

# **POPULATION AGEING IN THE PACIFIC ISLANDS: A SITUATION ANALYSIS**

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Suva, Fiji**

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# **POPULATION AGEING IN THE PACIFIC ISLANDS: A SITUATION ANALYSIS**

**Geoffrey Hayes**

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March 2009

*“The issues of ageing must be at the centre of the global development agenda. Today, the elderly are the world’s fastest-growing population group, and among the poorest. One person in ten is 60 years or older, but by 2050, the rate will be one person in five. We must meet the needs of the older persons who are alive today and plan ahead to meet the needs of the elderly tomorrow. In the developing world, there are almost 400 million people over age 60, the majority of whom are women, and this figure is expected to rise dramatically in the coming decade”.*

UNFPA Executive Director Ms. Thoraya Obaid's address to the Second World Assembly on Ageing in Madrid in 2002

UNFPA, the United Nations Population Fund, is an international development agency that promotes the right of every woman, man and child to enjoy a life of health and equal opportunity. UNFPA supports countries in using population data for policies and programmes to reduce poverty and to ensure that every pregnancy is wanted, every birth is safe, every young person is free of HIV/AIDS, and every girl and woman is treated with dignity and respect.

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**Geoffrey Hayes**  
**UNFPA consultant**



## Foreword

This report provides the first overview of population ageing in the Pacific Islands both at the sub-regional level and in individual countries. The report also reviews the implications of population ageing for social welfare of the elderly and related policy issues that Island governments will face in the coming decades. The UNFPA intends to work with the countries, other international organizations, NGOs and civil society in the future researching these issues in greater detail and assisting the countries of the region to formulate appropriate policies and programmes in a timely manner.

The issue of population ageing was first brought to the attention of the international community in 1969 when the Government of Malta placed the issue on the agenda of the 24<sup>th</sup> session of the UN General Assembly. The first World Assembly on Ageing was held in 1982 and resulted in the Vienna International Plan of Action on Ageing. At this point in time ageing was seen as an issue mostly affecting the more developed countries. By the time the second World Assembly on Ageing was held in Madrid, Spain, in 2002, population ageing was recognized as an issue affecting developing countries as well as the more developed regions.

Population ageing has not received much attention in the Pacific Islands region to date largely because the populations of most countries have remained relatively young and the challenges of a youthful population were the main focus of population programmes. Only two Pacific Island countries attended the second World Assembly on Ageing in 2002. As this report makes clear, however, the process of ageing is already well underway in the Pacific and will present major challenges to Pacific Islands governments, communities and families in the coming decades.



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## Acronyms

DHS	Demographic and Health Survey
ESCAP	Economic and Social Commission for Asia and the Pacific
FSM	Federated States of Micronesia
HIES	Household Income and Expenditure Survey
ILO	International Labour Organization
LDCs	Less Developed Countries
MDCs	More Developed Countries
MDG	Millennium Development Goals
MIPAA	Madrid International Plan of Action on Aging
MPA	Macao Programme of Action
NGO	Non Government Organization
NMI	Northern Mariana Islands
PNG	Papua New Guinea
PSR	Potential Support Ratio
SIS	Shanghai Implementation Strategy
SPC	Secretariat of the Pacific Community
TFR	Total Fertility Rate
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
WHO	World Health Organization

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# Executive Summary

## Introduction

Ageing refers to the process whereby an increasing proportion of a population is aged 60 years and over. Up until the 1980s, most Pacific Island populations were either ageing slowly or not at all and the proportion of the population over 60 years remained below 6 percent. Median age remained within the range of 16-20 years. In the last two decades of the 20<sup>th</sup> century the pace of ageing accelerated and is projected to reach a peak around 2025. The present rate of growth in the 60 and over population is above the world average and is also above the average for Less Developed Countries as a whole. The number of elderly in the Pacific is projected to increase at an average annual rate of 3.6 percent between 2000 and 2050 and to grow in number from around 376 thousand to 2.2 million. The oldest old (80 years and over) is currently growing at a faster rate than the 60 and over age group. The oldest old are projected to increase at an average annual rate of 5.2 percent between 2000 and 2050 and by 2050 there will be 266,400 persons aged 80 and over.

## Demographic impact

The demographic impact of ageing over the next few decades will be profound in most Pacific Island Countries. The median age will rise to around 30 years by 2025 and over 35 years by 2050. Some Pacific Island countries will reach a median age of 40-42 years by 2050. The old age dependency ratio will consequently increase substantially and the ratio of care-givers to those in need of care will decline significantly.

## Geographical variations

There are wide variations in the extent, pace and timing of ageing across the Pacific Islands. Among the three geographical sub-regions (Melanesia, Micronesia and Polynesia) Micronesia and Polynesia are presently ageing the fastest. This is due to the fact that the countries of these sub-regions entered the mortality and fertility transitions at an earlier date than was the case in the Melanesian countries. Furthermore, international migration has been large-scale with most emigrants being of working age and the smaller number of returnees being near or beyond retirement age. There is some evidence to suggest that ageing will become more pronounced in rural areas than in urban areas, as is the case elsewhere in the developing world.

## Feminization of the older population

In the Pacific, females form the majority of the older population and this will continue to be the case well into the future so long as female life expectancy exceeds that of male. However, the "feminization" of ageing is less pronounced here than in the more developed countries because the gap between male and female life expectancy has tended to be smaller in the Pacific Island countries than elsewhere. Projections indicate that the proportion of women among the "oldest old" will increase to about 63 percent by 2050. These patterns will be more pronounced in the small countries of Micronesia and Polynesia.

## Implications of population ageing

The ageing of Pacific populations will have serious implications for the delivery of health care and other social services. Addressing the needs of a rapidly ageing population will present major challenges for Pacific Island governments, communities and families. The provision of health services and long-term care for the oldest old or disabled will be particularly difficult—especially in rural areas and outer islands. Many countries face the dual challenge of a resurgence of infectious disease and a growing burden of non-communicable disease.

In the Pacific, the extended family is the main provider of care and social security for the elderly and this will remain the case. Family solidarity remains strong but is weakening in urban areas and in those areas affected by out-migration. Governments will need to develop ways to supplement family care with more formal institutional care as the number of elderly grows.

The coverage of pension or superannuation schemes in the Pacific is quite limited because the majority of the population have spent their working lives in the rural village sector or the urban informal sector where pension plans are not available. Universal, non-contributory schemes are also limited in scope. The expansion of such schemes is likely to place pressure on national budgets.

## Recommendations

- National Coordinating Bodies should be set-up in those countries that presently lack them. International agencies, particularly ESCAP, should stand ready to provide the financial and technical assistance that countries may require.
- In those countries that already have National Coordinating Bodies, a review of the structure, activities and effectiveness of these bodies should be undertaken. International agencies can also provide support to facilitate these reviews.
- National and international efforts need to be undertaken to greatly expand the knowledge base on population ageing and its implications in individual Pacific Island countries and across the region and its sub-regions. The Research Agenda on Ageing in the Twenty-first century endorsed in Valencia in 2002 can be used to identify the key issues on which research is required.
- Research is urgently needed to assess the poverty status of the elderly in the Pacific Islands. Recent DHS and HIES may provide scope for further analysis. Further analysis of disability data from censuses and surveys is also recommended.
- A knowledge sharing network needs to be established linking all Pacific countries regardless of political status. Given the variations across the region in population ageing, those countries in the early stages can share valuable lessons with those that will age later. NGOs, civil society, international agencies should also participate in the network.
- A public information programme is required to raise awareness of ageing trends and their implications among both service providers and the general public.
- Conduct a comprehensive review of the national infrastructure and enabling environment for addressing the needs of the older population and identify the key weaknesses.
- Review the regional arrangements for monitoring the implementation of the Madrid International Plan of Action on Ageing and the Macao Programme of Action for the Asia-Pacific region.

# 1 Introduction

## 1.1 What is Ageing?

Population ageing refers to the process whereby older persons comprise an increasingly larger share of the total population. It is broadly accepted that the age of 60 defines the transition between middle age and old age, but it is obvious that use of the terms “old” or “elderly” varies widely depending on the context in which they are used. For example, eligibility for a government pension may not occur until 65 years of age or even older. On the other hand, in village-based cultures any person with grandchildren may be considered “old”.

In the present study, the older population is defined as persons aged 60 years or over, and most of the analysis presented in the report refers to this group. Because the older population is also ageing, however, reference is also made to the “oldest old”, defined as persons aged 80 years and older.

## 1.2 Socio-economic implications of ageing

Ageing is a demographic phenomenon in the first instance but it is accompanied by a range of socioeconomic challenges, both for the individuals concerned and for the institutions that provide the services that old people are in particular need of. These needs arise from the fact that the older population is much more likely to be sick, infirm, or disabled than young people or the middle-aged. These conditions, along with others, also diminish the ability of the old to earn an income, even as the costs and complexity of their health care are increasing. The welfare and quality of life available to the old is therefore crucially dependent upon the capacity of the institutions that have the responsibility for providing the necessary support according to cultural norms and values.

In the presently industrialized world, state-sponsored pensions and subsidized health care were established over 100 years ago and existed well before the populations of the more developed countries began to age rapidly. In the less developed regions of the world, ageing is occurring not only at a much faster rate than previously experienced but also in a socio-cultural context in which the welfare of the old remains primarily the private responsibility of families or wider kin groups. While supportive institutions such as provident funds, private pensions and health insurance schemes are available to that proportion of the population that has spent their working life in government employment or in large private corporations, a very large proportion of the populations of the less developed countries have spent their working lives in village economies or the urban informal sector and lack access to such institutions.

In the Pacific Islands, the subject of this report, the care and welfare of the old is generally held to be the responsibility of the immediate family in the first instance (sons and daughters) followed by the extended family (nephews and nieces and others). While this is a strongly held cultural value across the region, the realization of this value in practice is already becoming difficult as a result of urbanization, individualization and other aspects of “modernization”, even though the ageing process in the Pacific is still in its early stages. Thus, it is highly likely that rapid ageing, a process that is already underway in some Pacific countries, will place increasing strain on family and kinship networks and will compel Pacific governments to introduce new institutional arrangements that will supplement, if not supplant, the resources available to the elderly through their families.

## 1.3 Purpose and structure of this report

The primary purpose of this report is to describe the current and likely future situation in the Pacific Islands region with respect to population ageing. An understanding of the ageing process as a demographic phenomenon requires a long-term perspective; thus the study looks both backwards to the demographic situation prevailing in the middle of the 20<sup>th</sup> century and forwards to the likely situation in the middle of the

21<sup>st</sup> century based on population projections. Against this demographic background the study will review the policy issues that Pacific countries will need to address and the policy options that are available to them.

Population projections that seek to forecast the number of elderly in a population have more certainty than a projection aimed at foreshadowing the total size a population might reach in future or its overall age composition. The reason for this is that the population that is undergoing ageing already exists and any additions to it can only come from in-migration and any deductions to it from death or out-migration. Thus, fertility is irrelevant and only death and migration need to be considered. Of these, migration is the least predictable, and this raises analytical difficulties in the Pacific because so many of the smaller Island countries have become “migration oriented” societies. The impact of migration, both internal (rural-urban and rural-rural) and international, can make a major difference in terms of how rapidly or slowly the older population grows.

But future trends in fertility are clearly relevant to the issue of the overall age structure and the relative balance between the older population and the younger population that has the responsibility, directly or indirectly, to care for it. Consequently, many of the indicators used in this report reflect changes in fertility patterns and their implications for the support of the older population.

Concerns about ageing of Asia-Pacific populations are not new. The 1992 “Bali Declaration” recommended that “governments formulate long-term development strategies that take into consideration the changing age structure of the population, in particular the implications of population ageing for economic and social development. Development policies and programmes must take into account the characteristics of future cohorts of older people, their potential for involvement in the process of development and the role of the family and community in caring for the elderly” (UNESCAP, 1992). The Fifth Asian and Pacific Conference of 2005 noted that ageing was occurring rapidly in the Asia Pacific region and reiterated the need to formulate appropriate policies and programmes to address the challenges associated with population ageing. Among the recommended actions was support for research on ageing patterns and the social arrangements for elderly people (ESCAP 2005).

The current report presents a descriptive analysis of ageing patterns in the Pacific Islands at both the sub-regional and individual country levels and uses population projections to provide insights into the likely future trends of ageing. The overall purpose is to assist the countries to prepare for a future in which the elderly comprise a much larger proportion of the population.

