in Tokelau, with all households dependent on private rainwater catchment systems (tanks feeding off corrugated iron roofs), with no other source of fresh water available. With no major communal back-up storage tanks, this can pose a major health problem during periods of prolonged draught.
- With limited land resources available, and Tokelau's lagoons providing a major source of food, waste disposal is of critical importance in such a fragile environment. There are clear differences in waste management between the atolls: on Fakaofu, for example, 84 per cent of all households have access to a water toilet, compared to Atafu and Nukunonu, where more than two out of three households use the lagoon for waste disposal. A similar picture prevails regarding the disposal of household waste: while 'natural recycling' in the form of composting and animal feed are very popular on all three atolls, only Nukunonu appears to have a well-organised system of public collection in place.
- With community generators providing the main source of power to run domestic appliances, a noticeable increase of those in recent years, particularly of freezers (by almost 100%), has obvious fuel cost implications, and increasing overloads have led to repeated system breakdowns in recent years.

**PART II ♦ TOKELAUANS LIVING IN NEW ZEALAND**



## 1. INTRODUCTION

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This chapter is aimed at giving a brief summary of the situation of Tokelauans living in New Zealand, based on the 1996 New Zealand census of population and dwellings. This information could be used to assist in the formation of policy and for planning in Tokelau, particularly in the area of migration policy. Where appropriate, comparisons have been made with the total New Zealand population. These comparisons have been made in order to help place Tokelauans in New Zealand within the context of all New Zealanders. It should be noted that there are some significant differences between New Zealand-born and overseas-born Tokelauans living in New Zealand. Because of lack of space in this publication, these differences have not been explored in this chapter, however, a Statistics New Zealand publication due for release in 1998 will cover this issue in some detail.

## 2. POPULATION SIZE AND STRUCTURE

The 1996 census enumerated 4,917 Tokelauans living in New Zealand, 2,433 men and 2,484 women. In other words, more than three times as many Tokelauans lived in New Zealand in 1996 than in Tokelau.

As can be seen from Figure 4 and Appendix Table 18, Tokelauans in New Zealand have a young age structure. With half of this population aged less than 18 years, this compares to a slightly older median age of 20 in Tokelau, and much older median age of 33 years for all New Zealanders.

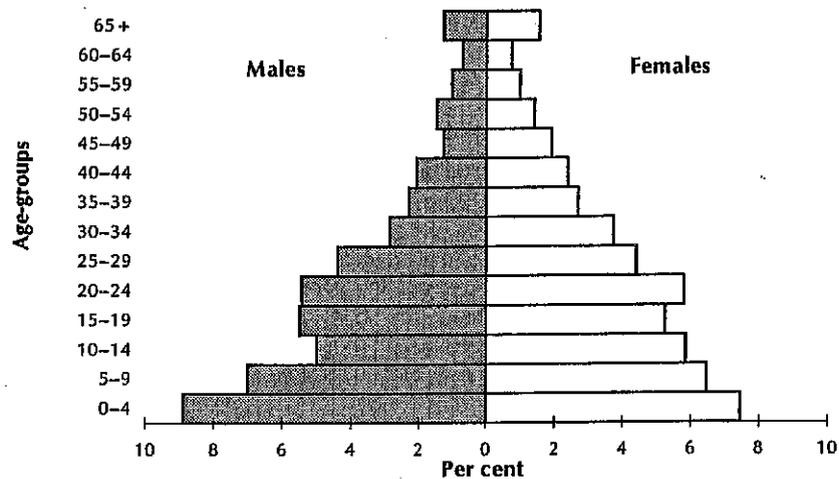


Figure 4: Age and sex pyramid for Tokelauans living in New Zealand, New Zealand, 1996

Since the 1991 census the number of Tokelauans living in New Zealand has increased by 771, or 18.6 per cent. The New Zealand population as a whole increased by 7.2 per cent over the same period. This equates to an average annual growth rate of 3.4 per cent for Tokelauans in New Zealand compared with 1.4 per cent for all of New Zealand.

### 3. DEPENDENCY RATIOS

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The dependency ratio gives a rough estimate of the number of dependent people (either children (aged 0–14), elderly (aged 65 and over), or both) compared with the 'economically active' population (the population aged 15–64 years). For Tokelauans in New Zealand the child dependency ratio was 72 children per 100 adults aged 15–64 years, the elderly dependency ratio was 5 elderly per 100 adults aged 15–64 years, and the total dependency ratio was 77 per 100. For the total New Zealand population the child dependency ratio was 35 children per 100 adults aged 15–64 years, the elderly dependency ratio was 18 elderly per 100 adults aged 15–64 years, and the total dependency ratio was 53 per 100. These figures show that Tokelauans in New Zealand have a much higher number of 'dependent' children but a much lower number of 'dependent' elderly when compared with all New Zealanders. Although their overall dependency ratio is higher, 77 per 100 compared with 53 per 100, it is concentrated in the younger age group, and is therefore seen as not such a heavy 'burden'.

## 4. FERTILITY

The 1996 New Zealand census asked women aged 15 and over how many live births they have had. Because of the sensitive nature of the question, women were given the option of objecting to answer; 6.5 per cent of Tokelauan women took this option. One way of looking at fertility with data for children ever born is to look at the average number of children women in different age-groups have given birth to (Appendix Table 19). Figure 5 compares the average number of children ever born by five-year age-group for Tokelauan women and for all New Zealand women. It shows that Tokelauan women are more likely to have ever had a child at all age-groups than all New Zealand women.

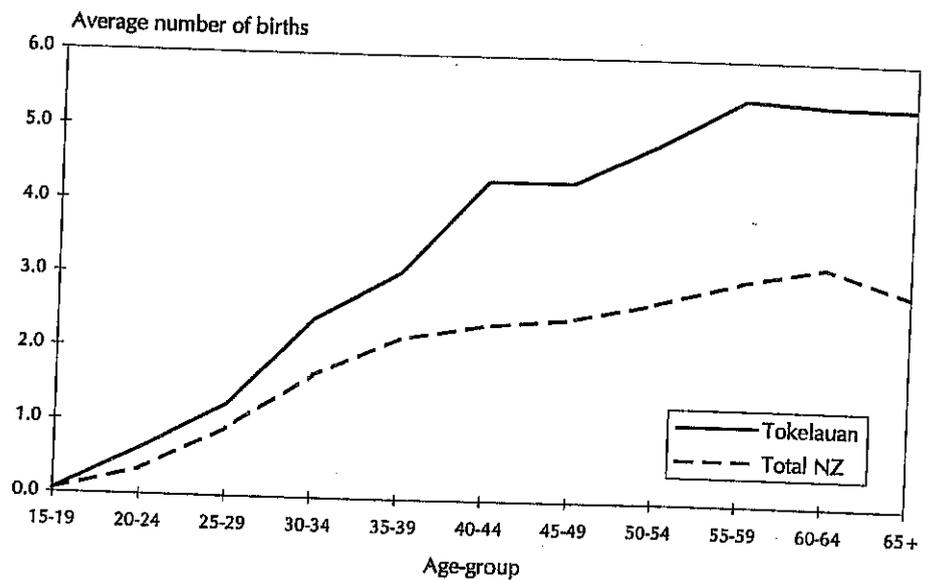
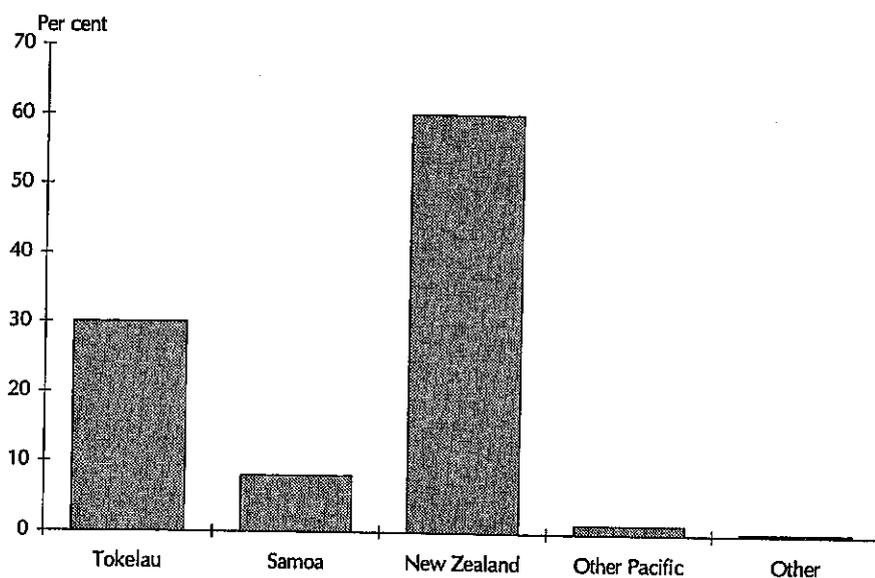


Figure 5: Average number of children ever born by age group for Tokelauan and all New Zealand women, New Zealand, 1996

## 5. BIRTHPLACE

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As can be seen in Figure 6, most (60%) of the Tokelauans living in New Zealand were also born there. Tokelau and Samoa were the other two main countries of birth for Tokelauans in New Zealand, with 30 and 8 per cent respectively.

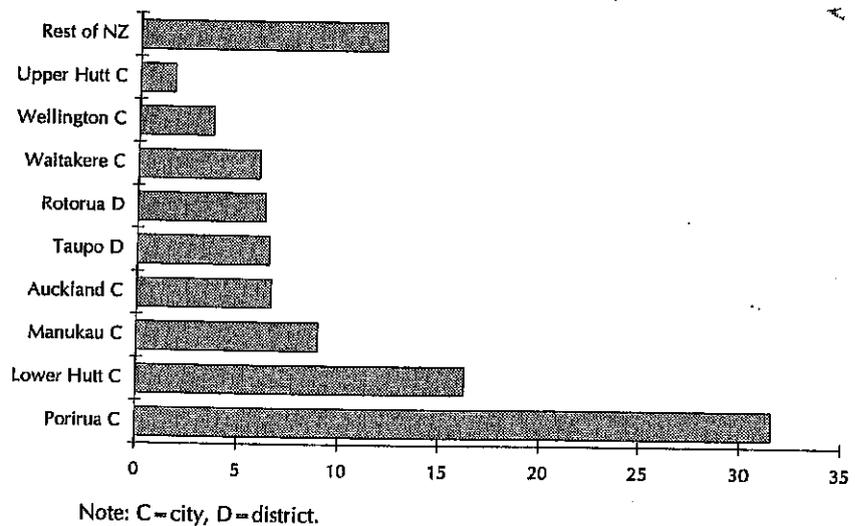


**Figure 6: Birthplace for Tokelauans living in New Zealand, New Zealand, 1996**

Of the Tokelauans born overseas, nearly half have lived in New Zealand for 20 years or more. Just 13 per cent of Tokelauans born overseas have lived in New Zealand for five years or less, and only 5 per cent for less than one year. These 5 per cent account for 105 people, of which 84 came from Tokelau.

## 6. POPULATION DISTRIBUTION

Tokelauans living in New Zealand are concentrated in a small number of areas. Nearly one-third (32 per cent) of Tokelauans live in Porirua City, and a further 16 per cent live in Lower Hutt (Figure 7). As might be expected from these figures, 90 per cent of Tokelauans live in urban areas with populations of 30,000 or more.



**Figure 7: Geographical distribution of Tokelauans in New Zealand, New Zealand, 1996**

## 7. FAMILIES AND HOUSEHOLDS<sup>2</sup>

### 7.1 Families

More than four out of five (88 per cent) Tokelauans in New Zealand lived as part of a family at the 1996 Census, compared with 77 per cent of the total population. The remaining people lived in non-family groups.

The most common type of family for Tokelauans in New Zealand and for all New Zealanders was of couples with children, at 55 per cent and 45 per cent of families, respectively. Some 32 per cent of Tokelauan families were made up of one parent and their child or children. This was almost twice as high as for New Zealand as a whole at 18 per cent.

As can be seen from Figure 8, 68 per cent of dependent Tokelauan children<sup>3</sup> lived in two parent with children families. This compares with 77 per cent of all dependent children in New Zealand. Almost one-third (23 per cent) of dependent Tokelauan children lived in one parent families, while this was the case for one-quarter (23 per cent) of all dependent children in New Zealand.

