AMERICAN SAMOA Population Profile

DEMOGRAPHY

A GUIDE FOR PLANNERS AND POLICY MAKERS

SECRETARIAT OF THE PACIFIC COMMUNITY

AMERICAN SAMOA POPULATION PROFILE

A guide for planners and policy-makers

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Secretariat of the Pacific Community

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CONTENTS

LIST OF TABLE AND FIGURES

LIST OF APPENDIX TABLES

FOREWORD

For almost 15 years, the SPC's Population/Demography Programme has assisted Pacific Island countries and territories in the population sector. With generous support from the United Nations Population Fund (UNFPA) until the end of 1992, SPC was able to provide assistance over a broad range of demographic issues and activities to its 22 Pacific Island members. Most of its activities concentrated on population censuses and surveys, covering all aspects from design, data collection and processing, to analysis, including training and institutional capacity building in these areas. The SPC Population/Demography Programme also provides quality technical advisory services throughout the region.

From 1993 onwards, the main emphasis of the SPC Population/Demography Programme has shifted from data collection, processing and demographic analysis to data utilisation, paying greater attention to the interrelationship between population and development. This new and more applied emphasis is in response to demands from our member countries and territories, acknowledging that many planners have had no formal or first-hand experience with population matters; and therefore found it difficult to incorporate population considerations into development planning processes.

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

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

This profile is mainly based on the results of the 1990 American Samoa Census and American Samoa Statistical Digest.

This volume was prepared by Ms Vilimaina L. Rakaseta with contributions by other members of the SPC's Population/Demography Programme: Ms Gladys Beccalossi, Mr Andreas Demmke, Ms Christelle Lepers and Dr Chris McMurray.

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

Chris McMurray
Demographer
Secretariat of the Pacific Community

SUMMARY

American Samoa, an unincorporated territory of the United States, consists of six inhabited islands and one uninhabited island. The main island is Tutuila, where the capital Pago Pago is located, and the other inhabited islands are Aunu'u which forms part of Eastern Tutuila, Ofu, Olosega and Ta'u which make up the Manu'a Group, and Swains Island in the Tokelau Group (which became part of American Samoa in 1923). Rose Atoll is uninhabited and is an atoll preserved for birds and other wildlife. All inhabited islands except Swains are very rugged and mountainous where village settlements are easily identified, scattered along coastal areas.

The total population estimated for American Samoa in 1999 was about 63,300 people. The population is unevenly distributed, with 96% concentrated on Tutuila and the remaining 4% spread over the remaining four inhabited islands.

The average population density in 1990 was 235 persons per square kilometre, ranging from 3 on Swains Island to 372 on Eastern Tutuila.

Between 1980 and 1990 American Samoa's population increased by 14,476 people, representing an annual population growth rate of 3.7%. At this rate of growth, the population of American Samoa would double in about 19 years. Western Tutuila was the fastest growing district at 5.9% while Eastern Tutuila and Manu'a grew at 2.0% and –0.2% respectively.

The median age in 1990 was 20.9 years.

American Samoa's fertility has declined substantially during the last 15 years. The average number of children born to women who had completed childbearing (45–49 years) has declined by 22% between 1974 and 1990, from 6.3 to 4.9.

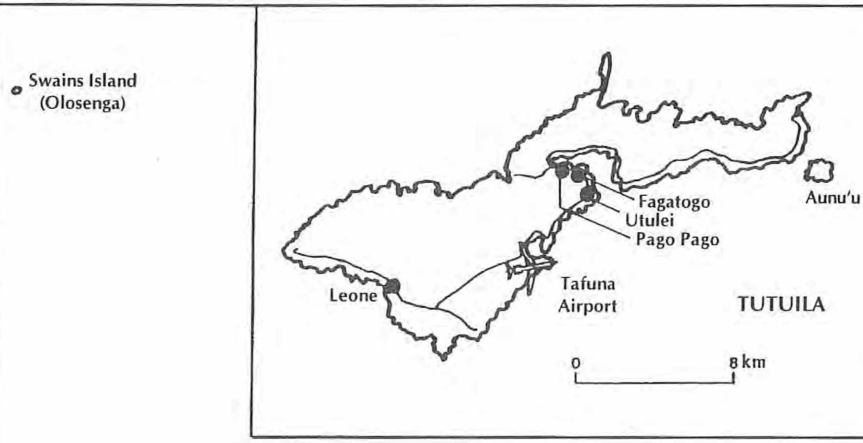
Life expectancy at birth for 1990 was 68.0 years for males and 75.5 years for females. American Samoa had a relatively low Infant Mortality Rate (deaths before age one year) of 11.1 per 1,000 live-births during the period 1990–1994.

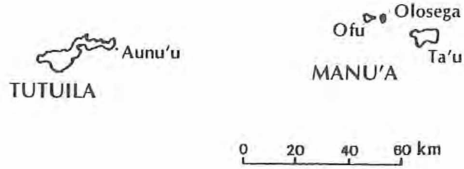
International migration has played a major role in shaping American Samoa's population. Forty-five per cent of the population in 1990 were foreign-born.

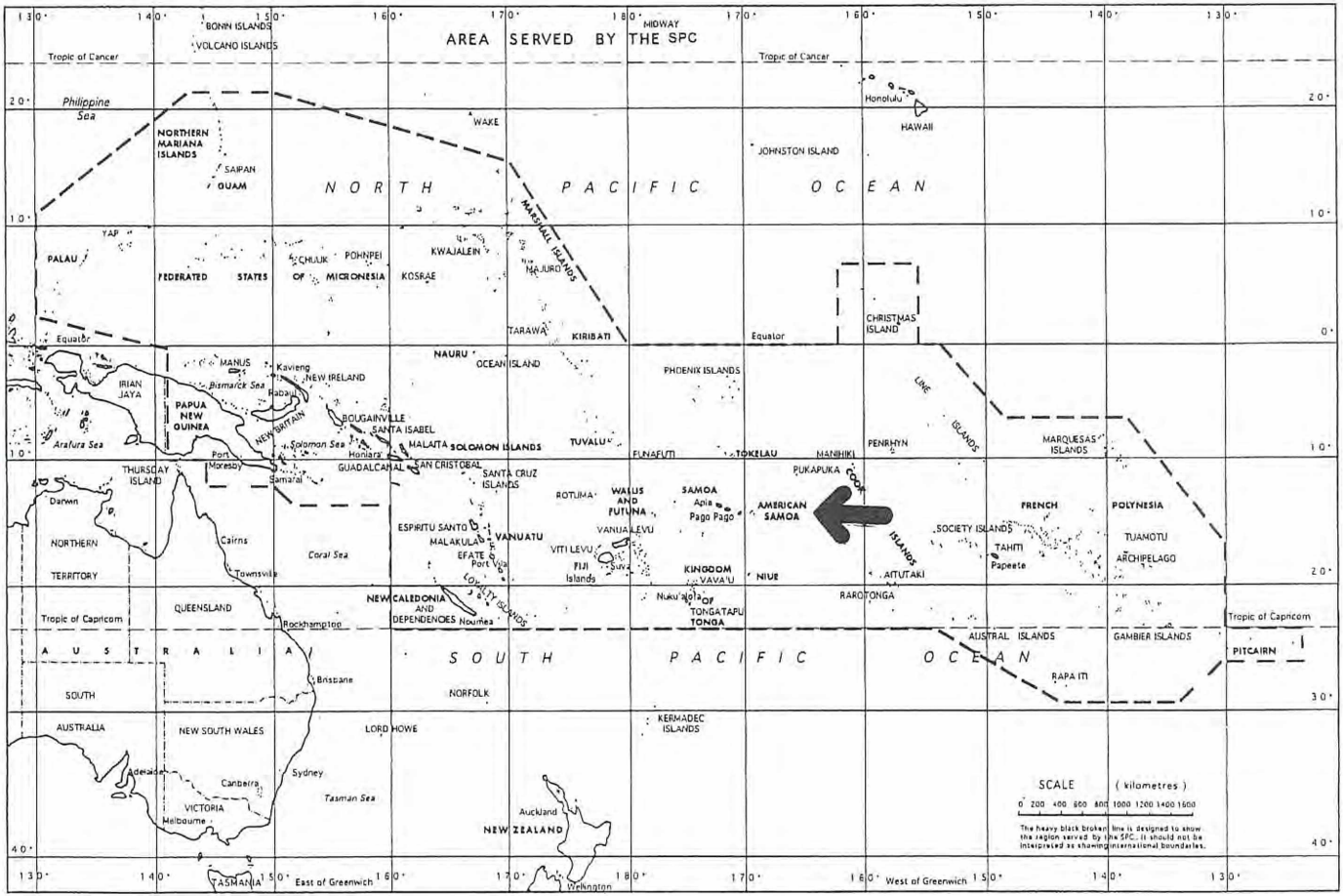
Although registration of births and deaths is comprehensive and timely, the third component of population growth, migration, is not documented at all. It can only be crudely estimated by comparing intercensal population growth with rates of natural increase for the same time period. While this method provides a

reasonably robust estimate of net migration, a more detailed breakdown of arrivals and departures by age and sex is needed if realistic policy decisions are to be made. Hence the introduction of a system to collect and process data on passengers arriving and departing from American Samoa is of the utmost urgency.