Chapter 2 provides an overview of the global and regional patterns of ageing covering the period 1950-2050. In this chapter, the geographical units of analysis are “world”, “Less Developed Countries” (LDCs), “More Developed Countries” (MDCs), “Melanesia”, “Micronesia” and “Polynesia”. The definitions of these geographical regions follow United Nations practice as described in the following section. Chapter 3 describes the impact of ageing on the populations of these geographical units using standard demographic indicators. Chapter 4 uses similar indicators to analyse population ageing in the Pacific at the country level. The implication of population ageing for social welfare of the elderly, with particular reference to the Pacific Islands, is reviewed in Chapter 5. Chapter 6 looks at the social policy frameworks for addressing ageing in the Pacific and the implementation challenges that Pacific Island countries will face. Chapter 7 presents conclusions arising from the analysis and makes recommendations for future work in the area of ageing in the Pacific.

## 1.4 Geographical areas and data sources

The analysis of demographic patterns in the Pacific Island countries as a region involves some complications in terms of which countries are included or excluded and the availability of population data for them. The region is normally considered to contain a total of 22 countries and territories. Together with Australia and New Zealand, this collection of countries is described by the United Nations as “Oceania”. This designation

does not include the islands that comprise the state of Hawaii, located in the northern Pacific Ocean. Similarly, Easter Island, in the South-Eastern part of the Pacific Ocean and politically part of Chile, is not included. The 22 island countries of Oceania differ in terms of their political status: three remain overseas territories of France<sup>1</sup>, three are part of or in a dependent political relationship with the United States<sup>2</sup> and one is governed by the UK<sup>3</sup>. The remaining 15 countries are either independent states<sup>4</sup> or self-governing states in association with New Zealand.<sup>5</sup>

Following general practice, the United Nations divides the 22 Island territories into three sub-regions, namely Melanesia, Micronesia and Polynesia. These designations are primarily geographical but are derived from early ethnographic distinctions that predated the immigration of Europeans and Asian into the Pacific. Thus, “Melanesia” now includes a large European population resident in New Caledonia and a significant ethnic Indian population in Fiji. For statistical purposes, the United Nations breaks down “Oceania” into five entities: Australia, New Zealand, Melanesia, Micronesia and Polynesia. Generally, the UN does not report statistical data for the collectivity “Pacific Islands”, a designation that would consist of the sum of the latter three entities. Where data for the 22 island countries and territories as a collectivity are required, it is necessary to employ data compiled by the Secretariat of the Pacific Community (SPC), or to prepare independent estimates for the purpose on hand<sup>6</sup>.

A further complication arises in the context of the present study. While the United Nations compiles statistical data for all the countries under the sub-regional headings of Melanesia, Micronesia and Polynesia, the way in which data are treated varies according to the population size of the country. Specifically, when the United Nations Population Division prepares population projections, it does not prepare projections for individual countries with a population below 100,000. Of the 22 countries in the Pacific, 12 are in this category. The usual practice in the UN is to add the total population of the countries under 100,000 to the sum of the countries having a population of 100,000 or more in each of the sub-regions. Thus, all countries in the sub-region are included in UN population projections at sub-regional level, but UN projections at national level are available only for those with a population of 100,000 or more.

To achieve the purposes of the present study, it was therefore necessary to use two sources of population data. (1) In order to make use of the sub-regional population projections carried out by the United Nations, UN sources have been used—as reported in the document *World Population Ageing 2007*<sup>7</sup> published by the Population Division of the United Nations Department of Economic and Social Affairs (UNDESA); (2) where UN data were unavailable because of the country’s small population size, or where no UN data were available for an indicator, population projections were prepared for each Pacific Island Country, specifically for the current study. These projections are designated in this study as “UNFPA projections, 2008”.

Unlike the UNDESA population projections, the UNFPA projections were carried out for all countries other than Pitcairn Island, which has a population of less than 100. The UNFPA projections employed cohort-component methods for all countries, largely building upon the projections carried out by SPC. Where sub-regional figures were required, country projections were aggregated. A more detailed description of the projections methodology, including the source of the assumptions, is provided in Annex II.

Out of the 22 Pacific Island Countries and Territories (PICTs), 15 are UN member states in their own right and are hence designated as so-called UN programme countries. The other seven countries, being territories in some type of dependent relationship with either France, the United States or the United Kingdom, are not members of the UN. Consequently, the UN has neither mandate nor funds to operate development assistance programs in these countries.

1 French Polynesia, New Caledonia and Wallis and Futuna.

2 American Samoa, Guam, Northern Mariana Islands.

3 Pitcairn Islands.

4 Fiji Federated States of Micronesia, Kiribati, Tonga, Tuvalu, Papua New Guinea, Vanuatu, Solomon Islands, Samoa, Nauru, Palau, and Republic of Marshall Islands.

5 Cook Islands, Niue Island and Tokelau Islands.

6 Following United Nations Statistical Division Practice, all countries and territories will be referred to henceforth in this report as “countries” except where the political status of the country is relevant.

7 UNDESA (2007)

## 2 Overview of population ageing: global and regional patterns 1950-2050

### 2.1 Trends: changing and projected proportion of older persons

This chapter provides an overview of population ageing in the three sub-regions of the Pacific, namely Melanesia, Micronesia and Polynesia. In order to provide a comparative perspective, the chapter also presents data for the world as a whole, the more developed countries (MDCs) and the less developed countries (LDCs).<sup>8</sup>

The proportion of older persons increased very slowly in all world regions between the 1950s and 1970s but accelerated after 1975 (Table 1 and Figure 1). By 2050, almost 22 percent of the world's population (one in every 5 persons) is expected to be aged 60 and over. Population ageing is most advanced in the more developed countries, in which 21 percent of the population was already aged 60 and over by 2007 and this proportion is projected to reach 32 percent by the middle of this century. Within four decades, about one third of the population of the developed countries will be "old".

In the Pacific Islands, past and expected future trends are similar to the less developed countries as a group with little ageing taking place in the second half of the 20<sup>th</sup> century and an accelerating pace of ageing occurring in the first decade of the 21<sup>st</sup> century. The historical and projected patterns of change in Micronesia and Polynesia are similar to world patterns while Melanesia lags well behind because of its late entry into the demographic transition and its' economically less developed status. By 2050, 22.5 percent of the population of Polynesia and 19.2 percent of the population of Micronesia will be "old".

**Table 1: Percentage of population aged 60 years and over by region, 1950-2050**

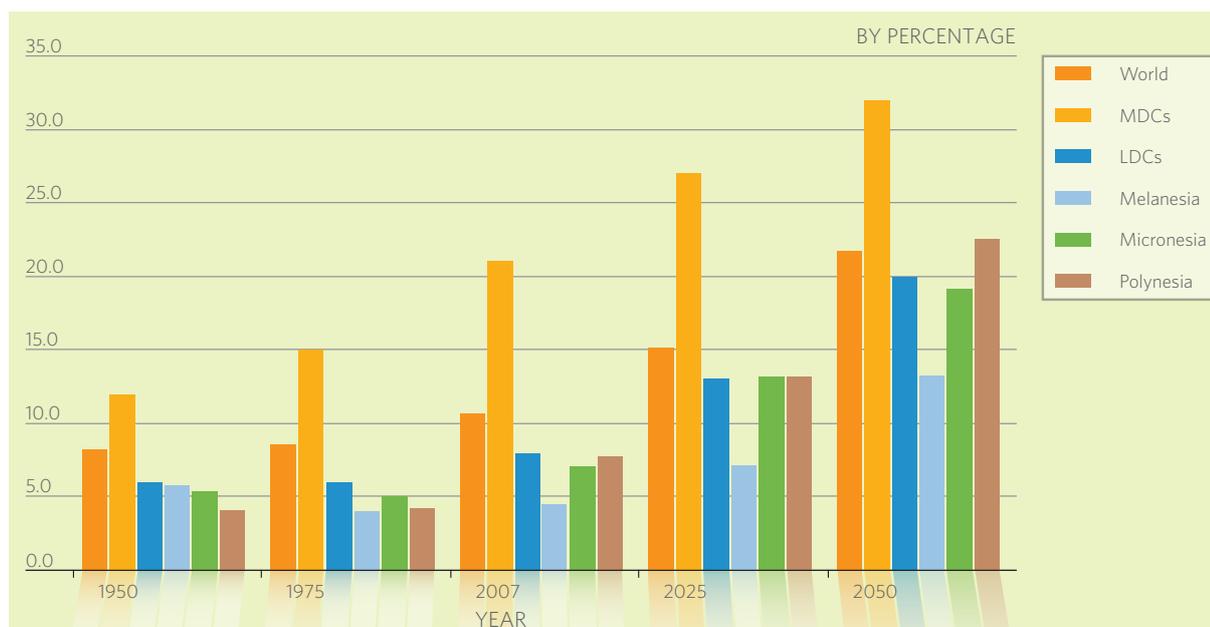
Region	1950	1975	2007	2025	2050
World	8.2	8.6	10.7	15.1	21.7
More developed countries (MDCs)	12.0	15.0	21.0	27.0	32.0
Less developed countries (LDCs)	6.0	6.0	8.0	13.0	20.0
Pacific Islands					
Melanesia	5.7	4.0	4.5	7.2	13.3
Micronesia	5.4	5.1	7.0	13.1	19.2
Polynesia	4.1	4.2	7.8	13.1	22.5

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

The speed at which populations are ageing varies according to the region and the period of time. At a global level, the rate of growth of the old population is currently 2.6 percent annually and this rate is expected to rise slightly to 2.7 percent over the next two decades (Table 2). In the MDCs, the elderly population is increasing at the much lower rate of 1.8 percent per year and this rate will decline over the next two decades. In LDCs, population ageing will occur at a much faster rate. The rate of growth in the older population has already reached 3.0 percent in the current decade and is projected to rise to 3.4 percent by the period 2025-2030.

<sup>8</sup> The less developed countries (not to be confused with "least developed countries") include Africa, Asia (excluding Japan) Latin America and the Caribbean and Oceania (excluding Australia and New Zealand). Thus, the Pacific Islands are included as part of the less developed regions but as their populations are so small relative to the rest of the countries in this group they have no impact on the indicators. The more developed countries include all other regions plus Australia, Japan and New Zealand.

**Figure 1: Percentage of population aged 60 years and over by region, 1950-2050**



Source: UNDESA (2007)

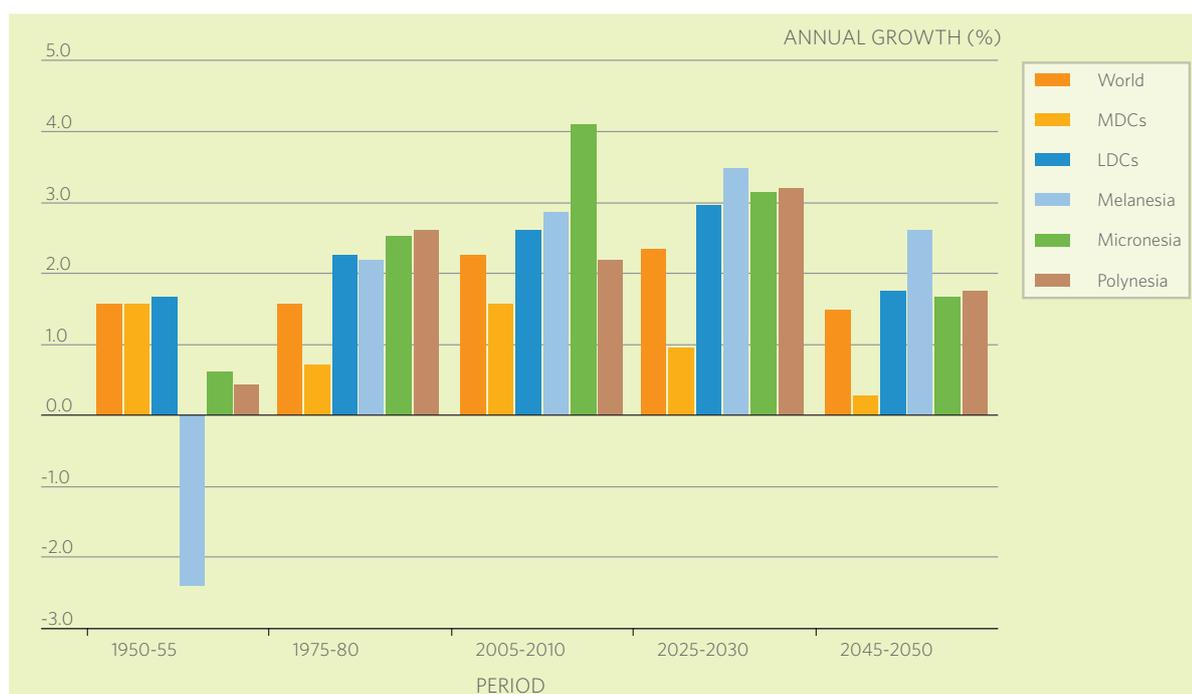
**Table 2: The pace of ageing 1950-2050: annual growth rate of 60+ population**

Region	1950-55	1975-80	2005-10	2025-30	2045-50
World	1.8	1.8	2.6	2.7	1.7
MDCs	1.8	0.8	1.8	1.1	0.3
LDCs	1.9	2.6	3.0	3.4	2.0
Pacific Islands*					
Melanesia	-2.8	2.5	3.3	4.0	3.0
Micronesia	0.7	2.9	4.7	3.6	1.9
Polynesia	0.5	3.0	2.5	3.7	2.0

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

In the Pacific, the pace of ageing was already above the world average in the late 1970s and is beginning to accelerate further. In the present decade, Melanesia and Micronesia are ageing more rapidly than in the world as a whole or in the LDCs. In Micronesia, the current rate of growth in the elderly population (4.7 percent) is well above global or LDC levels. In Melanesia, the peak rate of growth in the elderly population will not occur until the 2025-30 period when it is expected to reach 4.0 percent annual growth. This will also be the peak period for Polynesia.