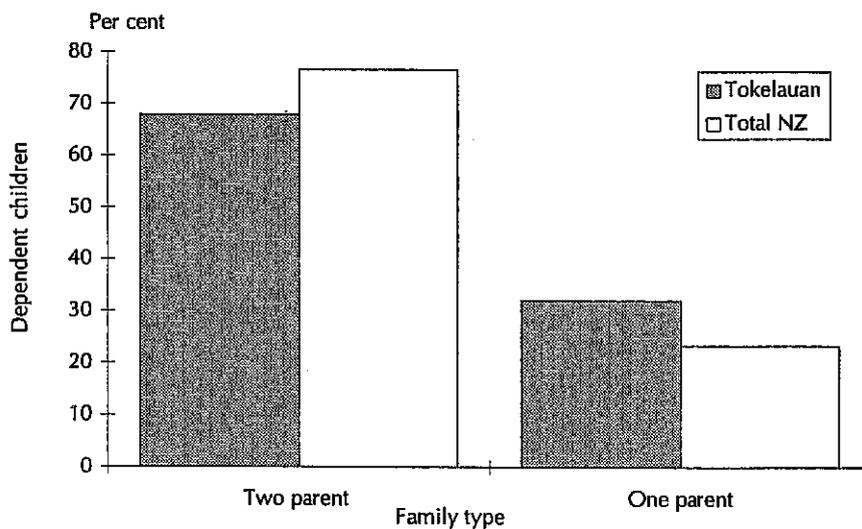


Figure 8: Dependent children by family type for Tokelauans and all New Zealanders, New Zealand, 1996

## 7.2 Households

Virtually all Tokelauans (96%) lived in family households at the 1996 census. Most Tokelauan households were made up of one family (71%) as were the majority of New Zealand households (69%), however, Tokelauan households were more likely than all New Zealand households to be made up of more than one family (Figure 9). Eighteen per cent of Tokelauan households contained two families while only 2 per cent of all NZ households did.

A further big difference between Tokelauan and all New Zealand households is that only 1 per cent of Tokelauan households were made up of one person, while 20 per cent of all NZ households contained one person. This may reflect the young age structure of the Tokelauan population, as old people are much more likely to live by themselves than young people.

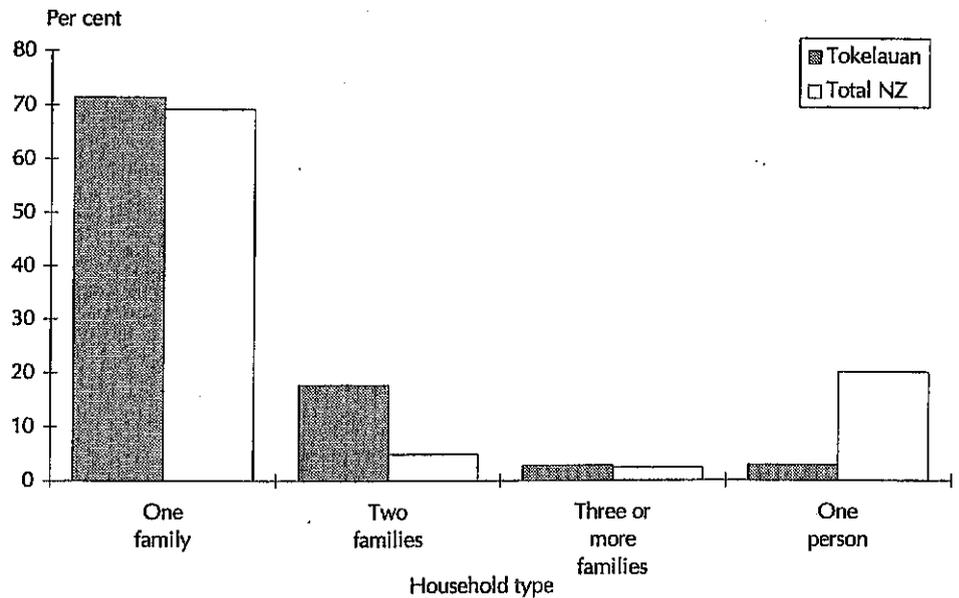


Figure 9: Household composition for Tokelauans and all New Zealanders, New Zealand, 1996

## 8. EDUCATION

Nearly half (48%) of Tokelauans aged 15 years and over had some sort of formal qualification, compared with 66 per cent of all New Zealanders. Tokelauan women were more likely than men to have a qualification, with 51 per cent of women and 44 per cent of men saying they had a qualification. Women were slightly more likely than men to have a qualification at all levels (See Figure 10). Compared with all New Zealanders, Tokelauans were more likely to have no formal qualification, and were less likely to have either a vocational or university qualification.

Overall, 18 per cent of Tokelauans studied either full- or part-time in the week before the 1996 census. Full-time study was more common than part-time study (13% and 4% respectively) and young people were far more likely to be studying full- or part-time than older people. Nearly half (48%) of all people studying full-time were aged 15 to 19 years, as were 43 per cent of those studying part-time.

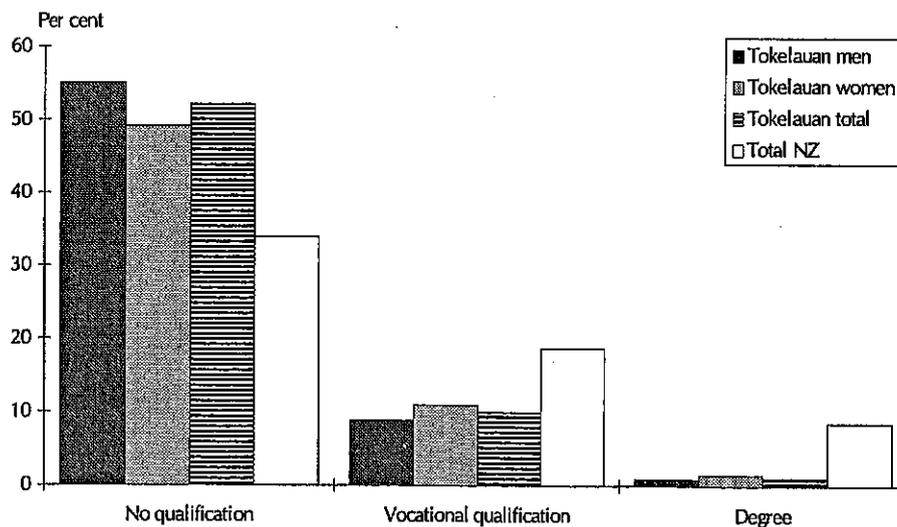
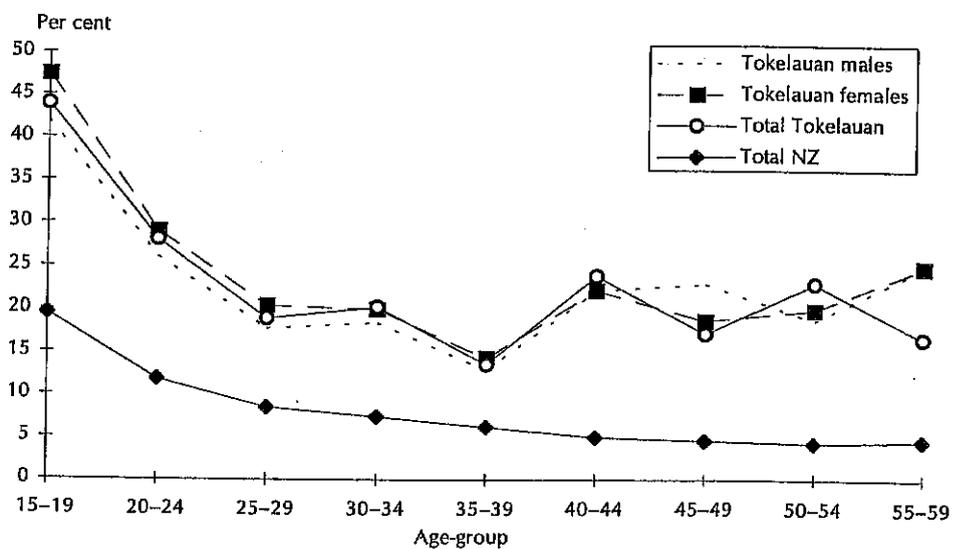


Figure 10: Educational qualifications by sex for Tokelauans and all New Zealanders, New Zealand, 1996

## 9. EMPLOYMENT

Of the 2,919 Tokelauans aged 15 years and over, 1,728 were either working full- or part-time or were unemployed, giving a labour force participation rate of 59 per cent (66% of men and 53% of women). 1,185, or 41 per cent, were not in the labour force. This compares with a labour force participation rate of 65 per cent for all New Zealanders (73% of men and 58% of women). Of those people in the labour force, 24 per cent were unemployed compared with 7.7 per cent of the total New Zealand labour force. Overall levels of unemployment were about the same for men and women at 23 and 26 per cent respectively, however, there are large variations by age. People in what are referred to as the labour force entrance ages of 15–19 and 20–24 have the highest rates of unemployment. Nearly half of all 15–19-year-olds are unemployed (42 and 47% respectively for men and women) while more than one-quarter of 20–24-year-olds are unemployed (26 and 29% for men and women respectively).

Although there are also comparatively high rates of unemployment for all young New Zealanders, they are nowhere near as high as those for Tokelauans (about 20% for all New Zealanders aged 15–19 years compared with nearly 45% for Tokelauans in the same age-group) and unemployment rates fall to a lower level in older age-groups for all New Zealanders. High levels of unemployment have serious implications for the future economic well-being of these young people. Figure 11 shows rates of unemployment by age group.



Note: The numbers for Tokelauans in the older age-groups in this table are small. Data should be used with caution.

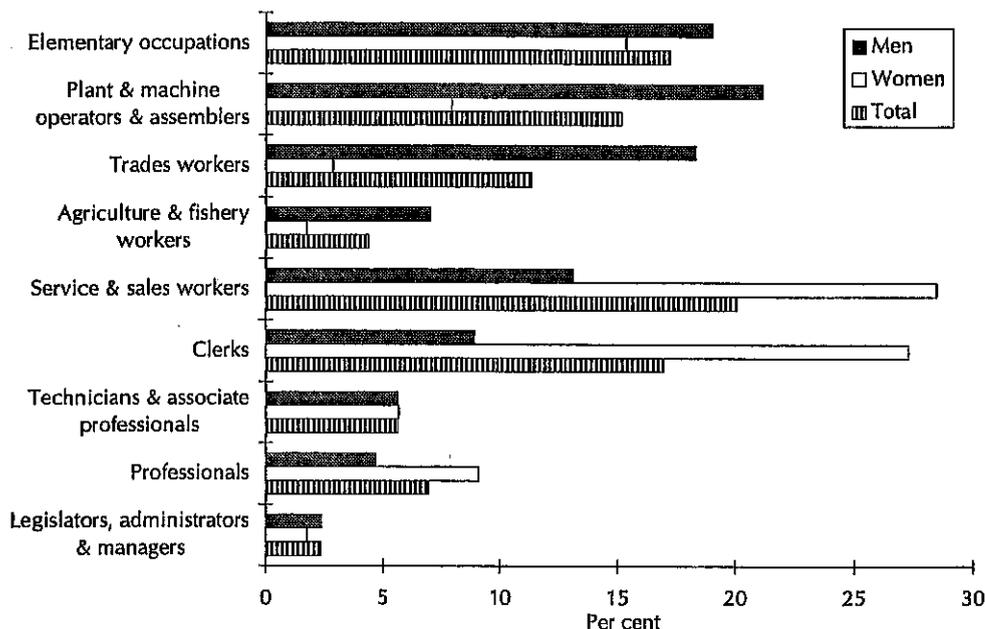
Figure 11: Unemployment rates by age-group and sex for Tokelauans in New Zealand, New Zealand, 1996

## 10. OCCUPATION AND INDUSTRY

The Tokelauans in New Zealand who are working either full- or part-time are concentrated in a small number of occupations and industries, with 54 per cent in three occupational groups and 51 per cent in two industry groups. Here, industry refers to the main activity of the organisation where people are employed. Occupation refers to the profession or type of work that a person does.