AMERICAN SAMOA



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SOUTH PACIFIC OCEAN
AUSTRALIA
Tropic of Cancer
Equator
Tropic of Capricorn
Philippine Sea
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Tasman Sea
BONIN ISLANDS
VOLCANO ISLANDS
MIDWAY
WAKE
HONOLULU
HAWAII
JOHNSTON ISLAND
NORTHERN MARIANA ISLANDS
SAIPAN
GUAM
YAP
PALAU
FEDERATED STATES OF MICRONESIA
CHUUK
POHNPEI
KWAJALEIN
KOSRAE
MAJURO
MARSHALL ISLANDS
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WALLIS AND FUTUNA
SAMOA
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COOK ISLANDS
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MALAKULA
VANUATU
Port Vila
VANUA LEVU
VITI LEVU
FIJI Islands
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PITCAIRN
RAPA ITI
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Brisbane
NORFOLK
NEW SOUTH WALES
LORD HOWE
KERMADEC ISLANDS
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SCALE (kilometres)
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The heavy black broken line is designed to show the region served by the SPC. It should not be interpreted as showing international boundaries.

1. INTRODUCTION

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

For governments to effectively cater for the specific needs of different population groups, it is important for planners to 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 the 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 specifically to alter population variables:

- greater budget allocation to a country's ministry or department of health to expand its maternal and child health and family planning services can lead to fewer deaths of infants, children and women;
- promoting family planning and providing easy access to family planning services may lead to reduced fertility and a slower population growth rate;

- the promotion of rural employment opportunities and improving rural services may slow down rural–urban drift.

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

The aim of this population profile is:

1) to familiarise planners and policy-makers with some of the key features of the socio-demographic situation of American Samoa; and

2) to discuss some of the key implications for development planning and policy.

More detailed analyses of specific sectoral issues and topics, for example housing and occupation, can be undertaken on demand. Efforts have been made to keep this report as brief and free of technical terms as possible. A glossary is appended to explain unavoidable technical terms.

This population profile draws on the following material:

- 1990 Census of Population and Housing - Social, Economic and Housing Characteristics: American Samoa

- Population Profile of American Samoa (1980 Census)

2. POPULATION STRUCTURE

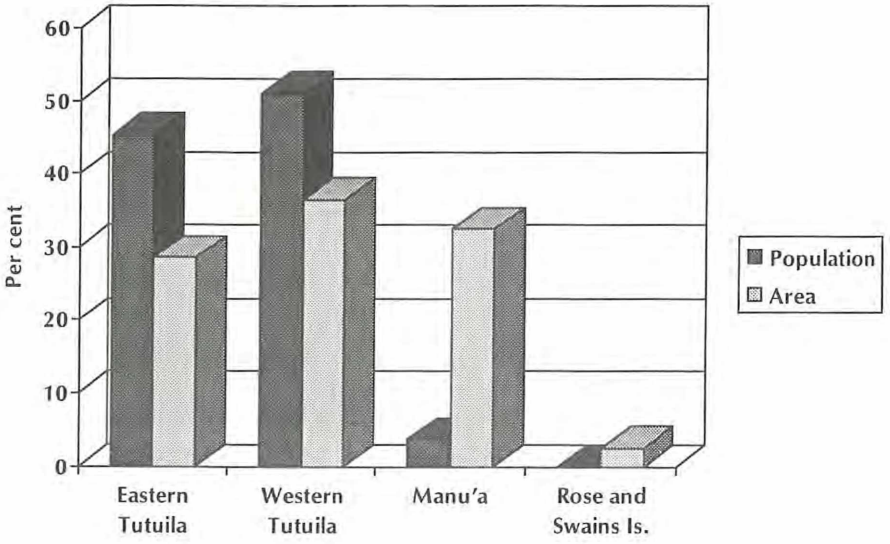
2.1 Size and distribution

A total of 46,773 people were enumerated in American Samoa in 1990. That was an increase of 14,476 persons compared with the 1980 census, representing an average annual increase of 3.7%.

The population of American Samoa is unevenly distributed. The bulk of the population (96%) lives on the main island, Tutuila where Pago Pago (the only urban area and also the administrative centre) is situated.

Population density ranges from 3 persons per square kilometre for Swain's Island to 372 persons per square kilometre for Eastern Tutuila. As can be seen from Figure 1 and Appendix Table 1, Western Tutuila has the largest share of the land area (37%) and the largest population (51%). Manu'a, on the other hand, has the second largest land area (32%), but is home to less than 4% of the population.

Figure 1: Percentage distribution of population and land area, by island, 1990



Source: 1990 Census of Population and Housing

IMPLICATIONS FOR PLANNING

- The geographical distribution of population and the pattern of settlement have important implications for planning, particularly if the quality of services provided is to be the same everywhere. Areas of dense settlement demand and attract the attention of planners and decision-makers. A high concentration of people usually means much better services, as population numbers justify the placement of medical, educational and financial institutions, communication and entertainment facilities. The provision of better services and facilities of various kinds on Tutuila is seen by people as a major advantage of living there, and by the same token, as a disadvantage in the other islands.

- High concentrations of people also place stress on the environment and sanitation services – hence environmental health services need to have higher priority than in less dense areas.

- No matter how small the population in Manu'a and Swains Island, it is the government's responsibility to provide essential quality services, although this may not be economical. Health service delivery can probably be only at a very basic level, and will not be the same quality as that in Tutuila. Provisions need to be in place to allow transport to the main hospital for all emergencies.

2.2 Age and sex composition

Development and planning objectives are often formulated with respect to population groups, whose characteristics are usually associated with age – for example, infants, children and adolescents, pregnant women, workers, students and elderly persons. The age distribution of a country's population is therefore a very important consideration in planning.

The sex ratio of a population and of various age-groups is the result of the sex ratio at birth and gender differentials in mortality and migration. In general, sex ratios tend to decline gradually with age, reflecting higher mortality of males.

In the case of American Samoa, Appendix Table 2 shows that sex ratios do not follow a consistent trend. The major irregularities are: (1) an unusually high sex ratio at age-group 10–14; (2) troughs at age-groups 20–24 and 25–29; (3) very high sex ratios at ages 40–59 and 70–74. Undoubtedly these irregularities are the consequences of international migration. For example the low sex ratios among the 20–29 year-olds are most probably due to sex-selective **emigration** of young adult males for education and/or employment overseas. On the other hand, the high sex ratio at the upper end of the working ages (40–59) is probably a reflection of **immigration** to American Samoa for employment purposes. The low sex ratio at ages 75 and older reflects the expected higher male mortality at older ages.

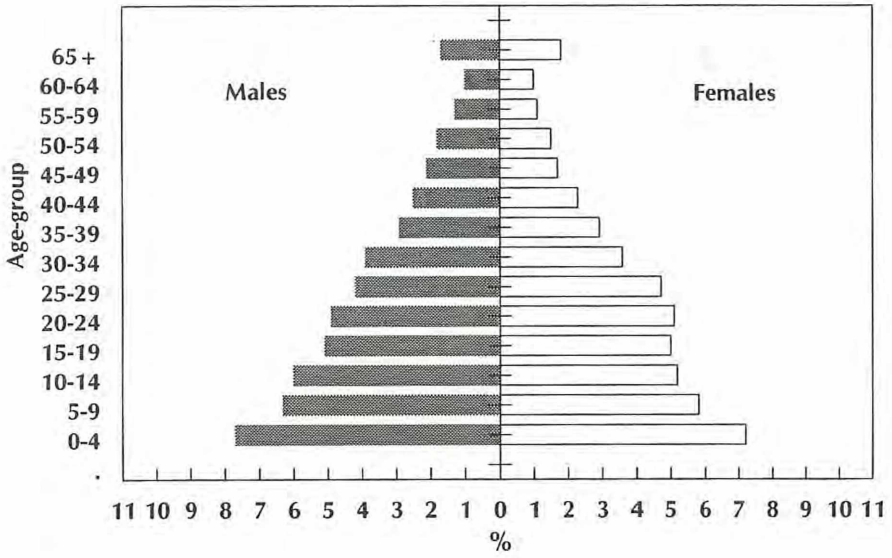
One of the most common ways of describing a population's age structure is to consider age-dependency ratios. The total age-dependency ratio combines the child and aged dependency ratios. It is an important measure of the relationship between the size of the working-age population (aged 15–64 years) and the dependent populations of children (under 15 years) and the elderly (aged 65 and over). The ratio highlights the burden on the working-age population of simultaneously supporting children and the elderly.

American Samoa's age-dependency ratio of 71 means that for every 100 working-age population, there are 71 children and elderly to support. This is quite a favourable ratio compared with 78 in 1980 even though, of course, not all people of working age have paid employment.