**Figure 2: Rate of growth in the 60 and over population 1950-2050**



Source: Table 2

These data show that the pace of ageing in developing regions will be much more rapid than was the case in the more developed regions. This will be the case in the Pacific as well. The rate of growth among the elderly in Micronesia is presently one of the highest to be found among the world's regions.

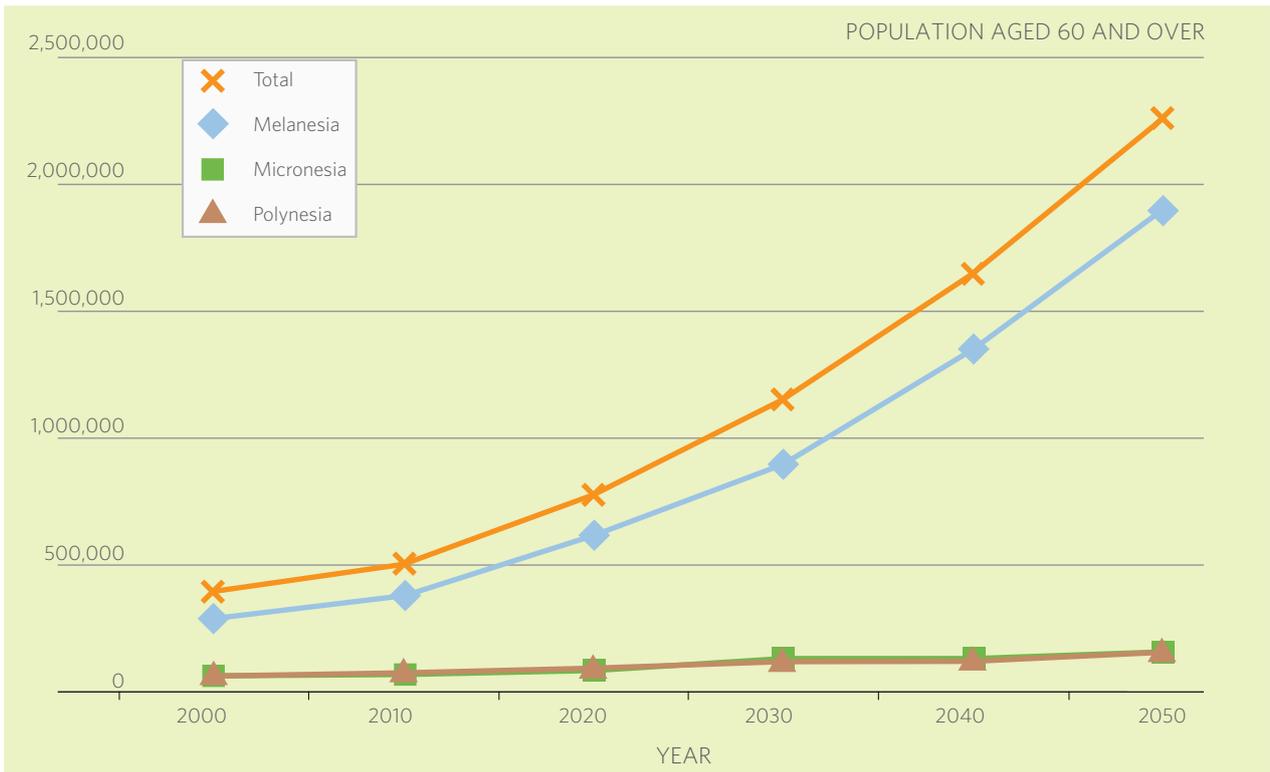
The contribution of the Pacific Islands region to the increasing number of elderly in the world is obviously miniscule, simply because the Pacific contains less than one percent of the world's total population. From a regional perspective, however, the projected increase in the absolute number of elderly over the next several decades is substantial (Table 3 and Figure 3). The elderly population can be expected to increase by 600 percent—from 376,000 in 2000 to over 2.2 million by 2050. A total of 1.7 million elderly will be added to the population of the Pacific by 2050. The vast majority of these (about 90 percent) will be in Melanesia, as this is where the vast majority of the Pacific's population lives. Over the same period the number of elderly people in Micronesia and Polynesia will increase by about 100,000 (Table 3 and Figure 4).

**Table 3: Projected number of 60 and over 2000-2050 in the Pacific Islands by region**

Region	2000	2010	2020	2030	2040	2050
Melanesia	304,447	403,940	606,133	951,046	1,389,473	1,975,293
Micronesia	28,355	39,715	64,815	95,293	110,555	129,167
Polynesia	43,364	56,967	81,304	110,094	120,833	144,404
Total	376,166	500,622	752,252	1,156,433	1,620,861	2,248,810

Source: UNFPA population projections, 2008

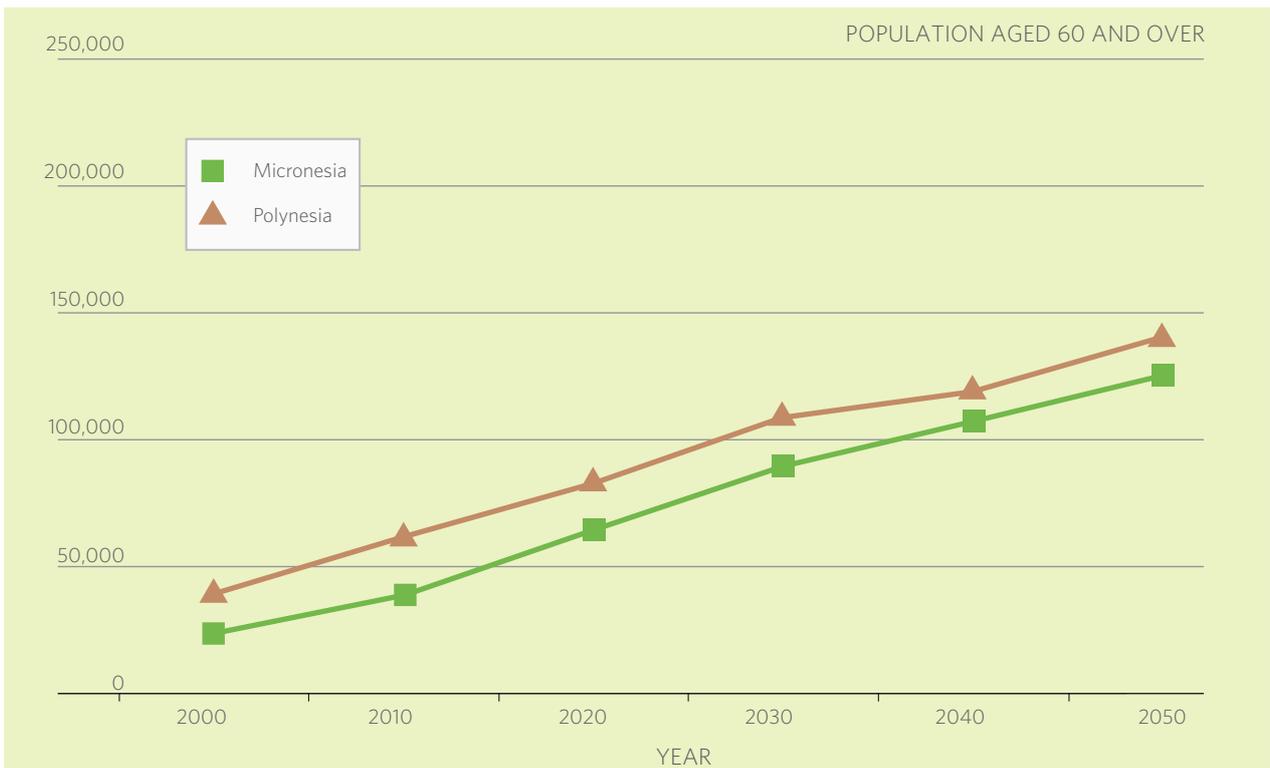
**Figure 3: Projected population aged 60+ in the Pacific Islands, 2000-2050**



Source: Table 3

As Figure 4 shows, the pace at which the elderly will be added to the populations of Micronesia and Polynesia can be expected to be rapid over the next several decades, even though the absolute numbers are much smaller than in Melanesia.

**Figure 4: Projected population aged 60+ in Micronesia and Polynesia, 2000-2050**



Source: Table 3

The social and economic challenges of population ageing will be formidable in all regions of the world, including the Pacific Islands. For most of the 20<sup>th</sup> century, the rapid growth of youth powered by high fertility rates over several decades was the primary challenge faced by governments. Accommodating the growing numbers of young people required the rapid expansion of educational and training institutions and a concerted effort to increase the supply of jobs. The momentum of population growth caused by the youth “bulge” has kept the focus of health care on children and youth. In the 21<sup>st</sup> century the rapid pace of ageing will bring quite different challenges, especially among Pacific Island countries with their far-flung islands suffering from poor communications and transport and low incomes.

## 2.2 Determinants: decline in fertility and improvements in life expectancy

Population ageing results from the “demographic transition”, a process that primarily results from advancements in health care that typically accompany economic development. This process manifests itself through initial decline in mortality rates followed after some time by declining fertility, eventually completing a transition from a high mortality and fertility demographic regime to a regime of low mortality and low fertility. In Europe and North America, the demographic transition occurred over a period of 100 years or more. In today’s developing countries, the demographic transition is being compressed into a much shorter period of time. This helps to explain why the pace of ageing in developing countries is projected to be so much faster than it was in the countries that are now more developed. Fertility decline reduces the number and proportion of children in a population while mortality decline increases the number and proportion of older persons.

The fertility and mortality transitions can be measured by means of two key indicators—the “Total Fertility Rate” (TFR, the number of children a woman would have in her lifetime if she were to experience the current age-specific fertility rates throughout her reproductive life) and “Life Expectancy at Birth” (the average number of years that a person would live from birth given current mortality rates by age and sex).