### 10.1 Occupation

Of the Tokelauans in either full- or part-time employment, 20 per cent work in service and sales jobs (13 and 28% for men and women respectively). Elementary occupations<sup>4</sup> are carried out by 17 per cent of Tokelauans (19% of men and 15% of women), and 17 per cent are also employed as clerks (9% of men and 27% of women) (Figure 12).



Note: There were no Tokelauans in the New Zealand Armed Forces in 1996.

**Figure 12: Occupation groups for Tokelauans in New Zealand by sex, New Zealand, 1996**

People in full- or part-time employment in New Zealand are not as concentrated in so few occupations as are Tokelauans. Clerical and service and sales jobs are the most common for all New Zealanders (14% each) with legislators, administrators and managers and professionals the next most common with 12 per cent each. In contrast to Tokelauans, only 7 per cent of New Zealanders did elementary jobs.

## 10.2 Industry

More than 4 in 10 Tokelau women are employed in community, social and personal services as are nearly 3 in 10 men (27% over all). The manufacturing industry accounts for a further 24 per cent of people, with 30 per cent of men and 16 per cent of women. All New Zealanders are also most commonly employed in community, social and personal services (26 per cent), however, manufacturing is less common, with 15 per cent of people employed in this industry (Figure 13).

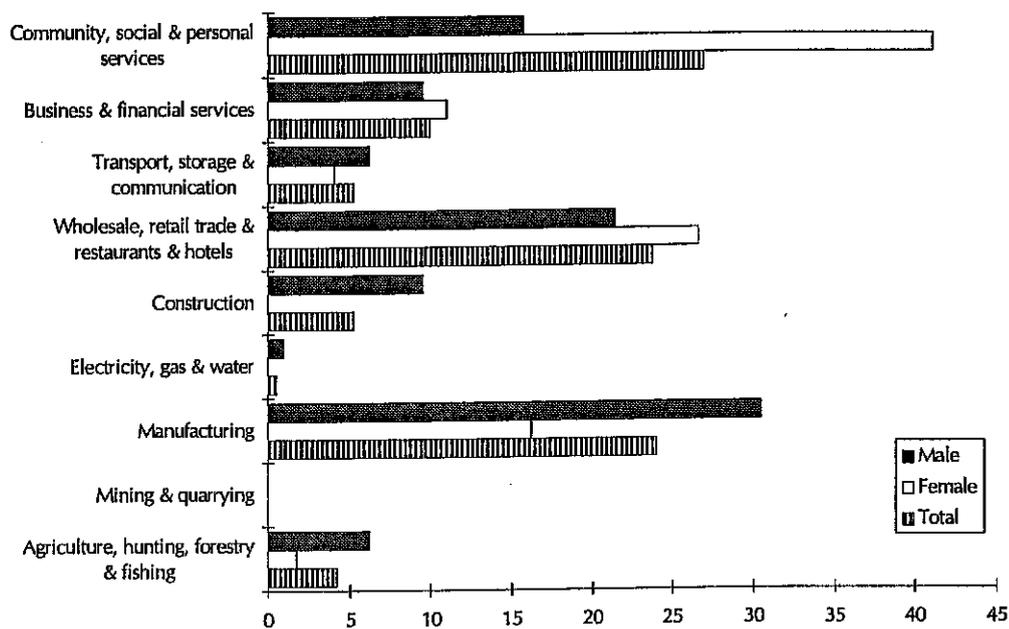


Figure 13: Industry group for Tokelauans living in New Zealand, New Zealand, 1996

## 11. INCOME AND INCOME SOURCE

### 11.1 Income

Half of Tokelauans in New Zealand aged 15 years and over had an income of just under \$11,000. As would be expected because of different levels of labour force participation, the median income for Tokelauan men is \$3,600 higher than that for all Tokelauan women at \$13,200 and \$9,600 for men and women respectively. This compares to figures for the total New Zealand population of \$15,600, \$22,000 for men and \$12,600 for women.

Considering only people with either full- or part-time work, more than half the Tokelauans had an income of \$20,300 (\$24,600 for all New Zealanders) while the median income for the total labour force (those with jobs and those who are unemployed) was \$16,500 (\$23,100 for all New Zealanders).

## 11.2 Income source

Tokelauans living in New Zealand got their income from a variety of sources. In the New Zealand census people are asked to name all of their different sources of income for the past 12 months. This means that people often have more than one source of income in any one year, for example, a person may have worked and received wages for part of the year and received a student allowance for part of the year. This means that these figures count responses rather than people.

Half of all Tokelauans aged 15 years and over said that they got some income from wages or salary paid by an employer in the year before the 1996 census (Figure 14). Slightly more than half of all New Zealanders (54%) received an income from the same source over the same time. Almost one-quarter (23%) of Tokelauans received income from the unemployment benefit, this compared with 8 per cent of all New Zealanders, a reflection of the relatively high level of unemployment amongst Tokelauans. The Domestic Purposes Benefit (DPB) was the third most common source of income for Tokelauans at 8 per cent, twice the rate of the total population. Both Tokelauan women and all women were much more likely than men to receive the DPB, reflecting their child-care role.

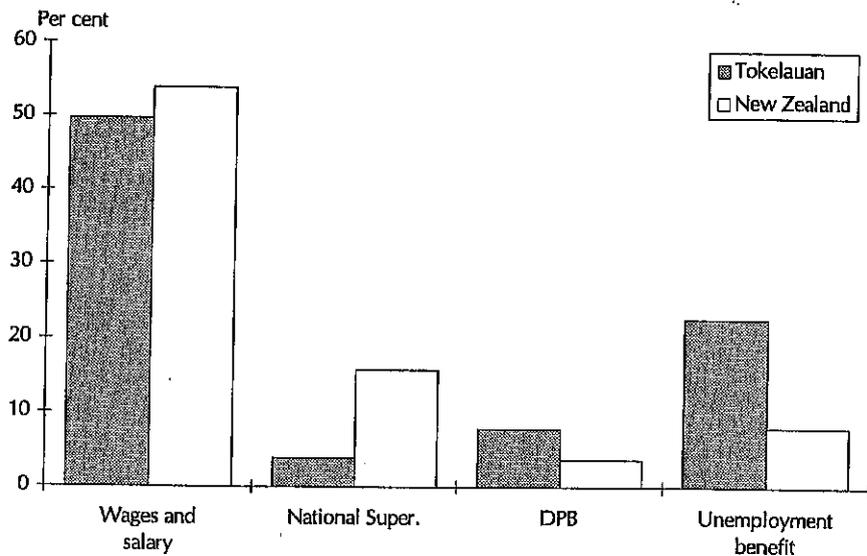
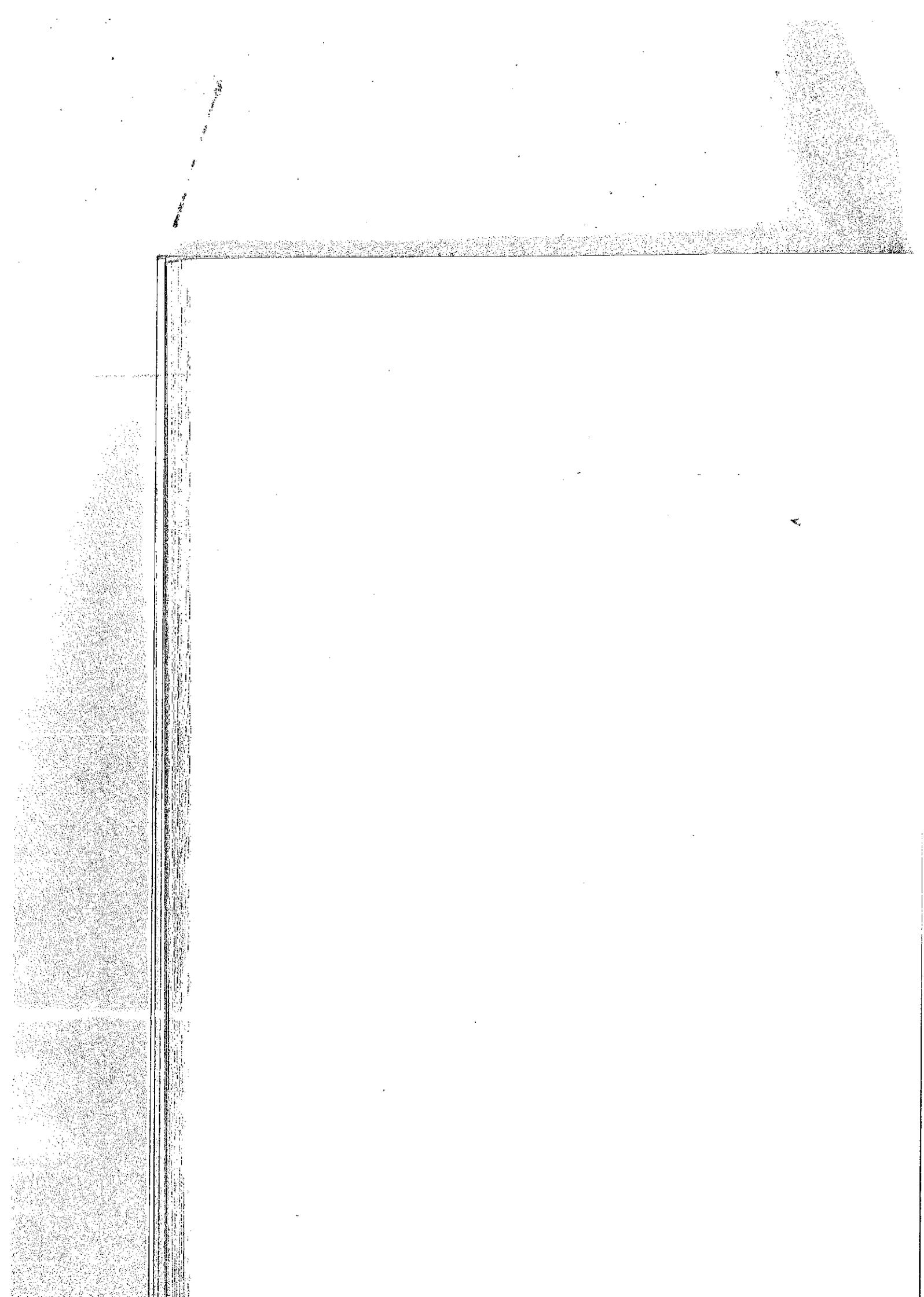


Figure 14: Selected income sources for Tokelauans and all New Zealanders, New Zealand, 1996

One of the biggest differences between the Tokelauan population and all New Zealanders is in the receipt of National Superannuation; 4 per cent for Tokelauans compared with 16 per cent for the total population.

**PART III ♦ OVERALL IMPLICATIONS FOR PLANNERS  
AND POLICY-MAKERS**



1. Tokelau's negative population growth rate of the last five to 10 years has been brought about by two relatively extreme, counterbalancing forces: a high rate of natural increase and a high rate of emigration.
2. The main country of destination for migrants is New Zealand, as Tokelauans are New Zealand citizens. In 1996, more than three times as many Tokelauans lived in New Zealand (4,917) as in Tokelau itself (1,507). Today, several generations of Tokelauans live in New Zealand, as can be seen from the fact that 60 per cent of them were born in New Zealand and only 30 per cent were born in Tokelau.
3. The 1996 New Zealand census has shown that 84 people arrived in New Zealand from Tokelau in the year preceding the census. More than 50 Tokelauans arrived in New Zealand annually between 1991 and 1996, and the trend is increasing.
4. Although people who leave Tokelau offset the consequences of a high natural growth, these people are mostly in the working age group, and are thus considered a loss of human resources from Tokelau. People who leave to seek a higher education may not find appropriate jobs back in Tokelau, and so decide to remain overseas. On the other hand, people who migrate seeking better employment opportunities might send home remittances, which could contribute to improving living standards at home.
5. As not much return migration occurs from New Zealand back to Tokelau, Tokelauan migrants in New Zealand seem to prefer their situation in New Zealand, despite their seemingly disadvantaged situation compared to the total New Zealand population.
6. In spite of Tokelau's declining population, the level of fertility, with its associated birth rate and natural growth rate, is high. The Tokelauan women bear on average five children, and the natural growth rate is 2.5 per cent per annum. Without migration, the population would double in just 28 years. This high rate of natural growth puts pressure on the available land and resources and might be the cause for the high migration rate. Perhaps it is not a coincidence that the number of births and the number of migrants are of a similar size.
7. Declining fertility, a reflection of reduced numbers of children per woman, would slow the natural growth of the population and reduce the pressure on Tokelau's natural and economic resources.
8. Were the Government to promote a policy to reduce fertility levels, provisions would need to be in place for easy access to family planning services by both males and females. The contraceptive prevalence rate needs to be raised by improving the knowledge, acceptability and availability of family planning methods and services, especially amongst men and women of childbearing age.
9. The estimated levels of mortality, life expectancy at birth and Infant Mortality Rates are comparable to neighbouring countries such as Tuvalu and Samoa. However, a coherent assessment of the mortality and health situation in Tokelau can only be made with the help of a long period study of morbidity and mortality indicators, and most importantly with the availability of data concerning the number of deaths by age and

sex. As all this information may be available at the three local hospitals, it would be possible to collect and analyse it.