Another way of describing the population is by a graphic presentation of age and sex, or the age–sex pyramid as shown in Figure 2 below. The 1990 age–sex pyramid reveals that American Samoa's population has considerable potential for growth in the future because its wider base signifies larger numbers of 0–4

year-olds than those in older age-groups. This means that there will be more potential parents when these children reach adulthood than there were in 1990.

Figure 2: Age–sex structure of the American Samoa population, 1990 (Percentage of total population)



Source: 1990 Census of Population and Housing

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 throughout their lives. For example:

* the size of the primary-school-age population (usually 6–11 years old) determines the demand for primary education (schools, classrooms, teachers, materials). Depending on future levels of fertility and migration, American Samoa's primary-school-age population will increase by between 48% and 79% in 2010 from 6,586 in 1990.

* budgeting pension entitlements depends on the number of elderly people. American Samoa's elderly population will increase by between 84% and 87% from 1990 to the year 2010.

* manpower planning depends on the size of the working- age population. Projections show that American Samoa's working-age population will increase by between 48% and 59% from 1990 to the year 2010.

* the number of the voting-age population is important for organising elections and other public campaign activities.

- The anticipated increase in the elderly (the consequence of the declining proportion of children) in the future means more demands for services for the elderly. For example, medical and social services, and funds for retirement benefits and pensions.

- As birth rates fall, child dependency ratios decline and thereby contribute to an initial reduction of total dependency ratios. During the process of population ageing, aged dependency ratios increase. This combination of trends results in initial reduction, but also a dramatic increase in total dependency ratios in the future.

2.3 Household size and composition

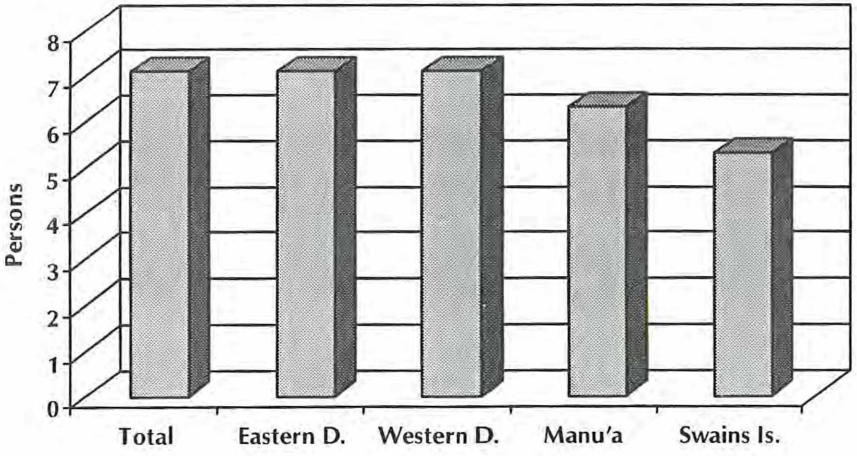
In order to determine the amount and different types of housing needed, it is essential that planners know the household and family characteristics of the population. Land availability and allocation; energy and water consumption patterns; waste disposal and sewage connections; and general infrastructure are also important considerations in determining housing needs.

Household size and composition depend mainly on socio-economic and cultural factors. They are shaped not only by the structure of the family (whether nuclear or extended), but also by the age at which young people leave their parents' house in order to form their own household, and whether they do this with or without family (individually or as couples with or without children).

The availability and costs of suitable housing (housing market) and the availability of land to build upon also have a big impact on household formation and composition.

The average household size in American Samoa has remained static between 1980 and 1990, with around seven persons. Census data reveal that urban households are, on average, slightly smaller (6.9 persons) than rural households (7.2 persons).

Figure 3: Average household size by district, 1990



Source: 1990 Census of Population and Housing

Sixteen per cent of total households in 1990 were headed by females, of which the majority (63%) were rural households. The majority of female household heads were the sole breadwinners. Sixty-eight per cent and 72% of urban and rural female householders respectively had no husband present at the time of the 1990 census.

Implications for planning

- Planners should be aware of changes in household size and composition and their impact on different demands for housing and dwellings in order to be able to supply the appropriate quality and quantity of housing units. Different demands for housing are closely linked to demands for land allocation, energy and water consumption, waste and sewerage disposal and general infrastructure.

- An increasingly recognised problem in American Samoa is the shortage of land on Eastern Tutuila. This has led to the dramatic increase in the growth of Western Tutuila. Care should therefore be taken when developing the limited land available on Tutuila in view of the anticipated increased demands for housing in the future.

- Special consideration should be given to the increasing number of female-headed households, to ensure that these women can afford adequate housing.

2.4 Educational characteristics

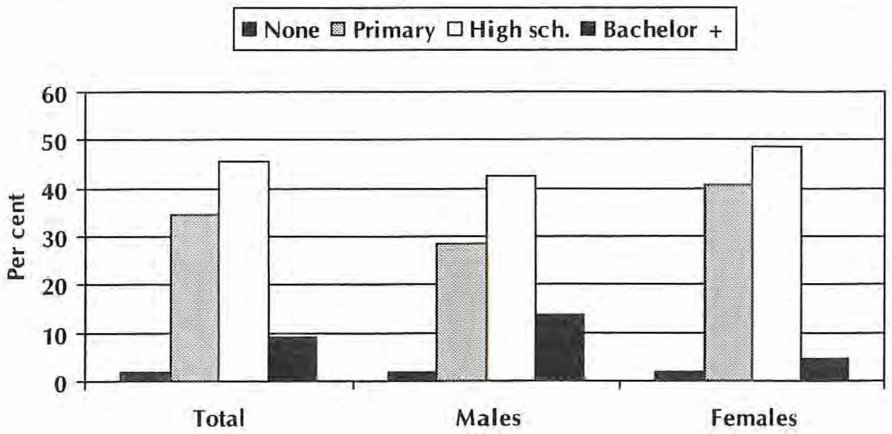
As a US Territory, American Samoa has an educational system modelled on the US system. Students are either enrolled in private schools or in public schools which are defined as 'any school controlled and supported primarily by a government agency'. The different levels of education identified at the 1990 census were pre-primary, elementary, high school and college.

School enrolment levels are relatively high in American Samoa, with 93% of the 10–14 year-olds attending school in 1990 (Appendix Table 3). There were no discernible gender differentials in school enrolment at any level of schooling.

Data on educational attainment derived from the 1990 census showed that 55% of the adult population (25 years and over) were high-school graduates or higher (Appendix Table 4). By gender, a slightly higher proportion of males (56%) than females (53%) had graduated from high school. These proportions have increased from just under one half (48%) of males and a little over one third (38%) of females in 1980.

However, at the tertiary level, there is a gender imbalance, heavily in favour of males. Fourteen per cent of males compared to only five per cent of females had attained at least a bachelor's degree in 1990.

Figure 4: Educational attainment of persons aged 25 years and over, 1990



Source: 1990 Cenus of Population and Housing

IMPLICATIONS FOR PLANNING

- Changes in a country's population structure affect educational needs. The higher a country's level of fertility, at given levels of mortality, the larger its school-age population relative to the rest of the population.

- In view of American Samoa's continued high fertility, the primary-school-age population will continue to increase despite future declines in fertility. This means more public funding will be required for educational purposes such as programmes, classrooms, teachers and materials in the future. Depending on future levels of fertility and migration, between 3,200 and 5,200 more school places will be needed in 2005 (see Section 4.3 and Appendix Table 10).

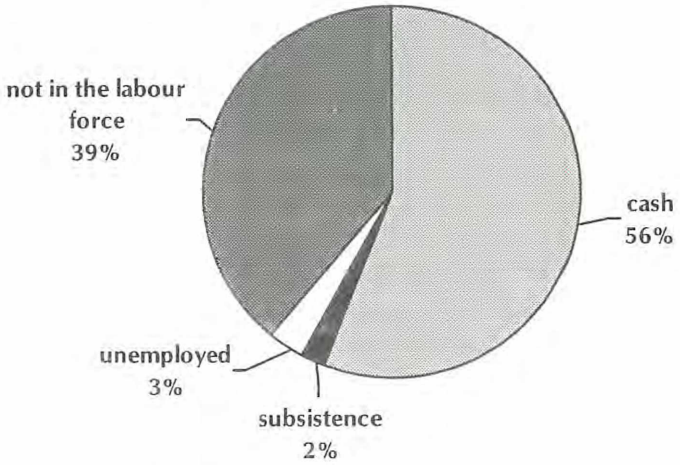
- Government should take positive steps to encourage pupils to complete secondary education. Encouragement should also be given to females to proceed to tertiary education to bring them into line with males.

- With more effort by the government to improve the level of education of American Samoans, there will be a more educated workforce. This increases the territory's comparative advantages, and greatly facilitates direct foreign investments.