## 2.3 Fertility trends

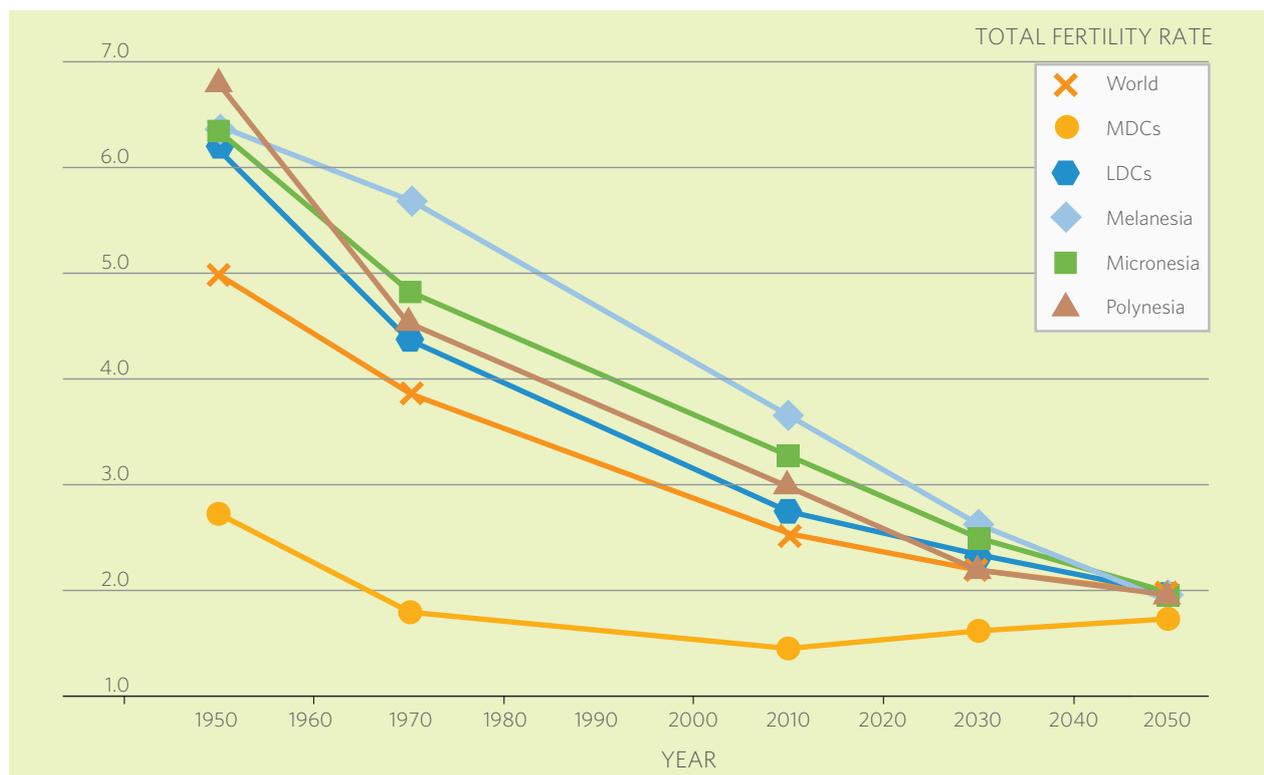
At the global level, the total fertility rate declined by 50 percent between 1950-55 and 2005-10, or from 5.0 to 2.5 children per woman on average (Figure 5). In the less developed countries, among which Pacific countries are included, the TFR dropped from 6.2 children per woman in the 1950s to an estimated 2.7 in the 2005-10 period. As evident from Figure 5, the UNDESA population projections assume that TFRs will converge in all regions other than the more developed countries to around 2.1 by 2050 (Figure 5). These actual and projected declines in fertility are a primary determinant of population ageing.

As depicted in Figure 5, the TFRs in each of the Pacific sub-regions have been notably higher than those of the LDCs as a whole. Strong declines in fertility are currently taking place throughout the Pacific region, most notably in Polynesia. The reduced influx of newborns resulting from this trend is a major cause of the rapid growth in the proportion of elderly people in this sub-region.

## 2.4 Mortality decline

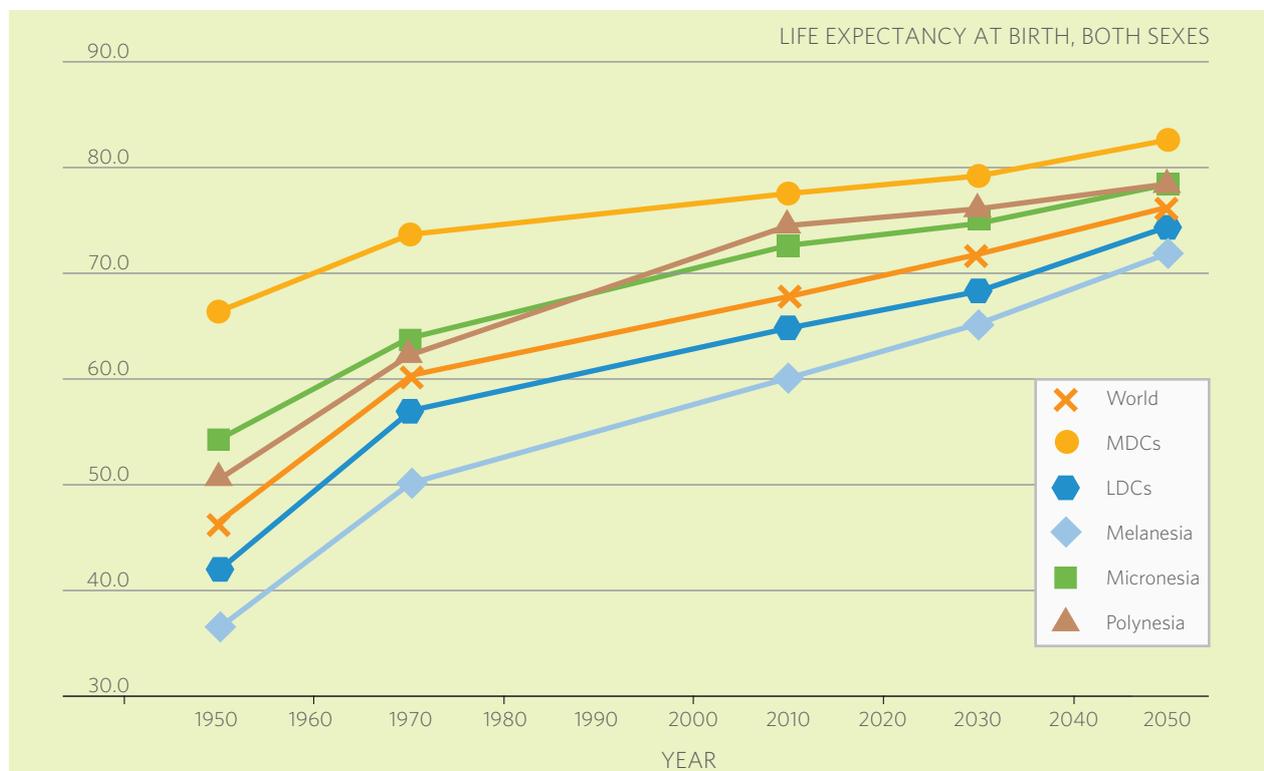
Whereas actual and projected mortality trends indicate steady improvement in life expectancy, their convergence over time is less than that of the fertility trends. Most notably, Melanesia is expected to have fallen somewhat behind by the year 2050 in terms of improvements in life expectancy. In Melanesia, life expectancy at birth was very low in the 1950s (only 37.4 years) and remains significantly lower than LDCs as a whole. Even by 2050, life expectancy in Melanesia is projected to be about 10 years below the MDCs. With regard to ageing this would suggest a slower increase in numbers of elderly, but quite likely also more demand for health for those who do reach higher ages. On the other hand, life expectancy in Polynesia and Micronesia has been consistently above the world and LDC averages since the 1950s and by 2050 is projected to reach to within 3 years of the MDC level of 82 years.

**Figure 5: Total fertility rates 1950-2050 by region**



Source: UNDESA (2007)

**Figure 6: Expectation of life at birth by region, 1950-2050**



Source: UNDESA (2007)

Higher life expectancy means that increasing proportions of the population survive into older ages and this process obviously contributes to ageing. At the global level, the proportion of persons expected to survive to 60 years is projected to increase to 86.7 percent by 2045-50 (Table 4) while in the MDCs 93.5 percent of the population will survive to become “old”. In the Pacific, Micronesia and Polynesia will reach similar survivorship rates as the MDCs whereas Melanesia will lag behind because of its much slower improvement in mortality rates.

**Table 4: Survival rates to age 60 years by region, 2000-2050**

Region	2000-2005	2025-2030	2045-2050
World	73.8	82.1	86.7
MDCs	86.0	91.3	93.5
LDCs	71.7	80.8	85.9
Pacific Islands			
Melanesia	62.1	73.4	81.7
Micronesia	83.7	88.9	92.0
Polynesia	84.8	89.4	92.1

UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

## 2.5 Rate of growth of the older population

Higher survival to age 60 years also implies higher survival to ages above 60 years. Thus the older population can also be expected to get older, just as the total population is ageing. The ageing of the elderly population is measured by the growth rate of the “oldest old” (80 years of age and over). It is apparent from Table 5 that at the global level the “oldest old” population is currently growing at a high rate (3.9 percent per year) and that the rate of growth in this age group will continue at a high level through to 2050. By the 2045-2050 period, however, the rate of growth in the MDCs will have dropped to 1 percent but will reach 3.9 percent in the LDCs.

**Table 5: Growth rate of the population 80 years of age and over, 1950-2050**

Region	1950-55	1975-80	2005-10	2025-30	2045-50
World	3.1	2.7	3.9	3.8	3.0
MDCs	3.2	3.6	3.3	3.1	1.0
LDCs	2.9	1.4	4.6	4.4	3.9
Pacific Islands					
Melanesia	2.5	2.5	2.8	5.4	4.8
Micronesia	-2.6	4.7	3.9	7.1	3.7
Polynesia	-1.0	2.1	3.5	3.2	4.3

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

In the Pacific very rapid increases in this age group can be expected in the coming decades. In Melanesia 5.4 percent annual growth in the 80 and over population can be expected by 2025 and this group would still be increasing at 4.8 percent per year two decades later. Both Micronesia and Polynesia will have rapid increases in this age group through to 2050.

The effects of such rapid growth rates are apparent in Table 6, which shows that the population aged 80 and over in the Pacific region will increase from about 19,000 in 2000 to 266,400 by 2050. This represents a 14-fold increase over 50 years or an average annual growth rate of over 5 percent.

**Table 6: Projected population 80 years and over in the Pacific, 2000-2050**

Region	2000	2010	2020	2030	2040	2050
Melanesia	14,782	24,805	38,155	63,248	118,425	223,352
Micronesia	1,912	3,248	4,691	7,952	13,964	20,115
Polynesia	2,193	5,247	7,681	11,134	17,900	22,966
Total	18,887	33,300	50,527	82,334	150,289	266,433

Source: UNFPA population projections, 2008

## 3 The Demographic Impact of Ageing, 1950-2050

### 3.0 Introduction

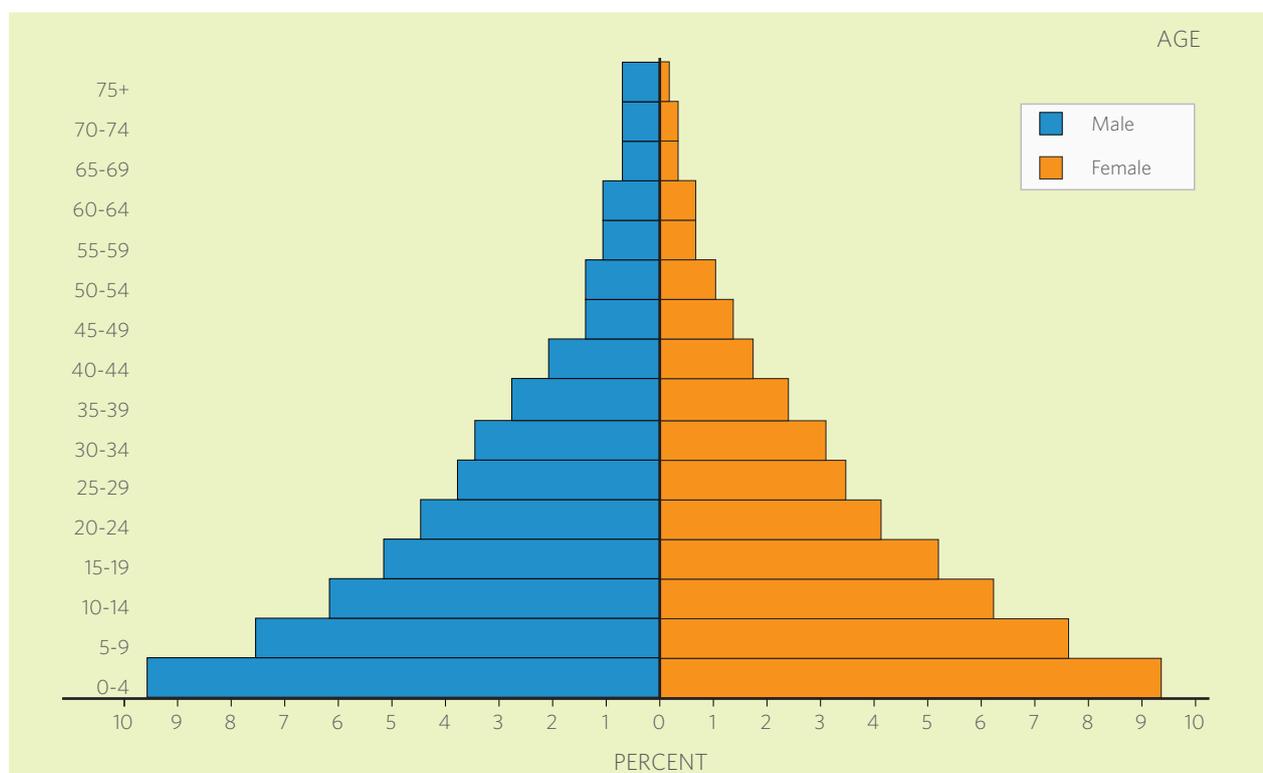
The demographic impact of rapid population ageing can be measured by a variety of indicators that reflect different dimensions of the age composition of the population. This chapter reviews changing age structures employing graphical representation (age pyramids) and various indices, including the ageing index, the median age, the potential support ratio and the parent support ratio. Each of these indicators measures a different aspect of ageing. This chapter reviews these indicators using the same geographical areas as the previous chapter but employing some data from individual Pacific countries to illustrate key points.