10. Healthier people live longer as a result of improved mortality rates. This goal will be achieved by improving the primary health care programme, expanding immunisation programmes, improving nutritional standards, and by maintaining a hygienic and safe living environment.

11. Reliable population statistics provide the basis for sensible development planning. They are indispensable for keeping data on population size, growth and indicators up to date. 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. It would then no longer be necessary to conduct a census every five years; if at all necessary, every 10 years would be sufficient.

12. To assist Government in its planning efforts, it is strongly recommended that a central population register be established to record the number of births by age of women, the number of deaths by age and sex, and the number of arriving and departing passengers by age and sex at the time of occurrence. As soon as this population register is operational and able to produce accurate and timely birth, death and migration statistics, censuses need no longer be conducted every five years or at all. Instead, it would seem more logical to conduct sector-specific surveys periodically.

13. 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.

14. A population's demographic structure and its level of fertility affects its school age population. The more births occur, the more potential pupils are born.

15. School attendance in Tokelau is compulsory from ages five to 15, and so the school enrolment rate of children in that age group is near 100 per cent. People who seek higher education have to compete for government scholarships overseas and have to leave for countries like Samoa, Tonga, Niue, Fiji and New Zealand.

16. Although data on educational attainment show that on average men have achieved higher academically than females, information on school enrolment shows that males and females were equally represented at school.

17. Scholarships provided by the Government to people who are able and willing to seek higher education should continue, as better-educated people have the knowledge to care well for themselves, and their family, community and country.

18. In spite of the fact that the number of people being economically active (in the labour force) has decreased during the five years between 1991 and 1996, the number of people in the paid labour force has increased by 62. The decline of the labour force is reflected in a decrease of people in the unpaid labour force. This is due to the re-

empowerment of the Taupulega in 1994. This included the increases of its work force and the transfer of TPS unskilled workers to become employees of the Taupulega. Therefore, the number of persons in the paid labour force has increased between 1991 and 1996, which is associated with an increase of paid job opportunities such as paying people for sweeping the village and collecting garbage.

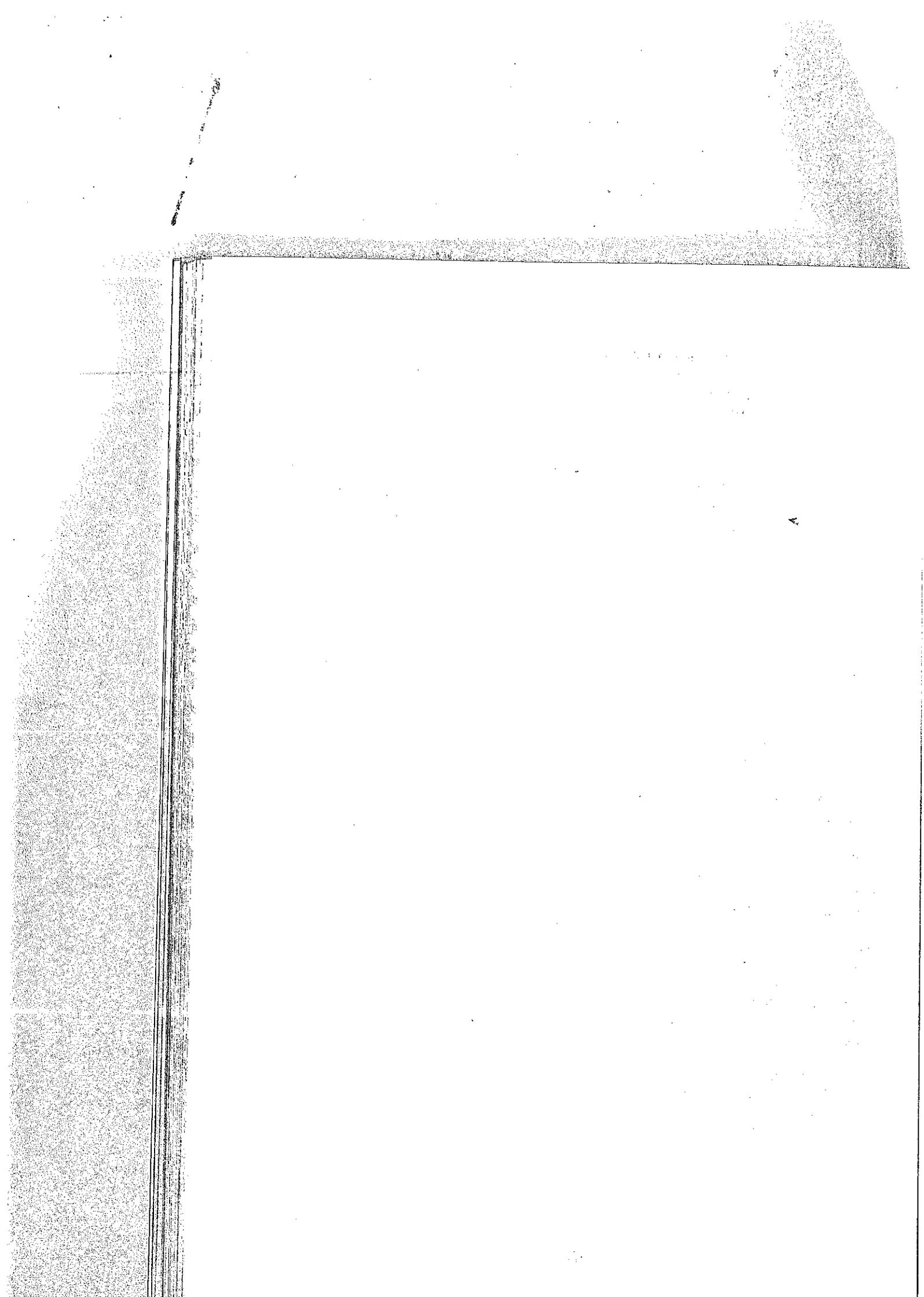
19. The proportion of people not in the labour force increased considerably. This was mainly due to an increase of women who have defined themselves as not being economically active. This development can only be explained by the fact that many women who did paid or unpaid work in 1991 no longer do this, and referred to housework as their main activity in 1996.

20. The main provider of income in Tokelau is the Tokelau Government through the Tokelau public service (TPS) and the Taupulega village work force. The disposable household income entirely depends on whether and how many people per household are employed with the TPS or enrolled with the Taupulega village work force. As everybody can join the Taupulega village work force and would therefore be entitled for payment, its existence guarantees all people who are able and willing to join the provision of a small cash income. This system might be regarded as one of the important means and reasons for young people to stay in Tokelau, as they otherwise have to look for alternative employment opportunities overseas. The only alternative direct or indirect sources of income are the sale of handicrafts, remittances from overseas and the sale of natural resources such as marine and agricultural products.

21. With the Government's housing scheme in place the housing standards are improving, and the style of houses has changed from traditional to European. The Tokelau Government should monitor any changes in household size and composition, because of their impact on different demands for housing and dwellings, in order to set aside a housing scheme budget that can finance a sufficient number of quality houses. 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 all of Tokelau's precious natural resources, pollution of the lagoon and the scarce land should be avoided. Sewage and waste can pose a serious health threat as has been shown in other Pacific countries. As the natural resources of the land and sea form the basis of a sustainable and healthy life for Tokelauan people, maintaining a healthy living environment should be a top priority for Tokelau's Government.

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



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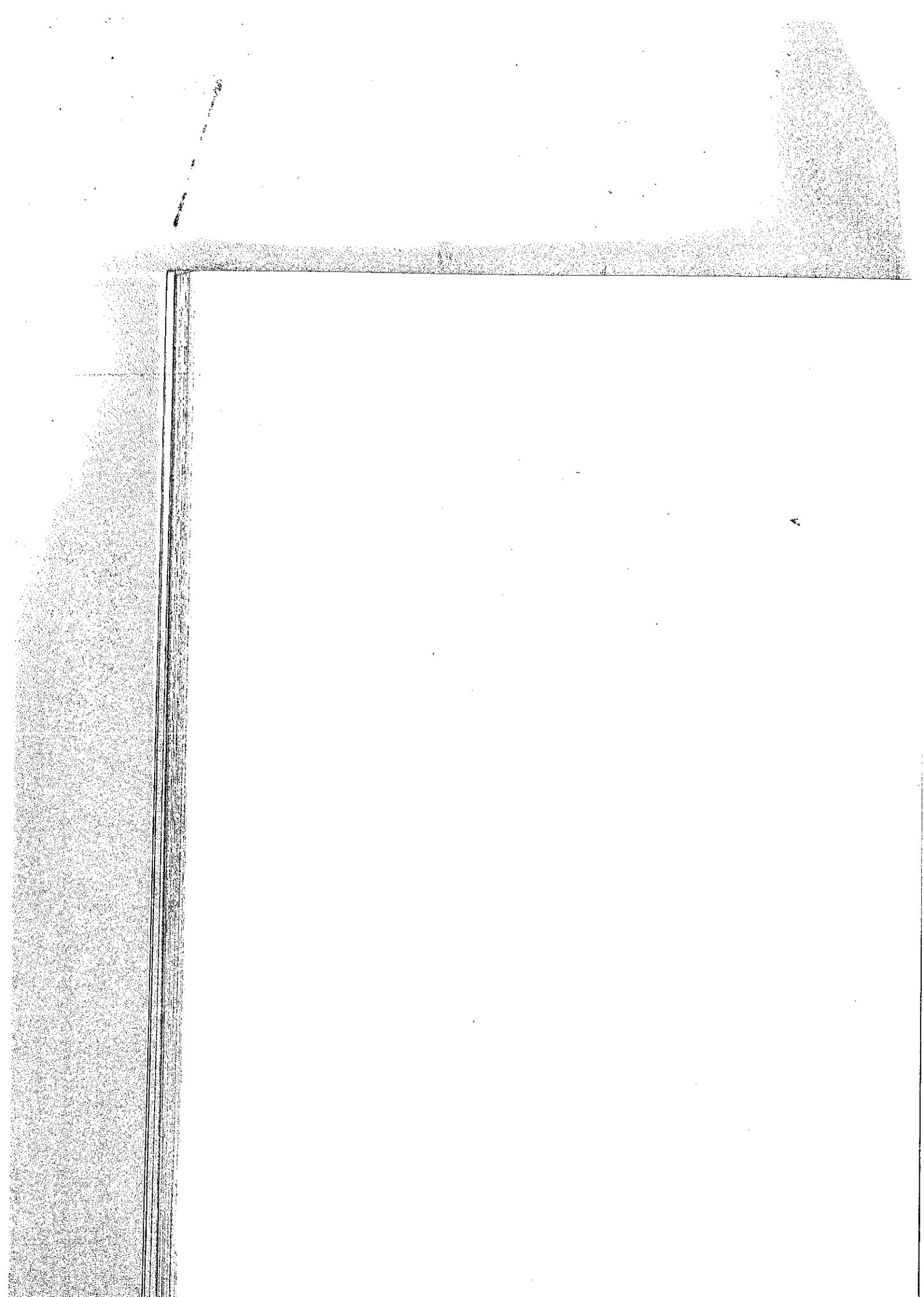
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APPENDIX TABLES