2.5 Economic activity

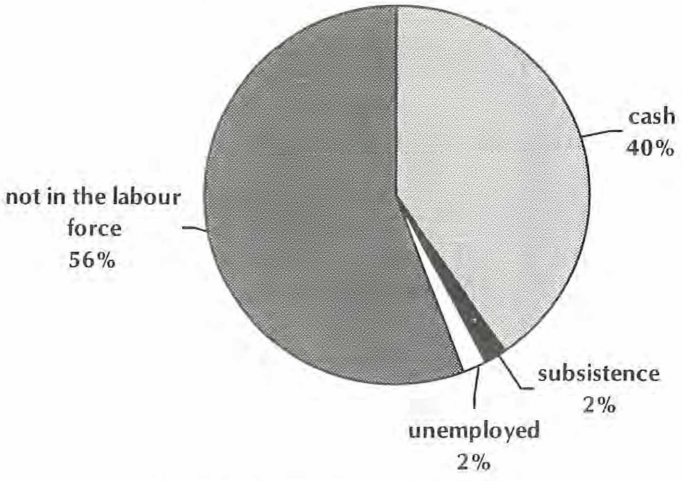
At the time of the 1990 census, more than half (53%) of persons aged 16 years and over were in the labour force. Fifty-nine per cent of males and forty-two per cent of females were in this category. The labour force refers to people who were either employed at the time of the census, or actively looking for employment (unemployed). As shown in Figures 5a and 5b, a larger percentage of males (56%) than females (40%) was employed in the cash economy, while most of the remainder of the population were not in the labour force: 39% and 56% of males and females respectively.

Figure 5a: Percentage of males aged 16 years and over by labour force participation, 1990



Source: 1990 Census of Population and Housing

Figure 5b: Percentage of females aged 16 years and over by labour force participation, 1990

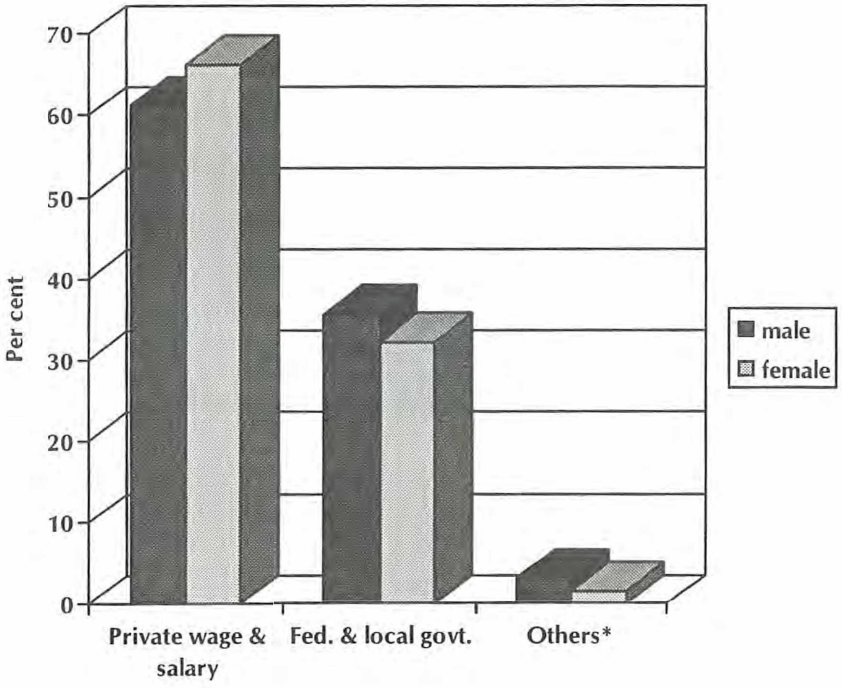


Source: 1990 Census of Population and Housing

As expected, the highest percentages of population engaged in cash employment were found in the middle age-groups (Appendix Table 5). Between 64% and 79% of 25–54 year-old males and around 50% of the 25–54 year-old females were in this category. Although the youngest age-groups had the lowest participation rates, it is worth noting that a significant percentage of the elderly males (25%) and females (15%) were engaged in cash employment at the time of the 1990 census.

The majority of the workers in American Samoa were private-sector employees: 61% employed males and 66% of employed females (Figure 6). Although a higher percentage of females were in this category, in absolute numbers males outnumbered females because of the much larger number of male workers: 7,901 versus 5,560.

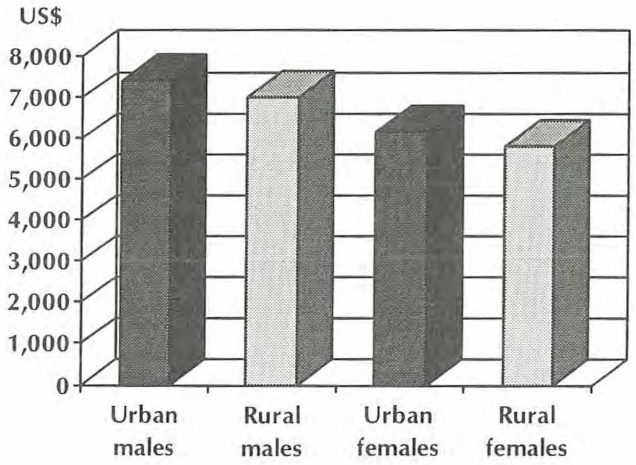
Figure 6: Employment status by gender, 1990



*Others are self-employed and unpaid family workers
Source: 1990 Census of Population and Housing

Income levels in American Samoa are very much influenced by its association with the United States and are therefore much higher than in most other Pacific Island countries and territories. Data from the 1990 census reveal differentials in income levels by residence and by gender. Median incomes of males and females were $US 7,151 and $US 5,952 respectively (Appendix Table 6). Median incomes favour urban dwellers (over rural) and males (over females), as shown in Figure 7 and Appendix Table 6. However, differences by place of residence are not as great as by gender. The median income of rural dwellers lies between 94% and 95% of that of urban dwellers, while the median income for females is only 83% of the median income for males. Urban males were the highest paid, while rural women were the lowest paid.

Figure 7: Median income by gender and urban–rural residence, 1990



Source: 1990 Census of Population and Housing

IMPLICATIONS FOR PLANNING

- There is a projected increase in American Samoa's working-age population between 1990 and 2005 of between 13,365 and 16,246 people. New jobs need to be created to avoid an employment shortfall.
- With female labour-force participation lagging behind male labour-force participation, particular attention might need to be accorded to redressing this.
- There is a need to increase the earning capacity of females centred on education and vocational training in view of the male-female gap in income levels.

3. POPULATION DYNAMICS

3.1 Population growth

There are two ways to describe population growth. At the most basic level, we can consider only natural increase, which describes population change as a result of births and deaths. Growth occurs when the number of births during a 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,

Natural increase = births – deaths.

Population growth may also be shaped by a further component: migration. It is a major contributing factor to the population dynamics of most countries, and particularly the Island countries and territories of the Pacific. In such circumstances we cannot look only at natural increase. The second, and more usual way of describing population growth is to consider the change in a country's population size as a result of births, deaths and migration.

Migration is the movement of people across a certain boundary. When this boundary applies to national borders, we speak of international migration. The people are referred to as migrants. We speak of immigrants if they are moving into a country and of emigrants if they are moving out of a country. When we refer to internal migration (movement within a country, between districts and provinces, for example), we speak of in-migrants and out-migrants.

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

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

Population growth = natural increase + net migration (immigration – 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 American Samoa the average CBR for 1981–90 was 36.6 per 1,000, which means that during those years there were about 37 births for every 1,000 people. A CDR of 4.2 for the same period means that there were around 4 deaths for every 1,000 people. By subtracting the CDR from the CBR, we obtain the rate of natural increase, as follows: CBR (36.6) – CDR (4.2) = 32.4 per 1,000 people, or 3.24%.

When we compare this with the growth rate obtained by substracting the 1981 de facto population from the 1990 de facto population (3.7%), we obtain the Crude Net Migration Rate (immigration – emigration).

$$\text{Net migration rate} = 37.0 - (36.6 - 4.2) = 4.6.$$

In other words, between 1981 and 1990, American Samoa's net migration amounted to 4.6 per 1000, which, based on the 1990 population, translates into a net migration of +212 persons annually. These figures do not mean that people are not leaving American Samoa; they simply mean that **there are more people coming into American Samoa than people leaving American Samoa.**

IMPLICATIONS FOR PLANNING

- Migration into American Samoa has played and will continue to play a significant role in shaping the population of the territory. Factors which contribute to this in-migration include (1) the presence of industries, e.g. fish canneries and the relatively high levels of income, and (2) political affiliation with the United States of America.

- The high population growth is due to births and immigration. There is potential for reduced growth in the future if (1) net immigration declines, (2) fertility rates decline (women have fewer children), or (3) there is a reversal of migration trends (more emigrants than immigrants).

- Rapid population growth may be an advantage for some economies, but it puts pressure on the public and private sector to respond to an increasing demand for housing, energy and water, educational services, health facilities and employment opportunities.

3.2 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 with few women, particularly women in child-bearing ages, will obviously have fewer births than a population with a large number of women in child-bearing ages.

- *Fecundity*. This is the biological/physiological ability to reproduce.