### 3.1 The changing age structure

A simple visual tool for understanding the changing age composition of a population undergoing ageing is the “age pyramid”. Figures 7-9 show the age pyramids at three points in time for Fiji—1950, 2000, and 2050 to illustrate this point. The 1950 pyramid (Figure 7) has the classic shape of a population experiencing rapid population growth due to high fertility—as evident in the very wide base of the pyramid. The median age in 1950 was 16.6 years, reflecting a very young population. By 2000, however, the median age had increased to 22.6 years (Figure 8) and the effects of declining fertility were apparent in the shrinking share of the population aged less than 15 years.

Projected to 2050 assuming a continuation of recent trends (Figure 9), the Fiji population would have a median age of 39.4 years and the age pyramid would have a very different shape with almost vertical sides and a widening at the top, especially for females. This age distribution and high median age is typical of the populations of the more developed countries at the present time.

**Figure 7: Population pyramid of Fiji, 1950: median age 16.6 years**

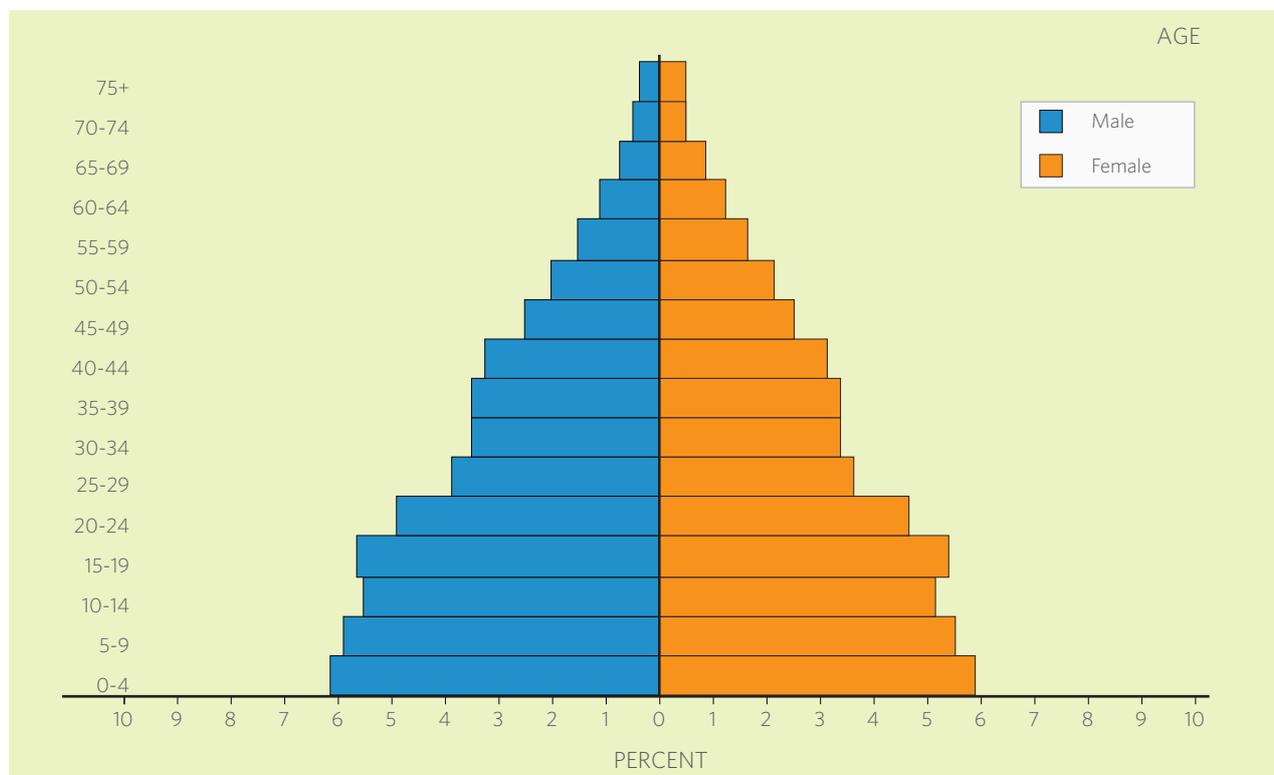


### 3.2 The ageing index

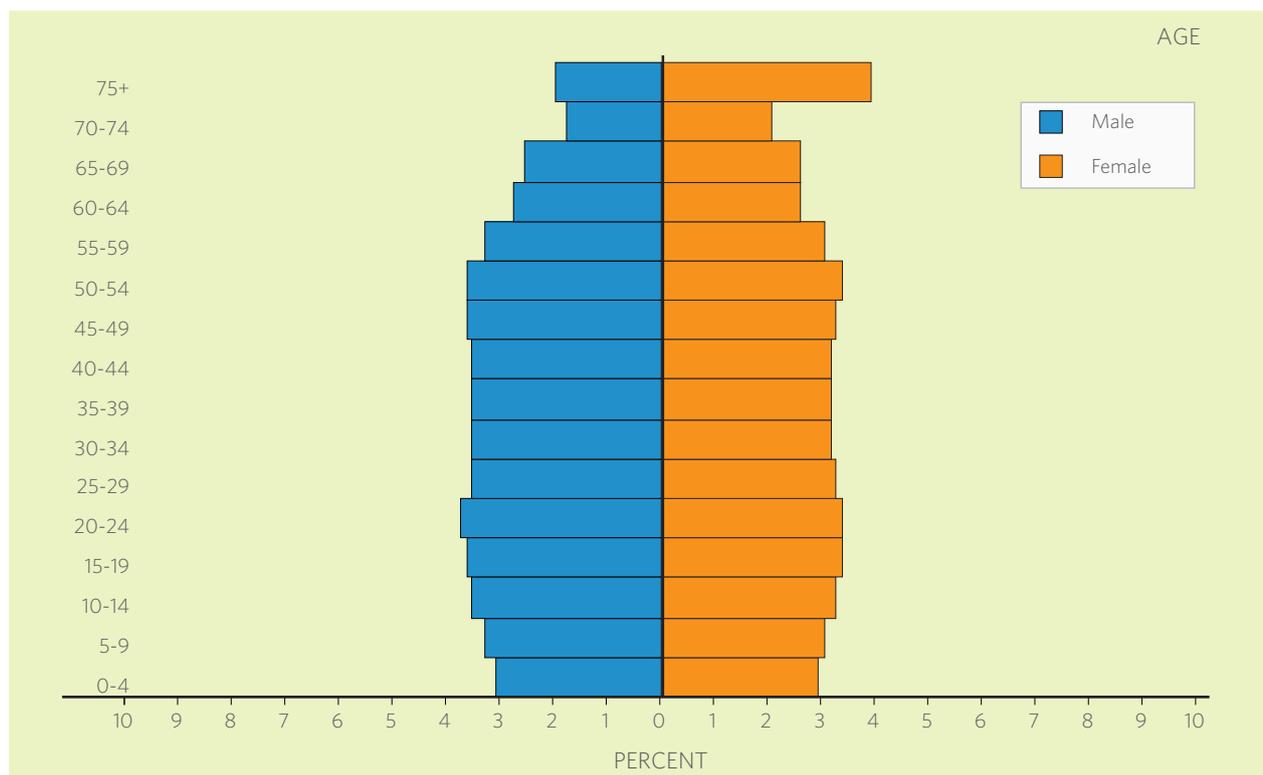
The ageing index refers to the number of older persons per 100 persons under the age of 15. An index of 100 means that the number of persons over 60 is equal to the number of children aged 0-14. An index above 100 means that there are more older persons in the population than there are children. Given present ageing trends, the aging index will reach 100 in 2050 (Table 7), after which it can be expected to continue rising. In the MDCs the index reached 100 in the late 1990s and by 2050 it will be over 200. In other words, there will be twice as many older persons in the population as children.

The ageing index will not reach 100 in the LDCs until some time after 2050, and this is also the case with Melanesia and Micronesia. In Polynesia, however, the ageing index will reach 100 around 2040. Compared with the present MDCs, the ageing index in the Pacific Islands will increase more slowly and children will out-number the old for some time to come. Nevertheless, between 2007 and 2025 the index will double and it will double again by 2050, and the implications for health and welfare policies will be profound.

**Figure 8: Population pyramid of Fiji, 2000: median age 22.6 years**



**Figure 9: Population pyramid of Fiji, 2050: median age 39.4 years**



**Table 7: Trends in the Ageing Index 1950-2050**

Region	Older persons per 100 persons age <15 years			
	1950	2007	2025	2050
World	23.8	38.7	61.5	100.5
MDCs	42.9	124.2	187.7	215.3
LDCs	17.2	28	48.2	88.6
<b>Pacific Islands</b>				
Melanesia	14.1	11.9	24.0	59.9
Micronesia	15.2	21.5	48.6	92.2
Polynesia	8.9	23.6	51.7	119.5

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

### 3.3 Median age

The median age is that age which divides the age distribution in half, that is, half the population is older and half younger. With ageing, the median age obviously rises because a larger proportion of the population is older. The median age is rising at a global level and in all world regions and is expected to reach 36 years by 2050. By that time the median age in the MDCs will be 46 years, an unprecedented level. Even today's LDCs will reach a median age of 35 by 2050. In the Pacific the expected trends are close to the LDCs as a group, although Polynesia will likely reach 39 years by 2050, 3-6 years older than Micronesia and Melanesia, respectively.

**Table 8: Trends in the Median Age 1950-2000**

Region	Median age (years)			
	1950	2000	2025	2050
World	24	27	32	36
MDCs	29	37	44	46
LDCs	21	24	30	35
Pacific Islands				
Melanesia	20	20*	26*	33*
Micronesia	21	24*	29*	36*
Polynesia	17	23*	30*	39*

Source: UNDESA (2007) \*UNFPA population projections

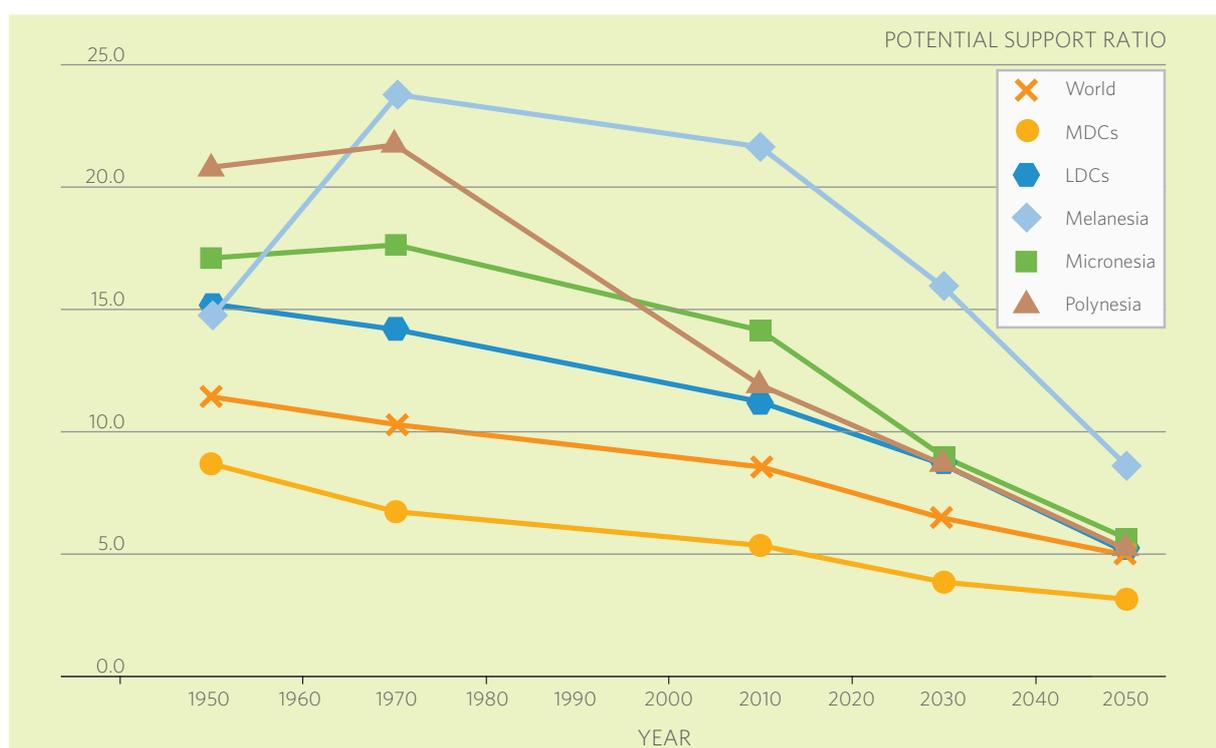
In all regions the rate at which the median age is rising is accelerating. In Polynesia, for example, the median age increased by six years between 1950 and 2000, but will increase by another 16 years between 2000 and 2050. This is yet another indication of the accelerating pace of ageing.