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Appendix Table 1: Usual residents by age and sex and atoll, Tokelau, 1996

Age-group	Tokelau			Sex ratio
	Male	Female	Both	
0-4	118	105	223	112.4
5-9	108	107	215	100.9
10-14	92	90	182	102.2
15-19	66	51	117	129.4
20-24	46	57	103	80.7
25-29	49	54	103	90.7
30-34	48	44	92	109.1
35-39	46	46	92	100.0
40-44	38	41	79	92.7
45-49	20	26	46	76.9
50-54	26	27	53	96.3
55-59	18	31	49	58.1
60-64	18	16	34	112.5
65-69	16	17	33	94.1
70-74	16	19	35	84.2
75+	11	20	31	55.0
<b>Total</b>	<b>736</b>	<b>751</b>	<b>1,487</b>	<b>98.0</b>

Age-group	Nukunonu			Atafu			Fakaofu		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	24	26	50	38	42	80	56	37	93
5-9	31	22	53	37	38	75	40	47	87
10-14	33	27	60	32	31	63	27	32	59
15-19	14	10	24	16	14	30	36	27	63
20-24	17	17	34	17	20	37	12	20	32
25-29	10	12	22	16	24	40	23	18	41
30-34	16	12	28	17	16	33	15	16	31
35-39	14	9	23	15	20	35	17	17	34
40-44	10	19	29	13	5	18	15	17	32
45-49	10	7	17	9	10	19	1	9	10
50-54	14	11	25	6	7	13	6	9	15
55-59	7	11	18	5	8	13	6	12	18
60-64	5	3	8	6	6	12	7	7	14
65-69	4	5	9	6	6	12	6	6	12
70+	8	18	26	9	8	17	10	13	23
<b>Total</b>	<b>217</b>	<b>209</b>	<b>426</b>	<b>242</b>	<b>255</b>	<b>497</b>	<b>277</b>	<b>287</b>	<b>564</b>

**Appendix Table 2: Population 15 years and older and highest school level achieved, Tokelau, 1996**

Age	Still at school	Never been	Std 3 or below	Std 4- Form 2	Form 3- Form 4	Form 5- Form 7	Tertiary education	Poly-tech.	Not stated	Total
15-19	71	2	0	0	16	28	0	0	0	117
20-24	2	0	2	0	24	72	2	1	0	103
25-29	0	1	1	4	44	48	3	2	0	103
30-34	0	0	2	2	30	49	5	2	2	92
35-39	0	1	0	11	49	26	5	0	0	92
40-44	0	1	0	30	27	16	3	0	2	79
45-49	0	0	1	24	10	5	4	0	2	46
50-54	0	0	4	29	10	3	3	0	4	53
55-59	0	0	3	34	6	2	0	0	4	49
60-64	0	3	7	17	3	0	0	0	4	34
65-69	0	6	6	7	1	2	1	0	10	33
70-74	0	8	4	5	2	2	0	0	14	35
75+	0	3	7	6	0	2	0	0	13	31
<b>Total</b>	<b>73</b>	<b>25</b>	<b>37</b>	<b>169</b>	<b>222</b>	<b>255</b>	<b>26</b>	<b>5</b>	<b>55</b>	<b>867</b>

**Appendix Table 3: Population 15 years and older and highest qualification gained, Tokelau, 1996**

Age	Primary or Form 2	Leaving cert.	School cert.	Univ. entrance	Dip.	Degree	Post grad. dip.	Post grad. degree	No cert.	Not stated	Total
15-19	8	6	1	0	0	0	0	0	102	0	117
20-24	16	10	19	6	3	1	0	0	48	0	103
25-29	14	14	19	3	8	2	0	0	43	0	103
30-34	8	7	17	5	9	3	0	1	41	1	92
35-39	8	8	13	2	3	1	1	0	55	1	92
40-44	10	4	4	1	7	2	0	0	51	0	79
45-49	5	7	2	0	1	2	0	3	25	1	46
50-54	9	6	1	0	5	1	0	0	31	0	53
55-59	8	1	0	0	1	0	0	0	39	0	49
60-64	4	2	0	0	0	0	0	0	28	0	34
65-69	5	1	0	0	1	0	0	0	26	0	33
70-74	3	1	0	0	0	0	0	0	31	0	35
75+	5	0	0	0	0	0	0	0	26	0	31
<b>Total</b>	<b>103</b>	<b>67</b>	<b>76</b>	<b>17</b>	<b>38</b>	<b>12</b>	<b>1</b>	<b>4</b>	<b>546</b>	<b>3</b>	<b>867</b>

**Appendix Table 4: Proportion of population 15 years and older by technical and professional training gained, Tokelau, 1996**

Training	Males	Females	Both
Apprenticeship	3.1	2.7	2.9
Technical or trade training	2.2	0.9	1.5
Nursing school	0.2	3.8	2.1
Theological school	0.7	0.2	0.5
Agricultural school	0.0	0.2	0.1
Other	26.8	17.4	21.9
Not specified	0.2	0.4	0.3
No training	66.7	74.4	70.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Appendix Table 5: Total number of households and proportion of all households raising livestock, Tokelau, 1996**

Livestock	Atafu		Fakaofu		Nukunonu		Tokelau	
	Number	%	Number	%	Number	%	Number	%
Sows	56	60.9	70	80.5	53	72.6	179	70.5
Boars	51	55.4	71	81.6	52	71.2	174	68.5
Chickens	56	60.9	60	69.0	53	72.6	169	66.5

**Appendix Table 6: Total number of livestock raised, Tokelau, 1996**

Livestock	Atafu	Fakaofu	Nukunonu	Tokelau
Sows	320	412	350	1,082
Boars	238	412	244	894
Chickens	946	1,085	961	2,992

**Appendix Table 7: Average number of livestock per animal raising household, Tokelau, 1991-1996**

Livestock	Atafu		Fakaofu		Nukunonu		Tokelau	
	1991	1996	1991	1996	1991	1996	1991	1996
Sows	4	6	5	6	5	7	5	6
Boars	4	5	5	6	4	5	5	5
Chickens	16	17	18	18	14	18	16	18

Appendix Table 8: Number of births and deaths, Tokelau, 1986-1996

	BIRTHS									Tokelau		
	Atafu			Nukunonu			Fakaofu					
	M	F	T	M	F	T	M	F	T	M	F	T
1996	10	6	16	7	4	11	11	6	17	28	16	44
1995	8	4	12	4	7	11	14	8	22	26	19	45
1994	12	6	18	6	9	15	12	9	21	30	24	54
1993	11	15	26	4	5	9	10	12	22	25	32	57
1992	13	10	23	5	10	15	11	7	18	29	27	56
1991	7	12	19	8	7	15	15	11	26	30	30	60
1990	11	10	21	6	5	11	9	12	21	26	27	53
1989	11	13	24	8	6	14	13	16	29	32	35	67
1988	11	10	21	7	5	12	8	12	20	26	27	53
1987	12	6	18	10	3	13	9	7	16	31	16	47
1986	14	13	27	7	5	12	4	12	16	25	30	55
Total (86-96)	120	105	225	72	66	138	116	112	228	308	283	591
Total (91-96)	53.3	41.2	94.6	25.8	35.1	60.9	57.9	42.2	100	137	118	256
Avg. (91-96)	10.7	8.3	18.9	5.2	7.0	12.2	11.6	8.4	20.0	27.4	23.7	51.1
CBR (91-96)	36.3			28.1			34.0			33.1		

	DEATHS									Tokelau		
	Atafu			Nukunonu			Fakaofu					
	M	F	T	M	F	T	M	F	T	M	F	T
1996	0	1	1	3	2	5	4	3	7	7	6	13
1995	1	0	1	4	2	6	0	3	3	5	5	10
1994	0	2	2	1	1	2	0	3	3	1	6	7
1993	5	5	10	2	4	6	2	0	2	9	9	18
1992	3	5	8	2	2	4	1	3	4	6	10	16
1991	5	1	6	0	2	2	3	3	6	8	6	14
1990	4	3	7	3	2	5	2	1	3	9	6	15
1989	3	1	4	4	0	4	4	3	7	11	4	15
1988	1	0	1	1	0	1	0	1	1	2	1	3
1987	3	1	4	6	4	10	3	3	6	12	8	20
1986	0	1	1	2	2	4	7	5	12	9	8	17
Total (86-96)	25	20	45	28	21	49	26	28	54	79	69	148
Total (91-96)	9.4	13	22.4	11.6	10.9	22.5	6.8	11.9	18.6	27.8	35.7	63.5
Avg. (91-96)	1.9	2.6	4.5	2.3	2.2	4.5	1.4	2.4	3.7	5.6	7.2	12.7
CDR (91-96)	8.6			10.4			6.3			8.2		

Note: the CBR and CDR are calculated by dividing the average number of births and deaths of the intercensal period 29 Nov. 1991 - 11 Nov. 1996 by the mid-period population of 1,542 people (521 in Atafu, 433.5 in Nukunonu, 587.5 in Fakaofu).

**Appendix Table 9: Population growth, number of births, deaths and migrants and corresponding rates, Atafu, Nukunonu, and Fakaofu, Tokelau, 1991-1996**

	Atafu		Nukunonu		Fakaofu		Tokelau	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
<b>Births</b>	95	36.3	61	28.1	100	34.1	256	33.1
<b>Deaths</b>	22	8.6	23	10.4	19	6.3	64	8.2
<b>Migration</b>	-117	-44.9	-45	-20.8	-100	-34.0	-262	-34.0
<b>Overall growth</b>	-44	-1.7	-7	-0.3	-19	-0.6	-70	-0.9

Note: birth, death and migration rates are given in per 1,000, the growth rate in per cent.

**Appendix Table 10: Number of children ever born by age of women, Tokelau, 1996**

Age of women	Number of children											Total wom.	Total chil.
	0	1	2	3	4	5	6	7	8	9	10+		
15-19	51	0	0	0	0	0	0	0	0	0	0	51	0
20-24	33	13	7	3	1	0	0	0	0	0	0	57	40
25-29	16	9	8	10	7	3	1	0	0	0	0	54	104
30-34	6	9	3	8	3	10	4	1	0	0	0	44	132
35-39	5	5	6	5	3	8	6	5	1	2	0	46	181
40-44	7	4	3	4	3	7	3	5	4	1	0	41	163
45-49	3	5	0	4	0	7	1	3	3	0	0	26	103
50+	14	8	7	5	13	11	12	19	12	11	18	130	739
<b>Total</b>	<b>135</b>	<b>53</b>	<b>34</b>	<b>39</b>	<b>30</b>	<b>46</b>	<b>27</b>	<b>33</b>	<b>20</b>	<b>14</b>	<b>18</b>	<b>449</b>	<b>1,462</b>

Appendix Table 11: Estimated intercensal Age Specific Fertility Rates (ASFRs) and Total Fertility Rate (TFR), Tokelau, 1991 and 1996

Age of women	Number of women		Number of births in the year before the census		ASFR		Estimated average annual number of births by age of women (1991/96)			Estimated intercensal ASFR and TFR (1991/96)	
	1991	1996	1991	1996	1991	1996	h	l	k	m	
	a	b	d	e	f	g	(f+g)/2	h*c	l*(56/59.25)	k/c or h*(56/59.25)	
		(a+b)/2			d/a	e/b					
15-19	63	51	11	0	0.1746	0	0.0873	5	4.7	0.0825	
20-24	55	57	13	12	0.2364	0.2105	0.2234	12.5	11.8	0.2112	
25-29	49	54	18	14	0.3673	0.2593	0.3133	16.1	15.2	0.2961	
30-34	46	44	15	13	0.3261	0.2955	0.3108	14	13.2	0.2937	
35-39	50	46	4	11	0.08	0.2391	0.1596	7.7	7.2	0.1508	
40-44	39	41	2	5	0.0513	0.122	0.0866	3.5	3.3	0.0819	
45-49	28	26	0	1	0	0.0385	0.0192	0.5	0.5	0.0182	
Total	330	319	63	56	1.2357	1.1648		59.25	56	1.1344	
TFR					6.18	5.82				5.67	

Note: The adjustments done in column m and n account for the estimated annual number of births (56) of the intercensal period 1991-1996. The high level of fertility of the years 1991 and 1996 is regarded as too high. As can be seen from Appendix Table 9, in 1991 there were an 'unusually' high number of births registered and the 1996 level is most probably influenced by an overstatement (age-misreporting) of the number of births in the year before the census.