- *Age at cohabitation/marriage*. In most countries child-bearing is closely linked to marriage or cohabitation.

- *Availability and use of family planning*. Populations that have access to, and regularly use, family planning methods have lower fertility rates than those where access is limited or denied.

- *Psycho-social and cultural factors*. This includes practices such as post-partum abstinence and breastfeeding, as well as value/belief systems concerning concepts of ideal family size, and the perceived 'value' of children.

- *Economic development*.

- *Status of women*. Women's place in society, level of education and work status. Based on world-wide empirical evidence, we know that higher levels of female education and access to economic opportunities outside the household are related to lower fertility and smaller families.

Fertility is the demographic component which has the biggest impact on a country's age–sex composition (unless there are high levels of migration), as the composition and size of different age-groups depend largely on birth rates. Populations 'age' with falling birth rates, since the percentage of children is reduced.

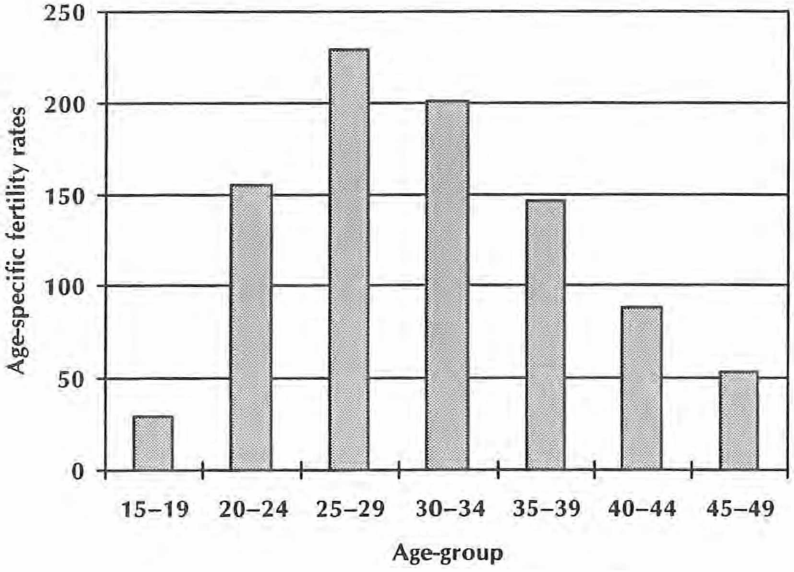
The indicator most commonly used to describe a country's fertility is the *Total Fertility Rate* (TFR). This measure indicates how many children women would give birth to, on average, if they were subject to the current fertility level and pattern throughout their reproductive lives (15–49 years of age). It is calculated from the number of live births by age of mother in a given year, the *Age-Specific Fertility Rates* (ASFRs). The data needed for the calculation of this measure are the total number of live births by age of mothers in a given time

interval (usually a calendar year) and the total number of women in each age-group. This information usually comes from vital and civil registration systems, but where such information is not available or considered incomplete or untimely, we rely on censuses and/or specific surveys.

Based on the 1990 census, the TFR in American Samoa was 4.5 children per woman. This means that, on average, American Samoan women were having between 4 and 5 children. Fertility has declined substantially in American Samoa during the last 15 years. The average number of children born to women who have completed their childbearing (45–49 years) has declined by 22% between 1974 and 1990, from 6.3 to 4.9.

The age pattern of fertility (or ASFR) which shows the rate for specific age-groups, indicates that in 1990 women in American Samoa give birth at relatively older ages compared with most other Pacific Island countries and territories. From Figure 8 it can be seen that fertility is highest for women aged 25–29, but there are significant numbers of births to women over 40 years; in other words, fertility is relatively high at older ages.

Figure 8: Age pattern of fertility, 1990



Implications for planning

- Declining fertility (a reduced number of children per woman), as is assumed in Scenarios 2, 3 and 4 of the population projections for American Samoa (Section 4.2) would have the following impact on the population:

  * a slowing of the growth rate;

  * American Samoa's population becoming older (as the percentage who are children declines);

  * fewer school children and declining school enrolments.

- There is a need to improve family planning utilisation, in order to reduce the current high rate of fertility. This would involve promoting family planning knowledge and acceptance, through radio and counselling services and improving availability and accessibility.

3.3 Mortality

The mortality of a population refers to deaths that occur within a population. It depends on various factors, including:

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

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

Life expectancy at birth is the most commonly used mortality measure. It is an estimate of the average number of years a newborn baby can expect to live. The higher the infant mortality rate (IMR), the lower life expectancy at birth tends to be.

Life tables for American Samoa have been calculated based on the average of age-specific death rates for the years 1987–93 (see Appendix Table 8). The life expectancy at birth was 68.0 years for males and 75.5 years for females. The table shows that the sustantially lower life expectancies for males than for females are not due only to the expected higher infant mortality rate for males. From age 15–45, the age-specific death rates for males are at least twice as high as for females and always substantially higher even for ages 80 and over.

American Samoa has a relatively low infant mortality rate. The average IMR for 1990–1994 was 11.1, which means that for every 1,000 babies born alive, 11 died before they reached their first birthday. This suggests that American Samoa's population enjoys good health services, particularly maternal and child

health services. Medical care is mainly available through the LBJ Tropical Medical Center; cases requiring special attention may be evacuated to Honolulu by air.

However, changing lifestyles have had an impact on American Samoan mortality trends in recent years, by increasing the incidence of lifestyle-related diseases. This is evident in the two major causes of death: heart diseases and malignant neoplasm (cancer). The higher mortality for males than females suggests males are more susceptible to lifestyle-related illness.

Implications for planning

- The most important result of improved mortality conditions is healthier people living longer lives.
- American Samoa's infant mortality rate has been declining and it is among the lowest rates in the region. Low IMR indicates that improved primary health care programmes are achieving the desired results (immunisation).
- Mortality may stagnate or even increase because of lifestyle-related illness. The prevalence of high-risk behaviour (including smoking and excessive alcohol intake) and the high fat content of modern American Samoan diets will be major factors underlying this likely trend.
- Higher life expectancies have had a direct impact on the age–sex structure of American Samoa's population. To make realistic forecasts for adequate provision of social welfare services (retirement benefits/ pension, health care for elderly), it would be helpful to have good mortality statistics, separately for males and females, by age and by cause of death.

3.4 Migration

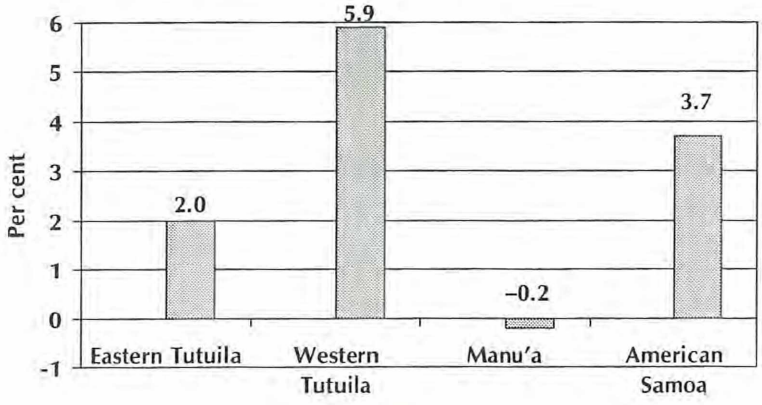
One of the key problems concerning migration is duration of stay. Someone coming for a short visit can hardly be termed a migrant — he or she is a visitor. Apart from time, intent is also of crucial importance, as a visitor can turn into a migrant if, for example, presented with sudden job opportunities. In the same way, a migrant may turn into a visitor, if expected job opportunities do not materialise. Whether or not a particular person qualifies as a migrant can only be established *post facto* (after the fact). Planners, therefore, need to base their decisions on past and projected movements of people.

3.4.1 Internal migration

Figure 9 shows that whereas the overall intercensal growth rate for American Samoa was 3.7%, there was considerable variation between districts. The fastest-growing district during the period 1980–90 was Western Tutuila, which grew at an average rate of almost 6% annually. This is almost three times the growth of Eastern Tutuila, the second fastest-growing district, which grew at 2%. Manu'a, on the other hand, experienced negative growth during the same period, although at a slower rate than in the preceeding intercensal period 1970–1980 when it decreased by –2.2% per annum (Appendix Table 9).

Over the years, Western Tutuila has overtaken Eastern Tutuila as the most populous district (Appendix Table 9). Western Tutuila's population would double in 12 years' time if it continues to increase at the current rate. That is if Western Tutuila's population continues to grow at the rate of 5.9%, its population will reach 47,700 in the year 2002, which is more than the total American Samoa population of 46,700 in 1990.

Figure 9: Growth rates by district, 1980–1990



IMPLICATIONS FOR PLANNING

- Tutuila can be compared to a small city, which means that internal migration can be considered intra-city movement.

- The statistics presented above suggest that Western Tutuila is more attractive to live in than other districts. This is mainly because of the availability of land on Western Tutuila. Eastern Tutuila is more mountainous whereas Western Tutuila has more flat land. The location of economic and social amenities on Tutuila has prompted people from other islands to move to Tutuila because they can find jobs, better health facilities or merely to have a better lifestyle.