### 3.4 Potential support ratio

The potential support ratio (PSR) refers to the ratio of population aged 15-64 to the population aged 65 and over. The PSR is a measure of the degree to which the population that is presumably no longer working is supported by the population that is working. A ratio of 1 means that 1 person of working age needs to support on average one elderly person. A falling PSR indicates that the population not working and aged 65 and over is rising relative to the population aged 15-64, thus increasing the “burden” on the working population. The measure is a simple demographic one that does not allow for the possibility that some persons aged 15 and over are not working or that some persons aged 65 and over are continuing to work. Nevertheless, it gives a valid indication of the impact and implications of an ageing population.

Figure 10 compares the actual and expected trends in the PSR over the period 1950 to 2050 between various world regions, including the Pacific. It is clear that this ratio is declining at a rapid rate in the LDCs but at a much more moderate rate in the MDCs.

**Figure 10: Potential support ratio 1950-2050**



Source: UNDESA (2007)

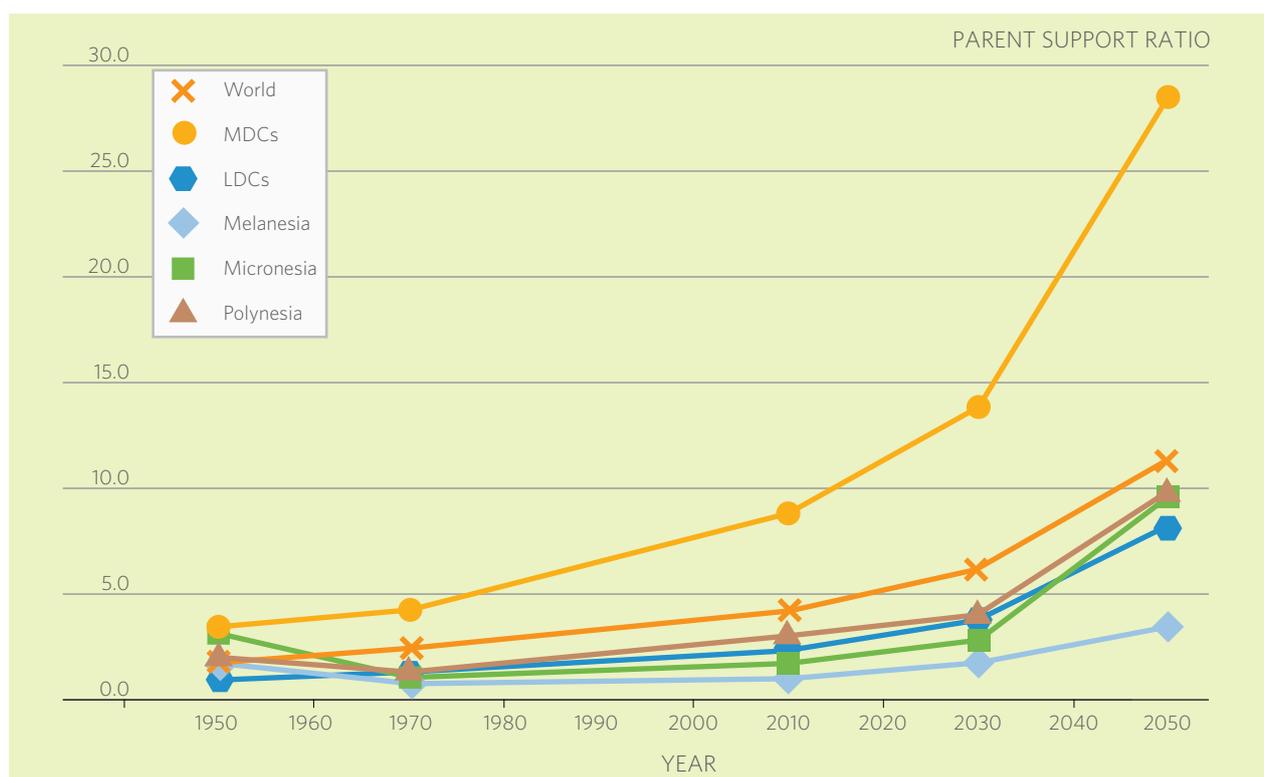
In the Pacific Islands, the Polynesian sub-region shows a very rapid decline in this ratio but it converges with that of Micronesia by 2025. In Melanesia the PSR rises to a high level by 1975 because of high fertility, but thereafter begins to decline at a rapid rate. In Polynesia and Micronesia the PSR will decline to the world average by 2050 but will be marginally higher than in the MDCs.

### 3.5 Parent support ratio

The “parent support ratio” refers to the ratio of persons aged 85 years of age and over to the population aged 50-64. This ratio measures the extent of support available to the oldest old from their children, assuming that their children are 20-35 years younger than they are. As with the potential support ratio, the parent support ratio is a demographic measure: it does not refer to persons who are actually related but is merely an approximation of the family support that might be available.

As Figure 11 shows, the parent support ratio has been increasing at a very rapid rate in the MDCs and this rate of increase can be expected to increase after 2025. This is also the case in the LDCs and in the Pacific Islands but at a lower absolute level. In 2050, the “burden” of caring for the oldest old in the MDCs will be three times as great as it will be in the LDCs. In the Pacific, the parent support ratio can be expected to more than double between 2025 and 2050.

**Figure 11: Parent support ratio 1950-2050**

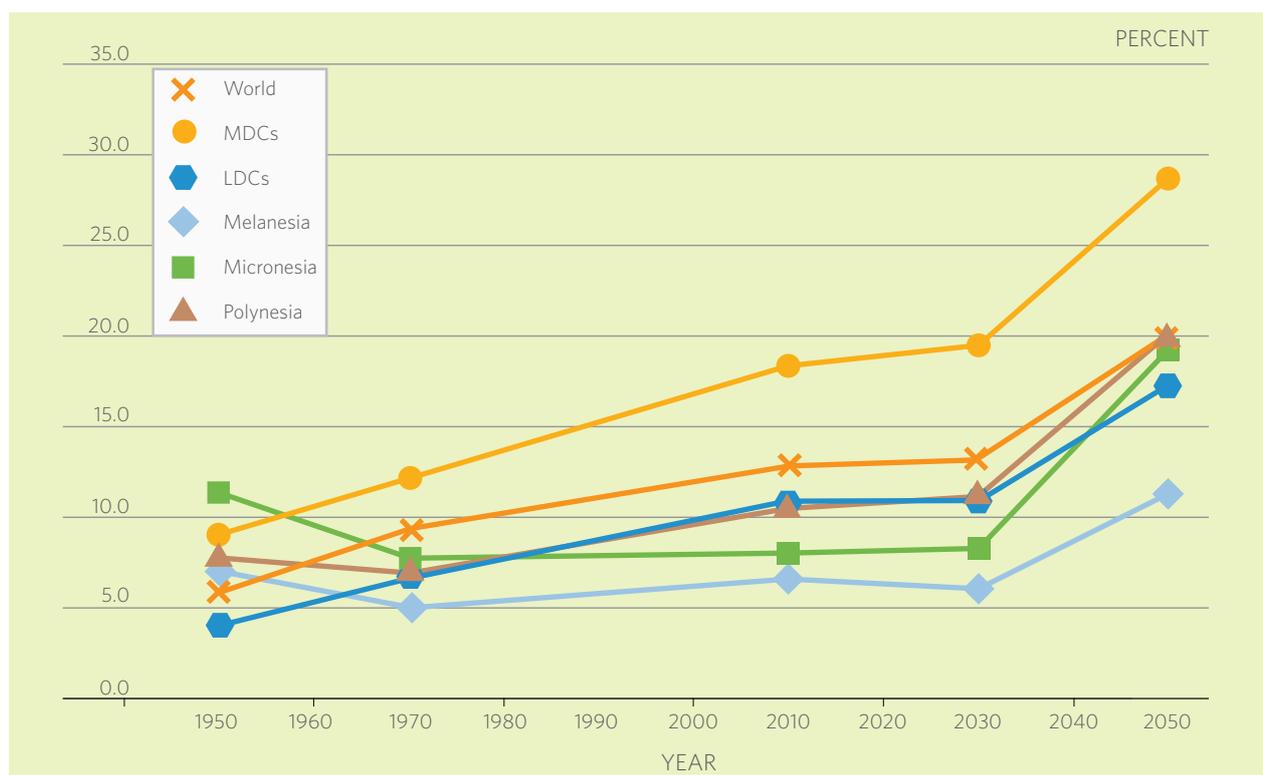


Source: UNDESA (2007)

### 3.6 Ageing of the older population

With increased longevity, a higher proportion of the older population (60 and over) will survive to even older ages; thus the older population will also age. This process is evident in Figure 12, which shows the increasing proportion of “oldest old” (80 and over) in the older population.

**Figure 12: Proportion of the population 80 years of age and over in the population aged 60 and over**



Source: UNDESA (2007)

This process is clearly more advanced in the MDCs, where almost 30 percent of the older population will be 80 years of age and over by 2050, but the same trend is apparent in the LDCs, including the Pacific Island regions. By 2050, 20 percent of the elderly in Micronesia and Polynesia will be 80 and over. In Melanesia the proportion will be much lower, but also increasing.

The cause of ageing within the older population is increasing survivorship. The first half of the 21<sup>st</sup> century will experience steadily increasing survivorship to age 80 and beyond. This is evident from the projected survivorship rates shown in Table 9.

By 2005-2010, half the population of the MDCs could be expected to survive to age 80 and this proportion is projected to increase to almost two-thirds by 2045-2050. Similar trends are expected in LDCs and in the Pacific Islands. In Micronesia and Polynesia, over 55 percent of the population will survive to age 80 by 2045-2050. In Melanesia the proportion will be much lower but the trend will be similar.

**Table 9: Trends in longevity of older population**

Region	Percent of population surviving to 80 years of age		
	2005-2010	2025-2030	2045-2050
World	36.5	44.7	51.7
MDCs	49.9	58.2	65.1
LDCs	32.3	41.4	49.2
Pacific Islands			
Melanesia	16.7	25.7	35.2
Micronesia	39.4	48.0	56.2
Polynesia	37.9	47.1	55.3

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

Furthermore, the average number of years that a person can expect to live past age 80 is also increasing (Table 10). In the MDGs this figure has already reached 8.2 years and this is expected to increase to 10.4 years by 2045-2050. In Polynesia, life expectancy for an 80 year old is projected to reach 8.7 years by 2045-2050. The implications of these changes for health care are obviously quite profound for remote island countries—especially rural areas and outer islands.

**Table 10: Life expectancy at 80 years**

Region	Average number of years lived after 80 years		
	2005-2010	2025-2030	2045-2050
World	7.2	8.2	8.8
MDCs	8.2	9.6	10.4
LDCs	6.4	7.4	8.2
Pacific Islands			
Melanesia	5.2	5.8	6.3
Micronesia	5.8	6.4	7.1
Polynesia	7.1	7.9	8.7

Source: UNDESA (2007) \*Note: Where UNDESA figures have been used, no total for the Pacific Islands can be provided

### 3.7 Feminization of ageing

Because women have lower death rates than men, a higher proportion of women than men survive into older ages. As a consequence, women frequently comprise the majority of older people. This is clearly the case in the more developed countries where, in 1975, 60 percent of the older population was female. While there is expected to be a slight downward trend in this proportion over the next few decades, by 2050 women will comprise the majority of older people in all regions (Table 11).

**Table 11: Percentage of females in the older population (60 years and over)**

Region	1950	1975	2007	2025	2050
World	55.5	56.1	54.9	54.2	54.1
More developed countries (MDCs)	57.5	60.0	57.9	56.5	56.1
Less developed countries (LDCs)	53.8	52.9	53.3	53.3	53.5
Pacific Islands					
Melanesia	45.4	51.8	49.3	53.2	51.5
Micronesia	51.9	48.8	52.7	51.4	52.7
Polynesia	48.0	50.8	51.6	52.9	52.2

Source: UNDESA (2007); UNFPA Population projections.