**Appendix Table 12: Age at first birth, Tokelau, 1996**

Age of women	Age at first birth				Not stated	No birth	Total number of women
	15-19	20-24	25-29	30+			
15-19	0	0	0	0	0	51	51
20-24	6	18	0	0	0	33	57
25-29	6	25	7	0	0	16	54
30-34	6	20	8	4	0	6	44
35-39	6	20	10	5	0	5	46
40-44	3	11	11	7	2	7	41
45-49	3	13	6	1	0	3	26
50-54	5	15	2	3	0	2	27
55-59	6	11	8	3	1	2	31
60+	14	30	10	7	1	10	72
<b>Total</b>	<b>55</b>	<b>163</b>	<b>62</b>	<b>30</b>	<b>4</b>	<b>135</b>	<b>449</b>

**Appendix Table 13: CBR and GFR by atoll of the intercensal period 1991-1996**

	Atafu	Nukunonu	Fakaofu	Tokelau
Mid period total population	521	433.5	587.5	1542
Mid period no. of women aged 15-49	112	93.5	119	324.5
Total no. of registered births (1991-1996)	94.6	60.9	100	255.5
Average annual no. of births (1991-1996)	18.9	12.2	20	51.1
<b>CBR</b>	<b>36.3</b>	<b>28.1</b>	<b>34</b>	<b>33.1</b>
<b>GFR</b>	<b>169</b>	<b>130</b>	<b>168</b>	<b>157</b>

CBR: Crude Birth Rate (average annual number of births divided by mid period total population multiplied by 1000).

GFR: General Fertility Rate (average annual number of births divided by mid period number of women aged 15 to 49 years multiplied by 1000).

**Appendix Table 14: Number and proportion of children ever born and children still alive by age of mother, Tokelau, 1996**

Age of mother	Number of children ever born			Number of children still alive			Proportion of children still alive		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
15-19	0	0	0	0	0	0			
20-24	24	16	40	24	16	40	1.000	1.000	1.000
25-29	56	48	104	55	47	102	0.982	0.979	0.981
30-34	70	62	132	66	60	126	0.943	0.968	0.955
35-39	87	94	181	82	87	169	0.943	0.926	0.934
40-44	80	83	163	73	80	153	0.913	0.964	0.939
45-49	50	53	103	47	51	98	0.940	0.962	0.951
50-54	91	76	167	90	70	160	0.989	0.921	0.958
55-59	99	86	185	85	85	170	0.859	0.988	0.919
60-64	46	40	86	41	34	75	0.891	0.850	0.872
65-69	53	73	126	43	62	105	0.811	0.849	0.833
70-74	44	47	91	35	42	77	0.795	0.894	0.846
75+	41	43	84	33	38	71	0.805	0.884	0.845
<b>Total</b>	<b>741</b>	<b>721</b>	<b>1,462</b>	<b>674</b>	<b>672</b>	<b>1,346</b>	<b>0.910</b>	<b>0.932</b>	<b>0.921</b>

**Appendix Table 15: Number and proportion of fathers and mothers still alive, Tokelau, 1996**

Age-group of respondent	Father			Mother			Proportion still alive	
	Alive	Dead	NS	Alive	Dead	NS	Father	Mother
0-4	220	3	0	222	1	0	0.987	0.996
5-9	210	5	0	213	2	0	0.977	0.991
10-14	178	4	0	180	2	0	0.978	0.989
15-19	109	7	1	113	3	1	0.940	0.974
20-24	94	9	0	99	4	0	0.913	0.961
25-29	87	16	0	92	11	0	0.845	0.893
30-34	69	22	1	77	15	0	0.758	0.837
35-39	64	28	0	61	31	0	0.696	0.663
40-44	31	48	0	41	38	0	0.392	0.519
45-49	16	29	1	18	28	0	0.356	0.391
50-54	9	44	0	21	32	0	0.170	0.396
55-59	4	45	0	13	36	0	0.082	0.265
60-64	3	31	0	4	30	0	0.088	0.118
65-69	0	33	0	2	31	0	0.000	0.061
70-74	0	35	0	1	34	0	0.000	0.029
75+	1	30	0	1	30	0	0.032	0.032
<b>Total</b>	<b>1,095</b>	<b>389</b>	<b>3</b>	<b>1,158</b>	<b>328</b>	<b>1</b>	<b>0.738</b>	<b>0.779</b>

**Appendix Table 16: Indirect estimation of early age mortality based on data of children ever born and children still alive using the UN's software package MORTPAK 3.0 (CEBCS), Tokelau, 1996**

Age of women	Age x	MALES							
		Probability of dying before age x		IMR		E(0)		Reference date	
		UN- General	C.& D. West	UN- General	C.& D. West	UN- General	C.& D. West	UN- General	C.& D. West
15-19	1	0.000	0.000	0.024	0.013	75.0	75.0	Nov. 95	Aug. 96
20-24	2	0.000	0.000	0.024	0.013	75.0	75.0	Mar. 95	Jun. 95
25-29	3	<b>0.018</b>	<b>0.018</b>	<b>0.024</b>	<b>0.016</b>	<b>75.0</b>	<b>73.9</b>	<b>Aug. 93</b>	<b>May. 93</b>
30-34	5	<b>0.090</b>	<b>0.085</b>	<b>0.065</b>	<b>0.063</b>	<b>62.0</b>	<b>61.7</b>	<b>Dec. 90</b>	<b>Aug. 90</b>
35-39	10	<b>0.063</b>	<b>0.057</b>	<b>0.045</b>	<b>0.041</b>	<b>67.8</b>	<b>66.7</b>	<b>Sep. 87</b>	<b>Jul. 87</b>
40-44	15	0.094	0.087	0.061	0.056	63.2	63.3	Feb. 84	Apr. 84
45-49	20	0.065	0.059	0.042	0.037	68.6	67.9	Aug. 80	Mar. 81

Age of women	Age x	FEMALES							
		Probability of dying before age x		IMR		E(0)		Reference date	
		UN- General	C.& D. West	UN- General	C.& D. West	UN- General	C.& D. West	UN- General	C.& D. West
15-19	1	0.000	0.000	0.024	0.013	75.0	75.0	Oct. 95	May 96
20-24	2	0.000	0.000	0.024	0.013	75.0	75.0	Mar.95	Jun. 95
25-29	3	<b>0.023</b>	<b>0.023</b>	<b>0.024</b>	<b>0.020</b>	<b>75.0</b>	<b>72.5</b>	<b>Dec.93</b>	<b>Oct. 93</b>
30-34	5	<b>0.034</b>	<b>0.033</b>	<b>0.028</b>	<b>0.027</b>	<b>73.4</b>	<b>70.4</b>	<b>Oct. 91</b>	<b>Jul. 91</b>
35-39	10	<b>0.082</b>	<b>0.078</b>	<b>0.056</b>	<b>0.054</b>	<b>64.5</b>	<b>63.8</b>	<b>Jan. 89</b>	<b>Jan. 89</b>
40-44	15	<b>0.039</b>	<b>0.037</b>	<b>0.029</b>	<b>0.027</b>	<b>73.1</b>	<b>70.6</b>	<b>Dec.85</b>	<b>Feb. 86</b>
45-49	20	0.040	0.038	0.028	0.025	73.3	71.1	Aug. 82	Jan. 83

Note: the presented probabilities of dying, Infant Mortality Rates (IMR) and life expectancies at birth E(0), are given according to the 'General' model of the United Nations Models (Palloni-Heligman Equation) and the 'West' model of the Coale-Demeny life table models. The average of the bold numbers of both models were considered for the mortality estimates.

Mortality rates for males were obtained by using the average results of data of the 25-39-year-old men and the average of the General life table pattern of the UN model and the West model of the Coale-Demeny models. The rates for females were obtained by using the same values given by the same model life tables, but in order to get results which are comparable to the same reference period (1990), the age groups 25-44 for females had to be used.

**Appendix Table 17: Population by place of birth, Tokelau, 1996**

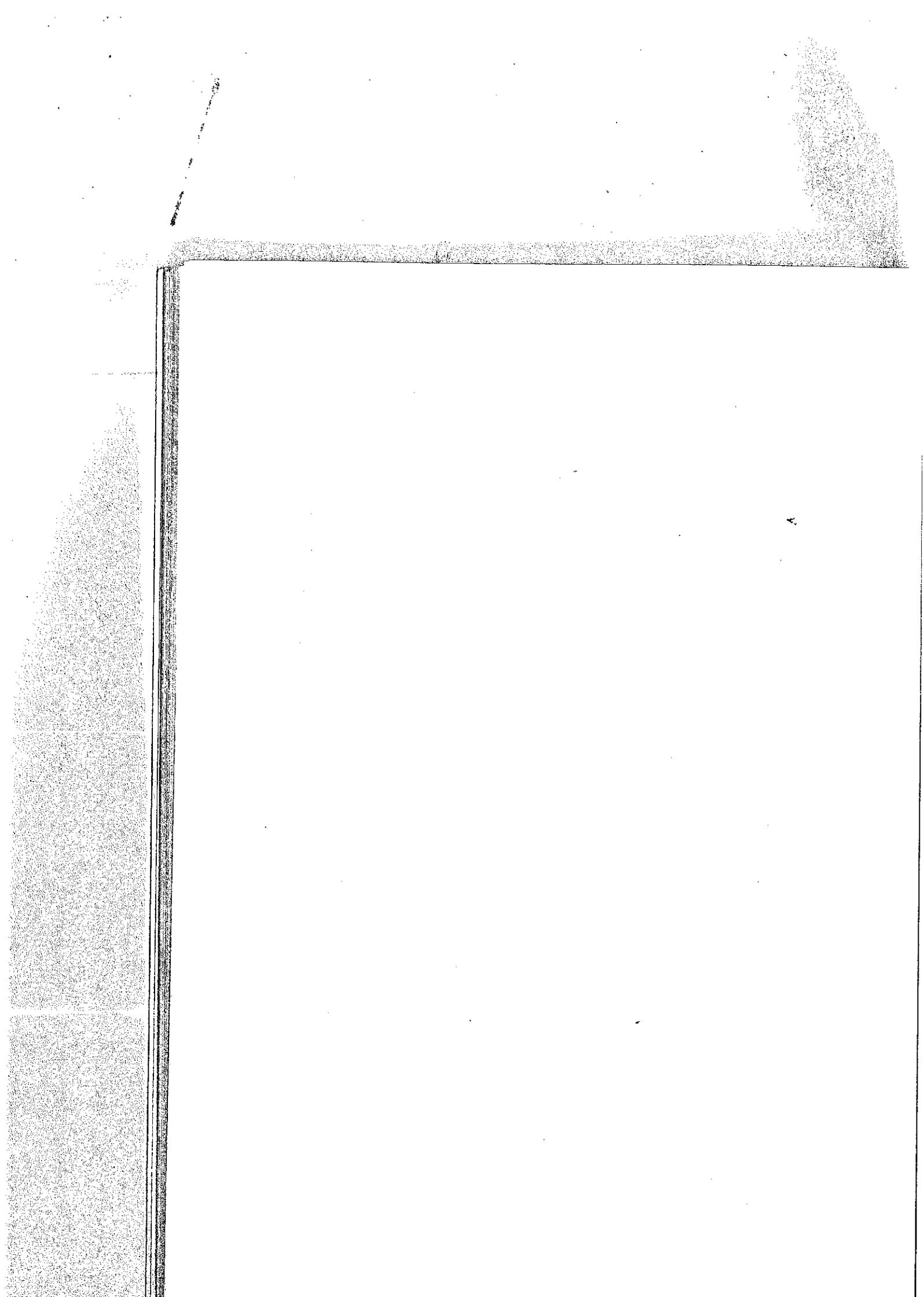
Place of birth	Number			Percentage		
	Males	Females	Both	Males	Females	Both
Tokelau	597	647	1,244	81.1	86.2	83.7
New Zealand	51	38	89	6.9	5.1	6.0
Samoa	63	39	102	8.6	5.2	6.9
Fiji	0	1	1	0.0	0.1	0.1
Other Pac. Islands	20	24	44	2.7	3.2	3.0
Australia	0	1	1	0.0	0.1	0.1
Other countries	1	0	1	0.1	0.0	0.1
NS	4	1	5	0.5	0.1	0.3
<b>Total</b>	<b>736</b>	<b>751</b>	<b>1,487</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Appendix Table 18: Population by age and sex and percentage distribution, Tokelauans in New Zealand, New Zealand, 1996**