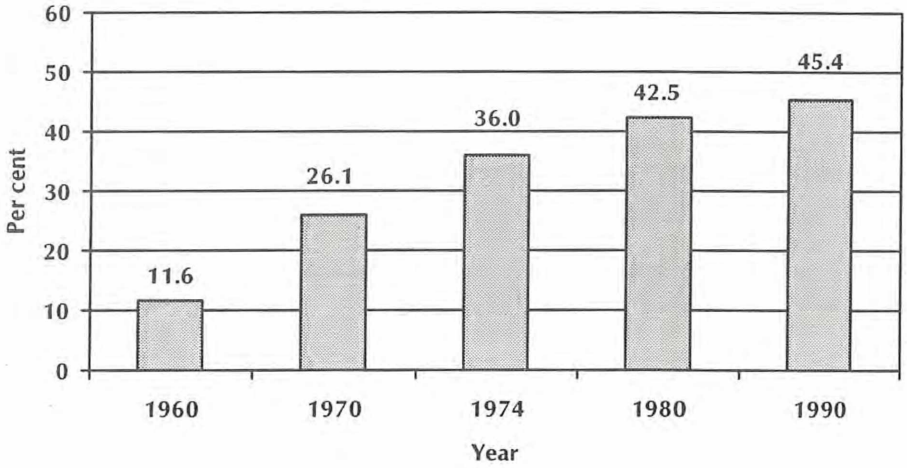
- There may be a need to slow migration into Tutuila to prevent overcrowding in the future. There is a need for greater attention to be paid to regional planning and development, to improve the standard of rural living and to create rural employment, especially on Manu'a.

- There is a need to create awareness among the population of the adverse effects if conditions on Tutuila become overcrowded. Communication links and transportation between Tutuila and Manu'a may need to be developed to enable people to communicate or move between the two islands easily and at affordable prices.

3.4.2 International migration

The population of American Samoa has been shaped by international migration as evidenced by the relative proportions of foreign-born persons over the years. In 1990 45% of the population were foreign-born compared to only 12% in 1960. The highest increase in the foreign-born population was during the decade 1960–70, when it increased by 205%.

Figure 10: Per cent of population born overseas, 1960–1990



Sources: Population Profile of American Samoa (1980 census)
1990 Census of Population and Housing

The main migrant flows to American Samoa have been from Samoa, Tonga and other Pacific Island countries, mainly for employment reasons. American Samoa's attractive wage rates have lured many people over the years, especially from neighbouring countries. Furthermore, American Samoa has served as a gateway for people wishing to migrate to the US mainland.

IMPLICATIONS FOR PLANNING

- In view of the substantial migration flows to and from American Samoa, it is important to establish a system which enables the American Samoan administration to gather accurate information on migration, in order to keep track of changes in the population size and structure.

- International migration is very much influenced by the political and economic conditions in American Samoa and in the countries of origin. Stemming immigration into American Samoa would mean less burden on the territory's services such as health and housing.

4. LIKELY FUTURE DEVELOPMENTS

4.1 The importance of population projections

The basis for any development planning is population size and structure. It follows therefore that in formulating socio-economic development plans, population variables need to be considered in conjunction with economic and social conditions.

For American Samoa to cater effectively for the specific needs of various population groups at different points in time, it is important for planners to be able to provide policy-makers with an indication of what the population might be like in the future. The way to do this is to create a series of population scenarios, that is estimates of what American Samoa's population could look like in the future if there are particular rates of fertility, mortality and migration. These scenarios are called population projections.

There are various methods of computing future population scenarios. Most of these methods are based on the cohort-component method which considers each five-year age-group separately and looks at how it may decrease or increase over time. Some Statistics Officers who attended the SPC population workshop in American Samoa in October 1997 are familiar with using this method and the computer program PEOPLE.

The starting point for any projection is a reliable age–sex distribution of a population and information on fertility, mortality and migration. The key to making meaningful projections lies in the choice of assumptions regarding possible birth, death and migration rates in the future. Obviously, it is not possible to know for certain what will happen, but we can use population projections to show the size and composition of the population at a future date, if we make various assumptions about trends.

After making assumptions about future demographic trends, we can test and evaluate likely outcomes of specific policy interventions. An example will illustrate this:

The American Samoa administration wants to evaluate the impact of international migration on the growth of the population. What would American Samoa's population look like if net migration was zero for a period of say, ten years? In this case the growth of the population would be determined by its natural growth only (births minus deaths). Scenario 1 is a population projection based on zero net migration, which allows us to see what the size and structure of American Samoa's population would be if emigration was equal to immigration or there were no migration (see Section 4.3).

Scenario-building based on population projections is an essential planning tool, in addition to other, more traditional social, economic and financial analyses and modelling undertaken by planners worldwide.

4.2 Projection assumptions

Four population projection scenarios have been prepared, using the de facto population and the age and sex distribution of the 1990 census.

This means only American Samoans who were in American Samoa on census day have been included.

The projection scenarios span 15 years, from 1990 to the year 2005 (see Table 1).

The Age-Specific Fertility Distribution was derived from the 1990 census and a TFR of 4.5 children per woman in 1990. Assumptions were made about TFR trends to produce the three different scenarios.

Life expectancy at birth for the base year was derived from the Age-Specific Death Rates for the years 1987–93 based on death data from the Department of Health (see Section 3.3 on mortality).

All four scenarios assume the same rising trend in life expectancy, based on the medium variant of the United Nations working model for mortality improvement as described in *World Population Prospects, The 1994 Revision*, p. 144:

> *The middle model, which is most often used, assumes that male life expectancy at birth will increase by 2.5 years every quinquennium (5 years) until it reaches 60 years and that the quinquennial gain is then gradually reduced to 0.4 year at life expectancy at birth of 77.5 years and remains at 0.4 year per quinquennium thereafter. Female life expectancy at birth is assumed to increase by 2.5 years every quinquennium until it reaches 65 years; and from then on the quinquennial gain is gradually reduced to 0.4 year at life expectancy of 82.5 and thereafter.*

Only one mortality assumption was used since changes in the level of mortality usually have only a small effect on the overall population growth rate. Under normal circumstances, in the absence of catastrophes, wars, famines or epidemics, mortality levels have tended to continuously improve throughout the world in recent years.

Making assumptions about migration presents the greatest difficulties. One reason is the lack of reliable recent data. It was therefore decided to use net migration figures derived from the Balancing Equation, as discussed in Section 3.1. A net immigration of 210 persons annually was used as the base migration input.

Scenario 1 (Zero net migration)

Fertility: The estimated TFR of 4.5 children per woman for 1990, is assumed to remain constant until the year 2005.

Mortality: The level of life expectancy at birth is assumed to gradually increase from 68.0 for males and 75.5 for females in 1990 to 70.5 and 77.9 in the year 2005, in accordance with the UN working model of mortality improvement.

Migration: It is assumed that there will be zero net migration for the duration of the projection period 1990–2005. This does not mean that people will not be entering or leaving American Samoa during this period. It simply means that the numbers of people leaving and entering the territory are the same.

Scenario 2 (Moderate fertility decline)

Fertility: The estimated TFR of 4.5 for the year 1990 is assumed to decline to 3.5 children per woman by the year 2005.

Mortality: The level of life expectancy at birth is assumed to gradually increase from 68.0 for males and 75.5 for females in 1990 to 70.5 and 77.9 in the year 2005, in accordance with the UN working model of mortality improvement.

Migration: It is assumed that the number of net immigrants will be 210 annually for the duration of the projection period 1990–2005.

Scenario 3 (Moderate fertility and migration declines)

Fertility: The estimated TFR of 4.5 for the year 1990 is assumed to decline to 3.5 children per woman by the year 2005.

Mortality: The level of life expectancy at birth is assumed to gradually increase from 68.0 for males and 75.5 for females in 1990 to 70.5 and 77.9 in the year 2005, in accordance with the UN working model of mortality improvement.

Migration: It is assumed that the number of net immigrants will be reduced from the 1981–90 level of 210 annually to 105 by the period 2000–2005.

Scenario 4 (Rapid fertility decline and moderate migration decline)

Fertility: The estimated TFR of 4.5 for the year 1990 is assumed to decrease to 2.5 children per woman by the year 2005.

Mortality: The level of life expectancy at birth is assumed to gradually increase from 68.0 for males and 75.5 for females in 1990 to 70.5 and 77.9 in the year 2005, in accordance with the UN working model of mortality improvement.

Migration: It is assumed that the number of net immigrants will be reduced from the 1981–90 level of 210 annually to 105 by the period 2000–2005.

4.3 Projection results

The four scenarios enable us to look at the impact that different levels of fertility and migration would have on overall population growth and age and sex structure. Table 1 compares the base year of the projections (1990) and the end year (2005) for the four projection scenarios. Scenario 2 would produce the largest population because it assumes continuation of current trends in migration and only moderate declines in fertility. The smallest population (Scenario 4) would be the outcome of reduced net immigration (to 50% of the current levels) combined with a very rapid decline in fertility (by 2 children) between 1990 and 2005. The results of the projections are summarised in Section 4.3.1 and shown in detail in Appendix Table 10.