In the Pacific the proportion of women in the older population will be somewhat lower than in other regions, but women will still be the majority in all the sub-regions.

The proportion of women in the oldest old population (80 years and older) will eventually reach the levels found in other world regions, although not so high as in today's more developed countries (Table 12). Currently, women in the more developed countries make up 68 percent of the oldest old population, compared to 60 percent in the less developed countries. In the Pacific, this proportion will be more than 62 percent by 2050.

**Table 12: Percentage of females in the oldest old population (80 years and over)**

Region	1950	1975	2007	2025	2050
World	62.0	63.3	64.2	63.4	62.2
More developed countries (MDCs)	63.5	68.1	68.1	66.1	64.2
Less developed countries (LDCs)	59.5	56.4	60.1	61.3	61.3
Pacific Islands					
Melanesia	42.0	55.6	50.7	59.9	63.6
Micronesia	55.6	60.0	56.8	62.8	62.6
Polynesia	50.0	57.1	63.2	62.2	62.2

Source: UNDESA (2007); UNFPA Population projections.

The high proportion of women among the oldest old has serious implications for their welfare. Most of the oldest old women are widowed and therefore will lack the support of a spouse. This is explained by the higher death rates among men and the fact that husbands are usually older than their wives. Thus there are more widows than widowers among the old. Furthermore, a higher proportion of widowers than widows re-marry on the death of their spouse. This is facilitated by the fact that there is an excess of females in the older population. In effect, therefore, the proportion of women among the oldest old will increase, with a high proportion of these women lacking support.

### 3.8 Spatial dimension: rural-urban differences

Given that the primary determinants of ageing are decreasing fertility and increasing longevity (processes that normally occur first and to a greater extent in urban areas than rural ones) it would be logical to expect that ageing is more evident in urban than in rural areas. In many countries, however, the opposite is the case. In South-East Asia, for example, the percentage of older persons in the population is generally higher in rural areas than urban (UNFPA CST 2006). This pattern arises from rural-urban migration which disproportionately selects younger working-age persons. On the other hand, urban-rural migration streams contain a high proportion of retirees returning to their villages of origin. The net result of these two processes is to hasten the ageing of the rural population.

Fragmentary evidence suggests that this pattern is also prevalent in those Pacific Island countries experiencing rural-urban migration and/or emigration, but more detailed demographic analysis is required to verify this. Census data for Fiji (Table 13) confirm that the proportion of elderly has been consistently higher in rural areas compared to urban since the 1970s and that the gap has been increasing through time.

**Table 13: Percent of population 60 and over in rural and urban Fiji, 1976-2007**

Area	1976	1986	1996	2007
Urban	3.5	3.9	4.4	6.8
Rural	4.4	5.1	5.8	8.2

Source: Fiji Islands Bureau of Statistics (2008); Seniloli (2006).

More analysis is required to determine if the same pattern applies in other Pacific Island countries. The issue is significant because the provision of services for the elderly is more difficult to achieve and more costly in rural areas and outer islands than in urban centres.

## 4 Population Ageing in Pacific Island Countries

### 4.1 Introduction

Previous chapters have looked at ageing in the Pacific at the sub-regional level, focusing mainly on Melanesia, Micronesia and Polynesia with only occasional reference to individual countries. In this chapter, data are presented for individual Pacific Island countries, with less focus on the sub-regions. The statistical data presented in this chapter are derived from the UNFPA population projections prepared in 2008 for the purpose of this study rather than from the UNDESA projections. The purpose of this chapter is to identify those countries that are ageing the most rapidly and will therefore need to take early steps to ensure that appropriate policies and programmes are in place to address the needs of the elderly in these countries.

At the beginning of the 20<sup>th</sup> century, most Pacific Islands were still recovering from the high death rates that followed from the introduction of new diseases into the region in the 18<sup>th</sup> and 19<sup>th</sup> centuries. Consequently, the rates of population growth in these countries remained relatively low. Some countries did not recover from high mortality until the 1930s, and colonial authorities were content with increasing fertility as it signalled a return to a healthy population. However, fertility rates accelerated for several decades until by the 1970s the Total Fertility Rate (TFR) had reached 7 children per woman or even higher in some countries. Rapid social change and increasing government support for family planning resulted in the TFR falling steadily over the next several decades so that by the beginning of the 21<sup>st</sup> century several countries had TFRs below 3.

The high fertility rates in past decades and their subsequent reduction have resulted in distinctive “youth bulges” in the present age distributions of many Pacific countries. The relative proportions of youth have continued to grow as influx of newborns went down due to lower fertility rates. Age distributions in the Pacific are consequently narrowing at the base and widening in the adult age range, while still remaining narrow at the top. However, this youth bulge is gradually moving up the age pyramid, and will eventually and inevitably reach the higher age groups. Thus, the process of ageing is already occurring and the median age of many Pacific Island populations is already beginning to rise.

### 4.2 Current and projected proportion of older persons

Pacific Island countries vary widely in the extent of ageing to date and the expected trends over the next several decades. As of 2000, the countries with the highest proportion of persons aged 60 and over (Table 14) are the small Polynesian countries whose populations are significantly affected by international migration and declining fertility—namely Niue, Cook Islands, Tokelau and Tuvalu. But these are not necessarily the same countries that will have a high proportion of older persons by 2050. The populations of these small countries, and their age structures, are significantly affected by variations in migration patterns; thus it is difficult to predict what age structure will emerge in the course of decades to come.

Based on projected trends, by the year 2050 the highest proportions of elderly persons will be found in New Caledonia, French Polynesia, Wallis and Futuna, Northern Mariana Islands and Guam, as well as in Palau and the Cook Islands. In each of these countries, more than 22 percent of the population is projected to be over 60 by 2050. The factors that contribute to ageing in these populations differ from country to country. New Caledonia, for example, receives migrants from France, French Polynesia and Wallis and Futuna, and these migrants tend to be either working age or retirees. Northern Mariana Islands has experienced significant immigration from Asia but this migration flow is set to reverse with expected changes in the garment industry. Palau has experienced a sharp decline in fertility while the Cook Islands have had several decades of net emigration of persons in the working age range as well as steadily declining fertility.

**Table 14: Percentage of older persons in Pacific Island Countries 2000-2050\***

Country	Percentage of older persons (60 years and over)		
	2000	2025	2050
<b>Melanesia</b>	<b>4.5</b>	<b>6.9</b>	<b>12.8</b>
Fiji	6.0	12.6	16.6
New Caledonia	8.6	18.1	24.1
Papua New Guinea	4.0	6.1	11.3
Solomon Islands	5.0	5.9	11.0
Vanuatu	5.0	7.6	12.4
<b>Micronesia</b>	<b>5.7</b>	<b>12.5</b>	<b>18.4</b>
FSM	5.3	10.2	16.2
Guam	8.2	15.4	22.0
Kiribati	5.4	8.2	18.4
Marshall Islands	3.4	6.4	11.6
Nauru	2.6	7.9	13.4
Northern Mariana Islands	2.7	17.8	22.9
Palau	7.8	23.3	24.9
<b>Polynesia</b>	<b>7.1</b>	<b>12.9</b>	<b>17.3</b>
American Samoa	5.4	11.2	14.2
Cook Islands	10.0	15.5	22.8
French Polynesia	7.3	16.2	23.3
Niue	14.5	21.1	21.3
Samoa	6.5	12.1	20.3
Tokelau	9.0	11.1	16.2
Tonga	7.9	9.7	12.6
Tuvalu	8.6	14.6	17.4
Wallis and Futuna	7.7	14.4	23.0

Source: UNFPA Population projections, 2008.

With the notable exception of New Caledonia, which is a special case due to its large “European” population, Melanesian countries have the smallest proportion of older persons both currently and projected into the future, but the population of older persons is nevertheless projected to treble in PNG, Solomon Islands, Fiji and Vanuatu between 2000 and 2050.

### 4.3 Pace of population ageing

The rates at which the older population in Pacific Island countries is currently growing vary widely both between countries and through time. As Table 15 shows, the older population has recently (2000-2005) been growing at more than 3 percent per year in nine countries. Most of these are dependent territories, largely because it is in these countries that the fertility and mortality transitions are the most advanced. The slowest growth among the older population is presently in the smaller Polynesian and Micronesian countries that are heavily affected by international migration and already have a relatively high proportion of elderly. In some of these countries high rates of growth among the elderly are projected for the near future (between 2010 and 2025), followed by a considerable slow down as mortality catches up with the increased proportions of elderly.

In the western Melanesian countries of Papua New Guinea, Vanuatu and Solomon Islands, the rate of growth in the older population is high because all age groups are growing rapidly; but starting from the 2010-2015 period the growth rate of the older population is projected to increase rapidly and will exceed the overall population growth rate by a considerable margin.

**Table 15: The pace of population ageing in Pacific Island countries**

Country	Rate of growth of the older population (annual % increase)				
	2000-2005	2010-2015	2020-2025	2030-2035	2040-2045
<b>Melanesia</b>	<b>2.5</b>	<b>3.8</b>	<b>4.6</b>	<b>4.0</b>	<b>3.5</b>
Fiji	3.6	3.9	3.0	0.8	1.3
New Caledonia	4.3	3.9	3.5	2.4	1.7
Papua New Guinea	2.5	3.9	4.9	4.3	3.7
Solomon Islands	2.4	3.3	4.6	5.2	3.9
Vanuatu	3.3	4.4	4.2	3.2	3.0
<b>Micronesia</b>	<b>2.2</b>	<b>5.0</b>	<b>4.3</b>	<b>2.0</b>	<b>1.1</b>
FSM	-0.3	4.8	2.7	0.3	3.9
Guam	3.4	4.8	3.1	2.3	1.3
Kiribati	1.9	3.3	4.4	2.1	3.4
Marshall Islands	1.2	5.5	2.8	0.4	5.6
Nauru	5.4	6.8	3.2	3.0	2.6
Northern Mariana Islands	6.3	8.1	6.3	3.7	-2.7
Palau	1.7	5.3	4.5	1.8	-0.5
<b>Polynesia</b>	<b>2.8</b>	<b>3.4</b>	<b>3.4</b>	<b>1.4</b>	<b>1.3</b>
American Samoa	4.0	4.7	4.3	1.7	0.9
Cook Islands	2.1	1.4	3.0	0.7	1.2
French Polynesia	4.1	4.7	4.4	1.9	1.7
Niue	-0.3	1.1	0.3	-0.1	-0.4
Samoa	2.0	3.0	3.8	2.7	0.6
Tokelau	2.3	-0.8	0.9	0.4	0.2
Tonga	0.9	0.9	1.2	1.1	1.9
Tuvalu	0.1	3.5	2.4	-0.8	1.4
Wallis and Futuna	4.9	3.0	2.0	1.5	3.5

Source: UNFPA Population projections, 2008

The total number of elderly persons in the Pacific Islands in 2000 was approximately 376,000 in 21 countries and territories<sup>9</sup>. By 2030, the number of persons 60 years of age and over is projected to reach one million and by 2050 will double again to 2.2 million. The overwhelming majority (88 percent) will be in Melanesia, 6.4 percent will be in Polynesia, and 5.8 percent in Micronesia.

#### 4.4 Changing balance between age groups

The median age (the age that divides the age distribution in half, indicating that half the population is above this age and half below) is a simple index of ageing and the relationship between age groups. With ageing, the median age rises and this pattern is apparent in all Pacific Island countries (Table 16).

<sup>9</sup> Excluding Pitcairn Island which has fewer than 100 people.