Age-group	Numbers			Percentage		
	Male	Female	Total	Male	Female	Total
0-4	438	366	807	18	15	16
5-9	345	318	663	14	13	13
10-14	246	288	534	10	12	11
15-19	270	258	525	11	10	11
20-24	267	285	552	11	11	11
25-29	216	216	438	9	9	9
30-34	141	183	324	6	7	7
35-39	114	132	249	5	5	5
40-44	102	117	216	4	5	4
45-49	63	93	162	3	4	3
50-54	72	69	144	3	3	3
55-59	51	48	99	2	2	2
60-64	36	36	72	1	1	1
65+	63	75	138	3	3	3
<b>Total</b>	<b>2,433</b>	<b>2,484</b>	<b>4,917</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Appendix Table 19: Children ever born of Tokelauan women in New Zealand, 1996**

Age of women	Number of children											Total NS women	Total chil.	
	0	1	2	3	4	5	6	7	8	9				
15-19	222	12	0	0	0	0	0	0	0	0	0	24	258	12
20-24	162	57	21	12	6	3	0	0	0	0	0	24	285	174
25-29	84	39	39	21	12	0	0	0	0	0	0	21	216	228
30-34	36	21	21	30	27	12	3	0	3	0	0	30	183	363
35-39	15	15	21	12	24	18	6	3	3	0	0	15	132	360
40-44	6	6	6	9	24	15	15	12	3	0	0	21	117	414
45-49	3	6	9	6	15	12	18	6	3	3	0	12	93	363
<b>Total</b>	<b>528</b>	<b>156</b>	<b>117</b>	<b>90</b>	<b>108</b>	<b>60</b>	<b>42</b>	<b>21</b>	<b>12</b>	<b>3</b>	<b>147</b>		<b>1,284</b>	<b>1,914</b>



## GLOSSARY

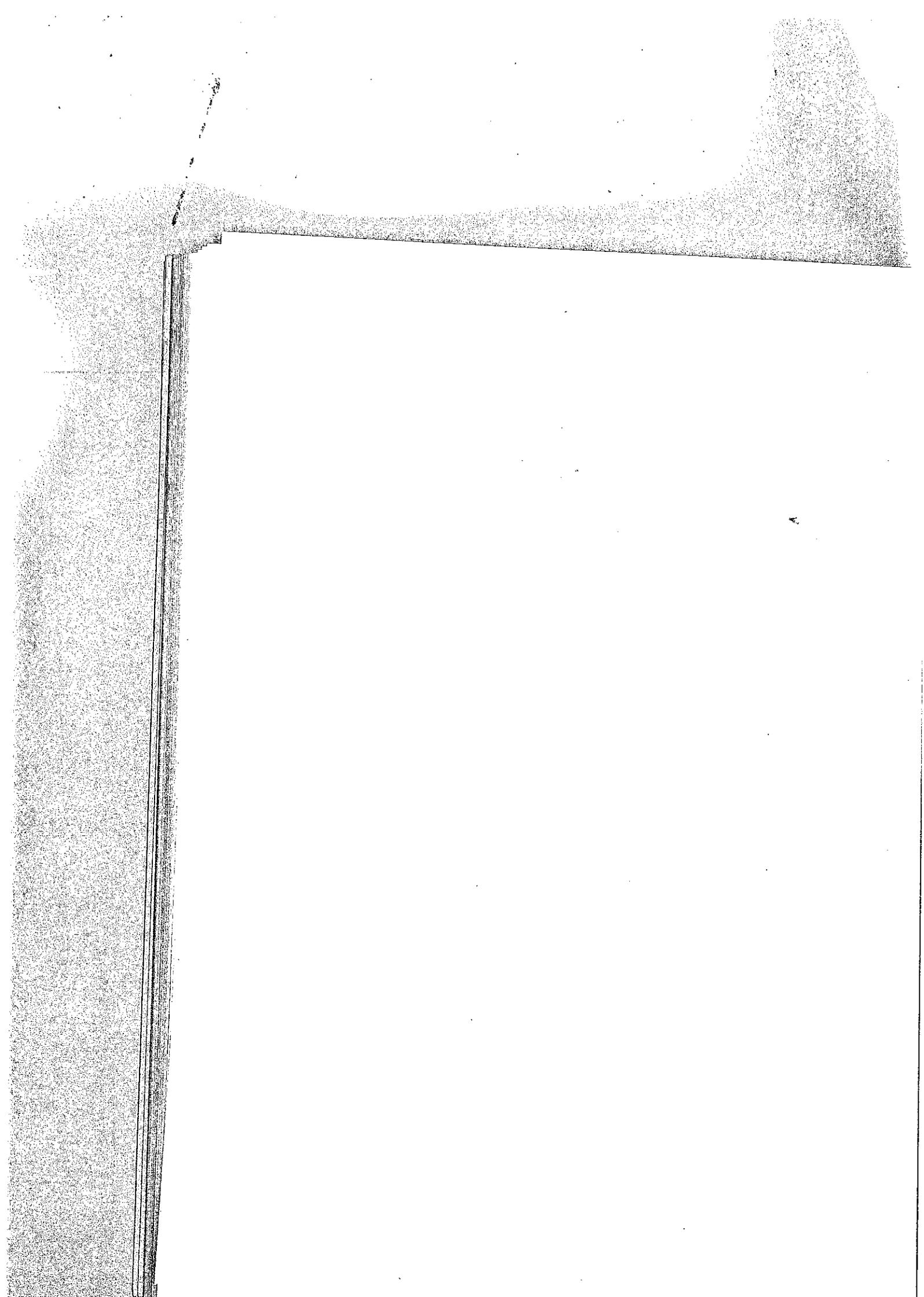
Term	Definition/description
Age-sex composition	Distribution of population by age and sex
Age-Specific Fertility Rates (ASFRs)	Relates the number of births to women of a particular age-group, in a specific calendar year, to the mid-year population of women in that same age-group
Average household size	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 under five years
Child Mortality Rate	Total number of deaths of children aged 1–5 during a year x, divided by the mid-year population estimates of children aged 1–5
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 in a year per 1,000 mid-year population
Crude Death Rate (CDR)	The total number of deaths in a year per 1,000 mid-year population
Dependency ratio	The ratio of the economically-dependent component of a country's population to its productive component. This is conventionally expressed as the ratio of the young (0–14) plus the old (65+), to the population in the working ages (15–64)
Direction of migration	Destination of migrants
Economically active population	Persons aged 15–64 (or 15–59) who were employed or looking for work; also referred to as the 'labour force'

Term	Definition/description
Educational attainment	Proportion of the population 25 years and over by age-groups and level of education
Elderly persons	Persons aged 65 years and over
Emigrants	Persons who move out of a country for the purpose of establishing a new permanent 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 and 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 permanent 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 permanent residence
Internal migration	The movement of people within a country for the purpose of establishing a new permanent residence
International migration	The movement of people between countries for the purpose of establishing a new permanent 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 at a given age, sex and/or level of education, divided by the corresponding total number of persons of the same characteristics
Life expectancy at birth (E(0))	The average number of additional 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 or 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 permanent residence
Migration	Movement of people across a specified boundary for the purpose of establishing a new permanent 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; a 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 or 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 permanent residence in a different area of the country
Percentage Age-Specific Fertility Rates	Fertility pattern: shows the relative contribution to fertility of one age-group compared to the overall fertility

Term	Definition/description
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
Population dynamics	Movement of population through time
Population policies	Measures devised by governments to influence population size, growth or distribution
Population processes	Vital events or migratory movements: refer to fertility, mortality and migration (including urbanisation)
Population structure	Refers to population size, geographic distribution and age-sex structure
Rate of natural increase	Rate at which population grows (increase or decrease) during a given year, as the result of a surplus or deficit of births over deaths; expressed as a percentage of the base population
Rate of population growth	Rate at which population grows (increase or 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 6-19
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	Economic activity, educational attainment of population, and marital status
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 statistics	Information on vital events
Volume of migration	Number of migrants
Working-age population	Normally defined as population aged 15–64, or 15–59



## CONCEPTS, DEFINITIONS AND CLASSIFICATIONS

### 1. POPULATION

- The total population or Tokelau population** Although the de facto population present in Tokelau on census night was counted (1507), only the usually resident population (1487) was asked to complete the Individual Questionnaire.
- Usually resident population** The population present at census night excluding those persons who usually live overseas.
- Usual residence** The place where a person usually lives. This may be different from the place where they were counted on census night.

### 2. DWELLING AND HOUSING CHARACTERISTICS

- Dwelling** A dwelling or house is any structure which is being used as living quarters on census night. A dwelling may consist of only one building or several buildings such as a European house with a nearby Tokelauan fale, both of which are occupied by a single household.
- Dwelling style** Dwellings are classified according to the type of material their floor, walls and roofs are constructed with. A Tokelauan fale is mainly build of locally available materials, a European style house is mainly constructed with imported materials, and a 'mixed style' describes the situation where both types of material have been used.

### 3. HOUSEHOLDS AND FAMILIES

- Household** A household is the total number of people living together in one private dwelling, who form a durable social and economic unit and eat and sleep together under the same roof.
- Family** A family comprises at least two persons related to each other by birth, marriage or adoption. There may be several families living in one household.

**Nuclear family** . A nuclear family are parents and their adopted or biological children.

**Extended family** Consists of people who are related as parents, grandparents, children, (great)grand-children, siblings and in-laws. Other persons, related and non-related, may also be present.

#### 4. ETHNIC GROUP

**Ethnicity** Ethnicity refers to an ethnic group or groups a person belongs to and feels most closely affiliated or associated with, as stated by themselves. For the tables presented in this report, where more than one ethnic group has been indicated including Tokelauan, the person was classified as being Part Tokelauan.

#### 5. LABOUR FORCE

**Labour force** The labour force consists of all persons aged 15 years and over who were economically active during the week before the census. A person was counted in the labour force if he or she worked for wages of salary; or worked on goods to sell for own profit (such as handicrafts, bread, fish, or any other agricultural and marine product); or was doing unpaid village or family work.

**Paid labour force** Comprises persons in paid employment, plus those self-employed in handicraft, agricultural or marine production for cash gain. A person doing both paid and unpaid work is treated as being in the paid labour force.

**Unpaid labour force** Comprises persons engaged in subsistence activities, cash crop production, and general maintenance, for village or family profit and development.

**TPS** The Tokelau public service – the main employer in Tokelau.

**Taupulega village work force** These are organised co-operative work teams, comprising all able males not engaged in TPS work. Paid and unpaid work is done on behalf of their village, prearranged by the village council (Faipule).

**Occupation** The paid or unpaid job, trade, profession or type of work in which a person is employed.

**Occupation groups** · The occupations stated were allocated a code which was then classified into major groups. The group structure is:

- Professional, technical and related workers: includes doctors, registered nurses and midwives, registered teachers, ministers of religion, members of, or workers in, a religious order, dentists, dental nurses, engineers and engineering technicians, artists, accountants, extension officers, and other professional, technical and related workers.
- Administrative and managerial workers: includes faipule, pulenuku, executive officers and other administrative and managerial workers.
- Clerical and related workers: includes typists, clerks, stores officers, radio telephone operators and other clerical and related workers.
- Sales workers: includes store keepers, store assistants and other sales workers.
- Service workers: includes nurse aids, hospital orderlies, teacher aids, police and other service workers.
- Agricultural workers, fishermen and labourers: includes field supervisors, copra workers, plantation workers, harvesters, fishermen, casual labourers, factory hands and other agricultural workers.
- Tradespersons: includes supervisors, foremen, leading hands, carpenters, electricians, plumbers, mechanics, fitters and welders, drivers, and other skilled workers.
- Village craftspersons: includes weavers and carvers.
- Other village workers not otherwise defined: refers to persons who did unpaid or family work without indicating their specific occupation.
- Occupation not applicable: includes those with no paid occupation.