Table 1: Population projections, 2005

	Total pop.	Under 15 years (%)	15–64 (%)	65+ (%)	Median age (years)	Annual growth rate (%)
Base year 1990	**46,773**	**38.1**	**58.5**	**3.4**	**20.9**	**3.7***
Projection results, 2005						
Scenario 1	73,365	40.6	55.3	4.0	20.0	3.0
Scenario 2	74,219	37.2	58.7	4.1	22.1	3.1
Scenario 3	73,289	37.4	58.5	4.1	21.9	3.0
Scenario 4	69,132	33.6	62.0	4.3	23.7	2.6
Changes compared to 1990						
Scenario 1	26,592	2.5	–3.2	0.6	–0.9	–0.7
Scenario 2	27,446	–0.9	0.2	0.7	1.2	–0.6
Scenario 3	26,516	–0.7	0.0	0.7	1.0	–0.7
Scenario 4	22,359	–4.5	3.5	0.9	2.8	–1.1

*1980–1990 Growth Rate

These projection scenarios highlight the impact of migration on population growth as well as the effect on both growth and age structure of different levels of fertility and increasingly longer lives.

4.3.1 Summary of results

Scenario 1

The population of American Samoa would grow by 26,592 people between 1990 and 2005 and the population would be 73,365.

The primary-school-age population would increase by 5,183 from 6,586 in 1990 to 11,769 in the year 2005 (Appendix Table 10).

The working-age population would increase by 13,265 from 27,340 in 1990 to 40,605 in the year 2005. The age-dependency ratio would increase from 71.1 dependents to every 100 persons of working age to 80.6 during the same period due to the relative increase in both the population below 15 years and the elderly population.

The proportion of the population older than 65 years would increase from 3.4% (1,612) in 1990 to 4.0% (2,964) in 2005.

Scenario 2

The population would grow at the rate of 3.1% to a total of 74,219 people in the year 2005.

The school age population would increase by around 70%. In absolute numbers there would be an additional 4,580 primary school children between the ages of 6 and 11 in the year 2005. The population aged under 15 would increase by 55%, or an additional 9,801 children between 1990 and 2005. This is despite the fact that children under age 15 will comprise a smaller percentage of the population.

The relative number of working-age and elderly population would both increase, by 59 and 87% respectively.

The age-dependency ratio would decrease from 71.1 in 1990 to 70.1 in 2005, mainly as a result of the declining percentage of young children.

Scenario 3

The total population would reach 73,289 by 2005, representing an average annual increase of 3.0% over the 15-year period.

The percentage of children under 15 would decline, and the percentages of working-age and people 65 and older population would both increase.

The age-dependency ratio would decline, as a consequence of the decline in the proportion of children in the population.

Scenario 4

The population would grow at the slower rate of 2.6% per annum to 69,132 in the year 2005.

A decline in the proportion under age 15 years would be reflected in a decrease in the age-dependency ratio, from 71.1 in 1990 to 61.2 in 2005.

Although the percentage of primary school children would remain constant between 1990 and 2005, in absolute numbers it would still increase by 3,180. This is because the total American Samoa population would be much bigger than the 1990 population.

All four scenarios have the following common features:

1) the total population would continue to grow, even if a rapid **decline** in fertility is assumed.

2) the primary school age population (6–11) in the year 2005 would be considerably larger than in 1990;

3) the number of people of working ages in the year 2005 would be considerably more than in 1990. There would be between 40,605 and 43,586 people between 15 and 64 years of age in the year 2005 compared to 27,340 in 1990;

4) the percentage and number of population 65 and older would be greater than in 1990. There would be around 3,000 elderly people in 2005 compared to 1,600 in 1990.

5. OVERALL IMPLICATIONS FOR PLANNERS AND POLICY-MAKERS

1. The four population projection scenarios produce population estimates for American Samoa in 2005 of between 69,132 and 74,219 people, depending on the levels of fertility, mortality and migration which prevail. Scenario 3, which assumes a moderate decline in both fertility and migration, is perhaps the most likely outcome, although we can only guess this. Under this scenario, the population could reach 73,289 people in the year 2005, an increase of more than 26,000 people compared to the 1990 census population, and representing an annual rate of growth of 3%.

2. The projection scenarios presented in this paper demonstrate that by the year 2005, the age structure of American Samoa's population is likely to undergo some changes (Table 1 and Appendix Table 10). Compared to 1990, there will be considerably more people in the school ages, the working ages and the elderly (65+).

3. Scenario 1 illustrates the impact that constant fertility at 1990 levels and zero net migration would have on the age structure of the population. From 1990 to 2005, the percentage of the population under the age of 15 would increase, as well as the elderly population (Table 1); on the other hand, the percentage of people between the ages of 15 and 64 would slightly decrease. As a result the age-dependency ratio would increase from 71.1 in 1990 to 80.6 in 2005 under this scenario.

4. Continued declines in fertility would lead to changes in American Samoa's age structure, especially the percentage of children under age 15. Scenario 2 estimates that the primary-school-age population would increase by 70%, which means that there would be at least 4,500 more students in the year 2005 than in 1990. This would mean considerable additional expenditure on resources for primary education in the future.

5. The expected increase in the working-age population between 1990 and 2005, in all four scenarios, would be considerable. There would be between 40,605 and 43,586 in the working age (15–64), which is an increase of between 13,265 and 16,246 people between 1990 and 2005. This would demand the creation of more employment opportunities.

6. The population older than 65 years would also increase, from 1,600 in 1990 to around 3,000 in 2005. This is referred to as 'aging of the population'. One reason for this is that American Samoa's population would live longer, but

also there would be larger cohorts in the older ages. These larger numbers would demand more services for the elderly, medical and social services, and require more funds for retirement benefits and pensions.

7. Reliable population statistics, including vital statistics and migration data, provide the basis for reliable development planning. They are indispensable for keeping population size, growth and indicators up to date, as they form the basis for sensible population projections. The impact and success of any policies, programmes or projects designed to influence any of the population parameters (fertility, mortality or migration) could be readily evaluated with the help of a complete and reliable vital registration system which also included data on migration.

To this end, it is important that:

- Vital statistics (births and deaths, including information on causes of death) are reliable, and that every effort be made to have timely and comprehensive coverage.

- Considerable improvements are made regarding migration statistics, especially collecting basic arrival and departure information on all incoming and outgoing passengers. Information is needed on the total number, age, sex and nationality of all passengers, by year.

8. While availability of good data is one pre-requisite for responsible development planning, data analysis and utilisation are of equal importance. This also requires adequately trained staff. Population projections are an essential planning tool, and an improved knowledge of the interrelationship between population and development is essential to provide a firm basis for undertaking demographic projections and scenario-building. The projections in this profile are a first step. Planners need to work with developers and policy-makers to estimate and plan for the demand for health services, schools, employment opportunities and housing, among other needs.

9. Incorporation of population variables into the policy-making and decision-making processes enhances the effectiveness of the processes. Planners and policy-makers should incorporate population variables into their policy-making and decision-making framework whenever possible, and make new population projections whenever new data become available.

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APPENDIX TABLES

Appendix Table 1: Population distribution and density, 1980 & 1990

District	Population distribution			
	1980		1990	
	pop.	%	pop.	%
Eastern Tutuila	17,311	*53.6*	21,175	*45.3*
Western Tutuila	13,227	*40.9*	23,868	*51.0*
Manu'a	1,732	*5.4*	1,714	*3.7*
Rose* & Swains Is.	27	*0.1*	16	*0.0*
Total	32,297	*100.0*	46,773	*100.0*

	Land area		Density per km^2	
	km^2	%	1980	1990
Eastern Tutuila	56.9	*28.6*	304.2	372.1
Western Tutuila	72.5	*36.7*	182.4	329.2
Manu'a	64.7	*31.7*	26.8	26.5
Rose* & Swains Is.	5.0	*3.0*	5.4	3.2
Total	199.1	*100.0*	162.2	234.9

	Land area		Density per $mile^2$	
	$mile^2$	%	1980	1990
Eastern Tutuila	21.9	*28.6*	790.5	966.9
Western Tutuila	28.0	*36.7*	472.4	852.4
Manu'a	25.0	*31.7*	69.3	68.6
Rose* & Swains Is.	1.9	*3.0*	14.2	8.4
Total	76.8	*100.0*	420.0	608.2

* There were no persons living on Rose Atoll in 1980 or 1990.
Source: South Pacific Commission, 'Population Statistics: Statistical Bulletin No. 42', Table 2.

Appendix Table 2: Age and sex composition of the total population, 1990

Age-group	Males	Females	Persons	Sex ratio (M/F)*100
0–4	3,598	3,354	6,952	107.3
5–9	2,924	2,716	5,640	107.7
10–14	2,812	2,417	5,229	116.3
15–19	2,396	2,322	4,718	103.2
20–24	2,301	2,363	4,664	97.4
25–29	1,986	2,175	4,161	91.3
30–34	1,807	1,706	3,513	105.9
35–39	1,359	1,362	2,721	99.8
40–44	1,178	1,068	2,246	110.3
45–49	974	805	1779	121.0
50–54	835	687	1522	121.5
55–59	598	495	1093	120.8
60–64	467	456	923	102.4
65–69	324	343	667	94.5
70–74	223	201	424	110.9
75+	241	280	521	86.1
Total	**24,023**	**22,750**	**46,773**	**105.6**

Source: 1990 Census of Population and Housing

Appendix Table 3: School enrolment by age and sex, 1990 (per cent of age-group)

Age-group	Primary		High school		College	
	M	F	M	F	M	F
5–9	79.0	79.9	0.0	0.0	0.0	0.0
10–14	71.3	70.0	21.8	23.7	0.0	0.0
15–19	1.1	0.9	58.7	56.4	10.1	13.3
20–24	0.0	0.0	3.0	2.3	12.8	12.6

Source: 1990 Census of Population and Housing

Appendix Table 4: Educational attainment of persons aged 25 years and over, 1980 & 1990

Educational level	1980 (%)			1990 (%)		
	Male	Female	Both	Male	Female	Both
No schooling	1.2	1.7	1.5	2.0	1.9	1.9
High school graduates or higher	48.1	38.4	43.4	55.9	53.0	54.5
Bachelor's degree or higher	(data not available)			13.5	4.5	9.1

Source: 1980 and 1990 Population censuses of American Samoa

Appendix Table 5: Labour force characteristics of the population 16 years and over, 1990

Age-group	Total population 16 years and over		Percentage in labour force		Percentage in cash employment		Percentage unemployed	
	Male	Female	Male	Female	Male	Female	Male	Female
16–19	1,911	1,846	12.3	10.7	10.3	8.7	2.0	2.0
20–24	2,301	2,363	51.4	41.3	45.8	36.8	5.6	4.4
25–29	1,986	2,175	68.9	51.0	64.2	48.7	4.7	2.3
30–34	1,807	1,706	77.2	56.3	73.4	54.2	3.8	2.2
35–39	1,359	1,362	77.5	58.4	75.6	57.1	1.9	1.3
40–44	1,178	1,068	81.3	56.3	78.7	55.2	2.6	1.0
45–49	974	805	76.8	51.0	74.6	49.8	2.2	1.2
50–54	835	687	74.8	48.6	71.6	47.9	3.2	0.7
55–59	598	495	62.7	37.0	61.5	36.4	1.2	0.6
60–64	467	456	45.6	31.8	45.2	31.1	0.4	0.7
65+	788	824	25.6	15.6	25.4	15.4	0.2	0.2
Total	**14,204**	**13,787**	**58.8**	**42.4**	**55.7**	**40.3**	**3.1**	**2.0**

Source: 1990 Census of Population and Housing

Appendix Table 6: Median income by urban or rural residence and by gender, 1990

	Male			Female		
	Urban	Rural	Total	Urban	Rural	Total
No. of persons earning income	2,950	5,940	8,890	2,313	4,336	6,649
Median income (US$)	7,415	7,018	7,151	6,189	5,829	5,952
Rural income as % of urban		94.6			94.2	
Female income as % of male				83.5	83.0	83.2

Source: 1990 Census of Population andHousing

Appendix Table 7: Age-Specific Fertility Rates, 1990*

Age-group	ASFR
15–19	0.029
20–24	0.155
25–29	0.229
30–34	0.201
35–39	0.146
40–44	0.088
45–49	0.054
TFR	**4.510**

* Based on 1990 census

Appendix Table 8: Life table for American Samoan Males and Females

Age (x)	ASDR Male 1987–1993	E(x)	ASDR Female 1987–1993	E(x)
0	0.01913	67.97	0.01257	75.52
1	0.00165	68.27	0.00107	75.47
5	0.00068	64.71	0.00037	71.79
10	0.00036	59.92	0.00041	66.92
15	0.00167	55.03	0.00043	62.05
20	0.00217	50.46	0.00085	57.18
25	0.00252	45.99	0.00046	52.41
30	0.00277	41.54	0.00117	47.53
35	0.00294	37.08	0.00147	42.79
40	0.00424	32.59	0.00094	38.09
45	0.00616	28.24	0.00248	33.25
50	0.00838	24.04	0.00437	28.63
55	0.02007	19.95	0.01010	24.20
60	0.02570	16.78	0.01316	20.32
65	0.04012	13.74	0.02624	16.52
70	0.05381	11.23	0.03483	13.48
75	0.08029	8.94	0.05882	10.56
80	0.10909	7.18	0.08571	8.34

Note: E(x) = life expectancy at age x (in years)
ASDR = Age Specific Death Rate

Appendix Table 9: Population growth by district, 1970–1990

District	Population at census dates			Average growth rate per annum (%)	
	1970	1980	1990	1970–80	1980–90
East. Tutuila	15,955	17,311	21,175	0.8	2.0
West. Tutuila	9,018	13,227	23,868	3.8	5.9
Manu'a, Rose & Swains Is.	2,186	1,759	1,730	–2.2	–0.2

Sources: Population Profile of American Samoa (1980 Census)
1990 Census of Population and Housing Report

Appendix Table 10: Population projections for American Samoa by age-groups, 1990 and 2005 (four different scenarios)

Indices	1990 census (base year)	2005 Scenario 1	2005 Scenario 2	2005 Scenario 3	2005 Scenario 4
Population size	46,773	73,365 +	74,219 +	73,289	69,132
<15	17,821	29,795	27,622	27,404	23,247
65+	1,612	2,964	3,012	2,998	2,998
Primary-school age (6–11)	6,586	11,769	11,166	11,122	9,766
Working age (15–64)	27,340	40,605	43,586	42,887	42,887
Population structure					
%<15	38.1	40.6	37.2	37.4	33.6
% 65+	3.4	4.0	4.1	4.1	4.3
% Primary-school age (6–11)	14.1	16.0	15.0	15.2	14.1
% Working age (15–64)	58.5	55.3	58.7	58.5	62.0
Median age (years)	20.9	20.0	22.1	21.9	23.7
Age Dep. ratio (15–64)	71.1	80.6	70.1	70.9	61.2
Annual growth rate (%)	3.7 *	3.0	3.1	3.0	2.6
Sex ratio	105.6	102.7	102.5	102.5	102.5

* 1980–1990 growth rate

\+ Totals by sub-groups do not add up to population size due to rounding

GLOSSARY

Term	Definition/description
Age-dependency ratio	The ratio of persons in the ages defined as dependent (under 15 and over 65 years) to persons in the ages defined as economically productive (15–64 years)
Age–sex composition	Distribution of population by age and sex
Age-Specific Fertility Rates (ASFRs)	Relates the number of births to women of a particular age-group, in a specific calendar year, to the mid-year population of women in that same age-group
Average household size	Total population living in private households divided by total number of private households
Balancing equation	Population growth = births – deaths + net migration
Birth cohorts	A group of people born in the same reference period
Child mortality	Mortality of children between one and five years of age
Child mortality rate	Total number of deaths of children aged 1–4 during a year x, divided by the mid-year population estimates of children aged 1–4
Child-bearing age (for women)	Ages 15–49 (the reproductive age-span of women)
Children	Population under 15 years

Term	Definition/description
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
Direction of migration	Destination of migrants
Economically active population	Persons 15 years and older who were employed or looking for work; also referred to as the 'labour force'
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
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

Term	Definition/description
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
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(o))	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

Term	Definition/description
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/decrease per 1,000 population in a given year
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
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

Term	Definition/description
Population momentum	Continued population growth even after birth rates have fallen due to an increasing number of adult couples because of past high fertility
Population policies	Measures devised by governments to influence population size, growth or distribution
Population processes	Vital events or migratory movements: refer to fertility, mortality and migration (including urbanisation)
Population projections	Scenarios of what future populations may look like under given assumptions
Population structure	Refers to population size, geographic distribution, and age–sex structure
Rate of natural increase	Rate at which population grows (increase/decrease) during a given year, as the result of a surplus/deficit of births over deaths; expressed as a percentage of the base population
Rate of population growth	Rate at which population grows (increase/decrease) during a given year, as the result of natural increase plus net migration; expressed as a percentage of the base population
School 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

Term	Definition/description
Socio-economic characteristics of population	Ethnicity, marital status, religious denomination, economic activity and educational attainment of population
Total Fertility Rate (TFR)	The average number of children a woman would give birth to, during her lifetime, if she were to pass through her childbearing years conforming to the Age-Specific Fertility Rates of a given year
Vital events	Births, deaths, marriages and divorces
Vital processes	Population processes: fertility, mortality and migration (including urbanisation)
Vital statistics	Information on vital events
Volume of migration	Number of migrants
Working-age population	Normally defined as population aged 15–64 (or 15–59)