## 6. FERTILITY

**Live birth<sup>5</sup>** Live birth is the complete expulsion or extraction from its mother or product of conception, irrespective of

duration of pregnancy, which, after such separation, breathes, or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born.

## 1996 Tokelau Population Census INDIVIDUAL SCHEDULE

Atoll/village  Household number  Person number

1. Full name: \_\_\_\_\_
2. Relationship to head of household: \_\_\_\_\_
3. Sex: [1] Male [2] Female
4. Date of birth: 

Day	Month	Year
-----	-------	------

  
Age
5. Ethnic origin:  
[10] Tokelauan  
[11] part Tokelauan/Samoan  
[12] part Tokelauan/Tuvaluan  
[13] part Tokelauan/Other Pacific Island  
[14] part Tokelauan/European  
[20] Samoan  
[30] Tuvaluan  
[40] other Pacific Islands  
[50] European  
[60] other
6. Marital status:  
[1] never married  
[2] married  
[3] widowed  
[4] divorced or separated
7. Religion:  
[1] Congregational Christian  
[2] Roman Catholic  
[3] Jehovah's Witness  
[4] 7th Day Adventist  
[5] other  
[6] Not disclosed/specified
8. Place of usual residence:  
Does person usually live here?  
[1] Yes >> Go to Q 9  
If No, where does person usually live?
9. Place of birth: Was person born here?  
[1] Yes >> Go to Q 11  
[2] No >> Go to Q 10
10. Where was this person born?  
(usual residence of mother at birth)
- Where did the person live before moving here?
- When did the person move here?  
Year 19
11. International migration: Has the person ever lived overseas for more than 6 months?  
[1] Yes (Continue with question)  
[2] No >> Go to Q 12  
If Yes - where  
[11] New Zealand  
[12] Samoa  
[13] Fiji  
[14] other Pacific Islands  
[15] Australia  
[16] other
12. School enrolment/last school attended:  
[1] still at school  
[2] Tokelau Village School  
[3] Samoa Secondary School  
[4] other Pacific Is. Secondary School  
[5] NZ Secondary School  
[6] other:   
[7] Not in school  
[8] Never been to school  
[9] Not specified
13. Educational attainment - highest level achieved:  
[1] still in school  
[2] never been to school  
[3] Primer 1 - Standard 3  
[4] Standard 4 - Form 2  
[5] Form 3 - Form 4  
[6] Form 5 - Form 7  
[7] university  
  
Highest certificates/qualifications gained  
[1] Primary/Form 2 Certificate  
[2] Leaving Certificate  
[3] School Certificate  
[4] University Entrance  
[5] diploma (subject: \_\_\_\_\_)  
[6] degree (subject: \_\_\_\_\_)  
[7] post-graduate diploma (subject: \_\_\_\_\_)  
[8] post-graduate degree (subject: \_\_\_\_\_)

14. **Other technical/professional training**  
 [1] apprenticeship  
 [2] technical/trade training  
 [3] nursing school  
 [4] theological college  
 [5] agricultural school  
 [6] other \_\_\_\_\_ (specify)

15. **Economic activity (work last week/week before the census)**  
 Did person work at any time last week?
- [11] YES: full-time/part-time as member of TPS - no subsistence activities > Q18  
 [12] YES: full-time/part-time as member of TPS - some subsistence activities > Q16  
 [13] YES: worked full-time/part-time for (wages/salary) > Q18  
 [14] YES: worked on goods to sell for own profit (handicrafts, bread, fish, toddy) > Q16  
 [15] YES: did housework plus worked on goods to sell for own profit > Q16  
 [16] YES: did unpaid work for family/village plus worked on goods to sell for profit > Q16
- [21] NO: did housework only > Q20  
 [22] NO: did unpaid work for family/village only > Q20  
 [23] NO: did not work because of sickness/illness > Q18  
 [24] NO: retired/too old > Q20  
 [25] NO: disabled/handicapped > Q20  
 [26] NO: student > Q20  
 [27] NO: unemployed/cannot find work > Q20

16. **If yes to 12, 14, 15 or 16 in question above: What did person mainly do?**
- [1] Farming/gardening }  
 [2] Fishing } Go to Q17  
 [3] Handicraft }  
 [4] Baking bread, making toddy }

17. **(Only for those answering question 15)**  
**The food the person grows, the fish caught, the mats, tapa, handicrafts produced: Are they for the persons own/family use, or are some sold?**
- [1] Own/family use/NEVER sell }  
 [2] Occasionally sell } Go to Q20  
 [3] Regularly sell }

18. **Principal occupation: (Only for those answering 1, 2, 3 in Q15)**  
 What kind of work did person do last week?  
 \_\_\_\_\_

19. **Employment status:**
- [1] salaried member of TPS  
 [2] casual work for TPS last week  
 [3] casual work for TPS this year  
 [4] self-employed (own account worker)  
 [5] employee (work for wage/salary for someone else)  
 [6] unpaid family worker: main unpaid activity is Kaiga team work  
 [7] unpaid village work: main unpaid activity is aumaga team work

20. **Real father and mother:**
- Real father alive?  
 [1] Yes [2] No [3] Unknown  
 Real mother alive?  
 [1] Yes [2] No [3] Unknown

Person number of mother if in this household

**If person is aged under 15 or is male skip the next question**

21. **Own children:**  
 (Ask only females aged 15 and over)
- How many live born children?   
 How many boys?   
 How many girls?   
 How many still living?   
 How many boys?   
 How many girls?   
 Age of mother at first birth (years)   
 When was last child born?     
 Sex of last child? [1] Male [2] Female  
 Is this child still alive?  
 [1] Yes [2] No [3] Don't know  
 If No give date of death

**Did the person named in this form give his/her own answers to the questions?**  
 [1] YES [2] NO

**If the answers were given by another person give that person's number**

## 1996 Tokelau Population Census HOUSEHOLD SCHEDULE

Atoll/village:	<input style="width: 90%;" type="text"/>	Household number:	<input style="width: 90%;" type="text"/>
		De facto HH size:	<input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
		De jure HH size:	<input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>

1. Number of persons present on census night: [ ][ ]

Person number	Relationship to head of household	Surname	First name	Usual residence
01	HH Head			
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				

2. Number of persons usually staying with you, but absent on census night: [ ][ ]

Person number	Relationship to head of household	Surname	First name	Current residence
01	HH Head			
02				
03				
04				
05				

### HOUSING CHARACTERISTICS

3. **Type of housing**

- [1] Tokelauan fale
- [2] European house
- [3] mixed-style
- [4] European house plus Tokelauan fale
- [5] OTHER \_\_\_\_\_ (describe)

**3.1 Floor materials**

- [1] coral pebbles
- [2] concrete
- [3] wood
- [4] OTHER \_\_\_\_\_ (describe)

**3.2 Outer walls materials**

- [1] open posts/blinds
- [2] wood
- [3] concrete
- [4] OTHER \_\_\_\_\_ (describe)

**3.3 Roofing materials**

- [1] thatch
- [2] roofing iron
- [3] OTHER \_\_\_\_\_ (describe)

4. **Source of water**

- [1] own water tank
- [2] water tank shared with other HH
- [3] no water tank (source of water: \_\_\_\_\_)

5. **Source of energy for cooking**

- [1] Tokelauan umu
- [2] firewood
- [3] kerosene stove
- [4] gas stove

6. **Source of energy for lighting**

- [1] generator (community)
- [2] generator (private)
- [3] solar
- [4] Coleman
- [5] hurricane light
- [6] OTHER \_\_\_\_\_ (describe)

7. **Sanitation - toilet facilities**

- [11] tank flush - private, inside dwelling
- [12] tank flush - private, outside dwelling
- [13] tank flush - public, share with others
- [21] pour flush - private, inside dwelling
- [22] pour flush - private, outside dwelling
- [23] pour flush - public, share with others
- [30] over water

8. **Sanitation - personal hygiene**

- [1] shower facility - private, inside dwelling
- [2] shower facility - private, outside dwelling
- [3] shower facility - public, share with others
- [4] lagoon, ocean

9. **Waste disposal - household waste**

- [1] burn
- [2] bury
- [3] lagoon or ocean
- [4] OTHER \_\_\_\_\_ (describe)

**10. HOUSEHOLD GOODS** (write in box: 1 = Yes; 2 = No)

- radio working order
- tape-recorder working order
- TV/video working order
- refrigerator working order
- washing machine working order
- sewing machine working order
- traditional canoe working order
- aluminium boat working order
- wooden boat working order
- fibre-glass boat working order
- outboard motor working order

**11. LIVESTOCK** (write number in box)

- Number of pigs (sows) owned by household
- Number of pigs (boars) owned by household
- Number of chickens owned by household

**12. MIGRATION-REMITTANCE NETWORKS** (immediate family members currently overseas)

Location: (1) NZ; (2) Samoa; (3) Australia; (4) Pacific Island; (5) elsewhere

Activity: (1) working; (2) unemployed; (3) student; (4) retired; (5) visiting; (6) other

Remittances received: 1 = regular/every month; 2 = sometime each year; 3 = once a year or less; 4 = never

Relationship to household head	Overseas (yes/no)	Location	Activity	Remittances received
spouse				
daughter(s)				
son(s)				
mother				
father				
sister(s)				
brother(s)				
mother-in-law				
father-in-law				
sister-in-law				
brother-in-law				
OTHERS				

**13. USUAL SOURCE OF HOUSEHOLD INCOME** (indicate frequency in box)

1 = regular or every month; 2 = sometime each year; 3 = once a year or less; 4 = never

- regular TPS salary
- casual TPS wages
- allowances
- remittances from family overseas
- contributions from other households
- sale of copra
- sale of handicraft
- sale of pigs, chicken
- sale of fish
- old age pension
- government superannuation
- other sources: \_\_\_\_\_ (specify)

## ENDNOTES

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### ***<sup>1</sup> Factors affecting and 'mismatching' census age data of fertility and mortality***

In a hypothetical, closed society, where age is correctly reported, the population under one year of age would match exactly the number of births in the year prior to the census minus those who have died. As societies are usually not closed but affected by migration, the enumerated population under one year of age usually does not match the number of births in the year before the census (as reported by the female population) because:

1. women who were present during the census count report the birth of a child, who is not present at the time of the enumeration (overseas); and
2. children who were present during the census count are not accompanied by their mothers to report their birth (overseas or dead).

Apart from discrepancies caused by migration, under-reporting of persons and misreporting of age is another, often significant factor affecting the quality of census data that refer to questions regarding fertility and mortality. The following reasons for misstating the exact age and number of persons affect the accuracy of data:

3. children who died at an early age have not been reported to be born;
4. children who died a long time ago are not reported at all;
5. children who have died are not reported to be dead;
6. children are not reported to be born (e.g. by young and/or unmarried mothers);
7. older parents cannot remember the exact date of birth of their oldest children;
8. inadvertent misreporting of a correct date of birth or age;
9. misunderstanding between enumerator and respondent; and
10. errors at data entry.

<sup>2</sup> In this publication a Tokelauan family has been defined as a family in which at least one Tokelauan person lives. Households have been treated in the same manner; a household is defined as a Tokelauan household if one or more people living in it are Tokelauan.

<sup>3</sup> A dependent child is a child who is aged under 18 years and is not employed full-time (less than 30 hours a week).

<sup>4</sup> Elementary occupations include jobs like cleaners, rubbish collectors and laborers.

<sup>5</sup> Definition as adopted by the World Health Assembly.

**GENERAL COMMENTS BY CENSUS ENUMERATOR (if any)**

**FORM CHECKED BY SUPERVISOR**

(signature): \_\_\_\_\_

**FOLLOW-UP ACTION IF REQUIRED (if any)**

- 1.
- 2.
- 3.