**Table 16: Indicators of changing age structure in Pacific Island countries 1975-2050**

Country*	Ageing Index Older persons per 100 persons <15 years				Median Age Years			
	1975	2000	2025	2050	1975	2000	2025	2050
<b>Melanesia</b>	--	<b>11.5</b>	<b>21.1</b>	<b>53.7</b>	--	<b>20</b>	<b>26</b>	<b>33</b>
New Caledonia	15.5	29.4	78.2	135.5	21	27	35	41
Fiji	11.2	18.3	45.0	74.0	19	24	27	33
Papua New Guinea	8.5	10.0	20.8	53.1	18	20	23	29
Vanuatu	9.7	11.7	24.2	64.9	17	19	23	29
Solomon Islands	10.2	12.2	19.1	63.9	16	19	22	28
<b>Micronesia</b>	--	<b>16.6</b>	<b>47.8</b>	<b>107.0</b>	--	<b>24</b>	<b>29</b>	<b>36</b>
FSM	--	13.1	36.2	79.5	--	19	26	37
Guam	10.2	27.0	68.0	113.4	21	27	32	38
Kiribati	--	13.4	27.1	74.9	--	20	26	39
Nauru	--	6.6	26.5	61.5	--	20	26	33
Northern Mariana Islands	--	12.1	102.3	136.4	--	29	35	43
Marshall Islands	--	7.8	18.3	51.1	--	18	22	32
Palau	--	32.9	105.6	136.6	--	31	38	40
<b>Polynesia</b>	--	<b>19.9</b>	<b>47.0</b>	<b>82.2</b>	--	<b>23</b>	<b>30</b>	<b>39</b>
American Samoa	--	14.0	36.5	64.9	--	21	26	33
Cook Islands	--	29.4	63.5	123.9	--	25	32	41
French Polynesia	11.5	24.2	74.5	122.3	19	26	34	39
Niue	--	49.1	91.2	99.3	--	29	36	37
Samoa	7.0	15.7	38.7	95.2	17	19	28	39
Tonga	8.6	20.5	29.8	57.4	17	20	29	34
Tokelau	--	24.0	46.6	107.2	--	20	28	42
Tuvalu	--	23.9	51.1	84.6	--	24	29	36
Wallis and Futuna	--	21.9	60.3	120.5	--	22	32	39

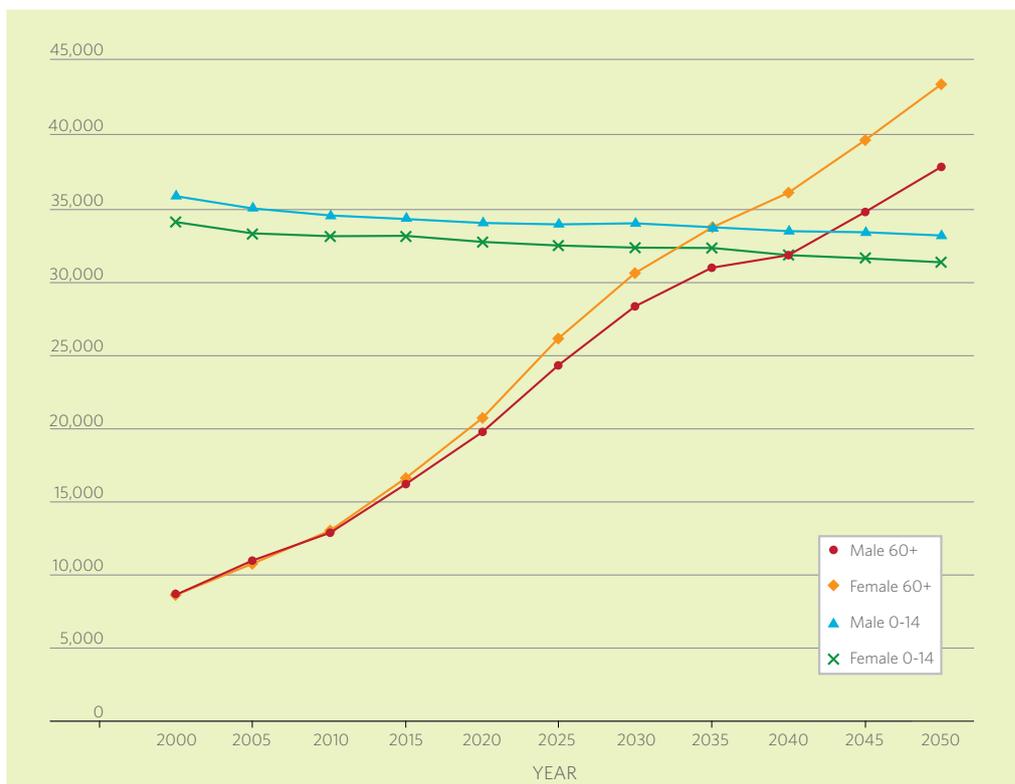
Source: UNFPA Population projections, 2008 .

In 1975, many Pacific countries had very young populations with a median age of between 16 and 19 years. By 2000, the median age had reached 31 years in Palau, 29 years in Northern Mariana Islands and Niue, and 27 years in Guam and New Caledonia. The median age is projected to increase in all Pacific countries over the next several decades. Several countries, including Cook Islands, Tokelau, Palau, New Caledonia and Northern Mariana Islands will have a median age of over 40 by 2050, similar to the level projected for Thailand.

As explained in Chapter 3, the Ageing Index specifically measures the ratio of older persons to persons under 15. Generally a rising Median Age is accompanied by an increase in the Ageing Index, although in countries that are experiencing high levels of immigration or emigration (particularly in the working ages) the two measures may not change at the same rate or in unison. In the Pacific region, the Ageing Index is currently highest in the small Micronesian and Polynesian countries. This index is expected to reach a value of 100 in these countries after the year 2020. By 2050, the number of old persons will exceed the number of children in eight countries, but the number of children will continue to exceed the number of older persons in high fertility populations such as Marshall Islands, FSM and Solomon Islands for several decades to come.

Figures 13 and 14, which graph the changing relationship between the number of children and the number of older persons in French Polynesia and Palau, respectively, show the typical trends in countries undergoing the demographic transition. As the lines representing the number of the elderly approaches and then crosses the lines representing the 0-14 population, social policy will need to shift its focus towards the needs of the elderly. When the population aged 0-14 remains more or less static, the demand for (primary) schools and teachers will be static as well. Conversely, with rapid growth of the elderly population the need for caregivers to the elderly and appropriate care facilities will rise.

**Figure 13: Projected changes in age groups 0-14 and 60 and over in French Polynesia 2000-50**



Comparing Figures 13 and 14 illustrates the point that changes in relative size of the elderly and the under 15 population can vary significantly in speed between countries depending upon the pace of change in fertility, mortality and migration.

**Figure 14: Projected changes in age groups 0-14 and 60 and over in Palau, 2000-2050**

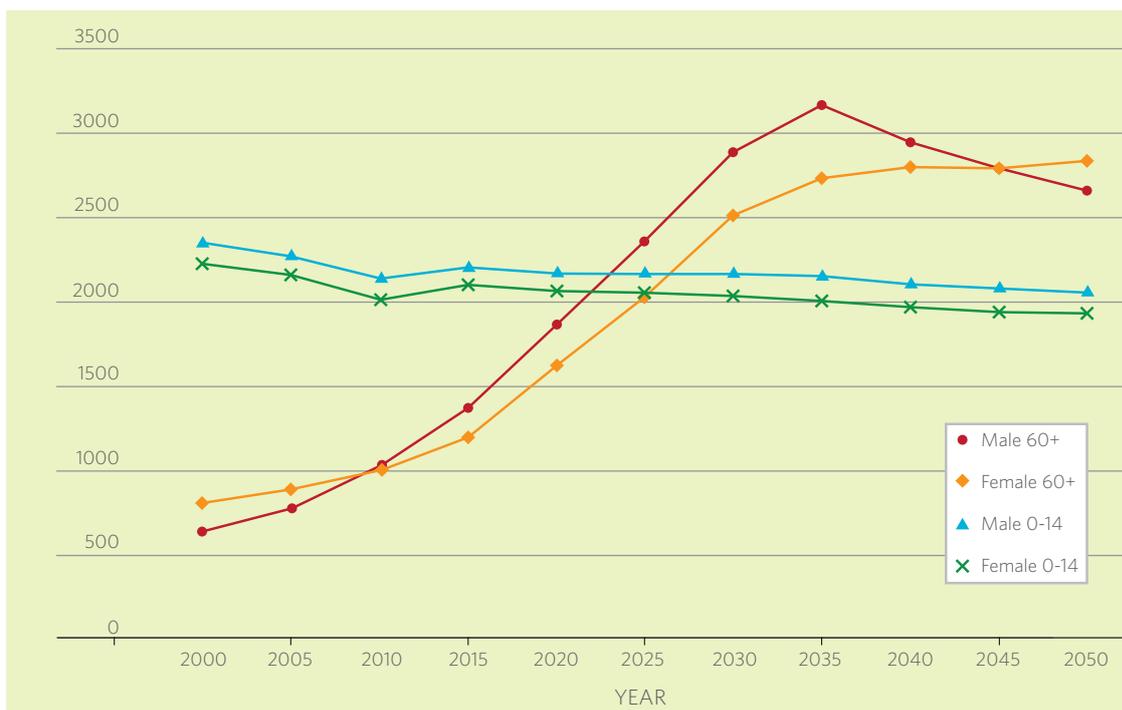
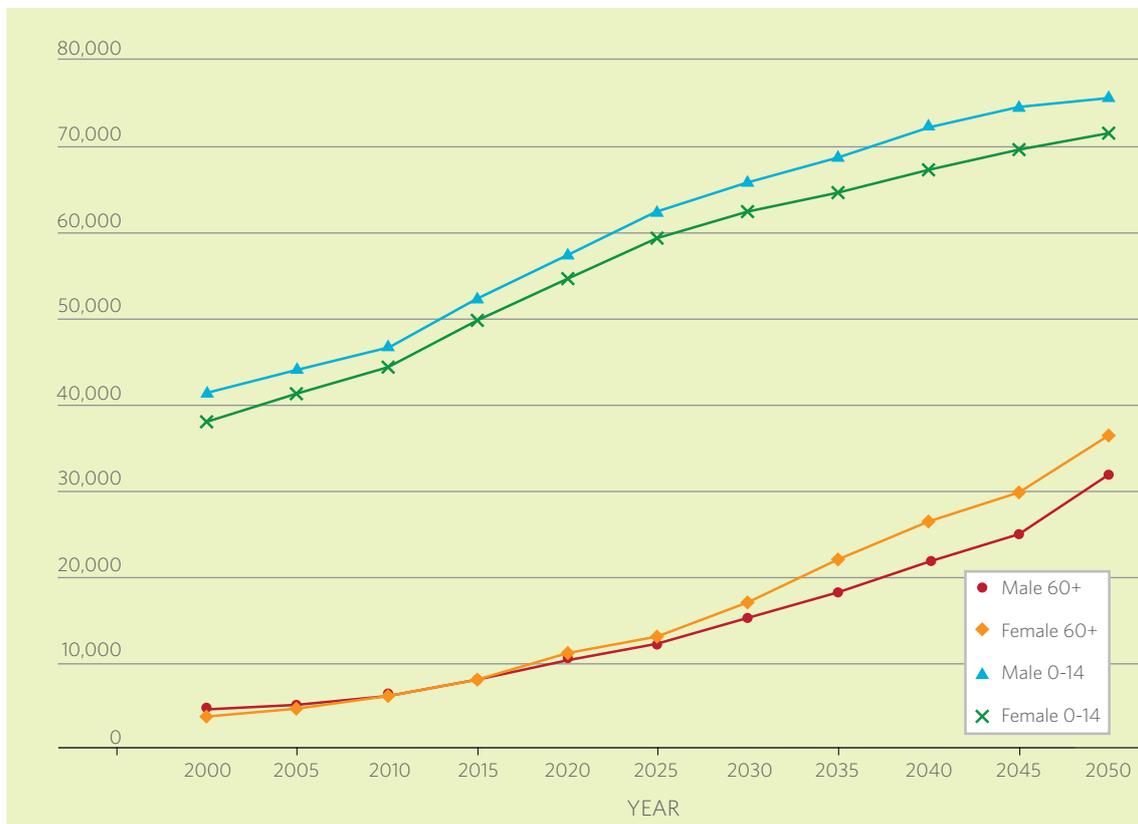


Figure 15, shows the case of Vanuatu, where the demographic transition is proceeding slowly with high fertility persisting over several decades. In this case the population of children 0-14 is projected to continue to grow throughout the first half of the 21<sup>st</sup> century even as the number of older persons rises as well, thus increasing the overall burden of dependency.

**Figure 15: Projected changes in age groups 0-14 and 60 and over in Vanuatu, 2000-2050**



## 4.5 Ageing of the older population

As mentioned in earlier chapters, the average age of the older population is increasing in most world regions. In the Pacific, the projected rate of growth in the oldest old (those who are over 80) is currently higher than the rate of growth in the elderly population as a whole (those over 60) and this is expected to continue for the next several decades. High growth rates among the oldest old are a consistent feature in all countries and sub-regions (Table 17), although fluctuations are evident in some countries as a result of their uneven age structures.<sup>10</sup>

<sup>10</sup> Age distributions in the Pacific are affected by the misreporting of age to census-takers. "age-heaping" on ages ending in 5 or 0 is common in Melanesia—particularly Papua New Guinea.

**Table 17: Rate of growth of the oldest old by country and sub-region**

Country	Rate of growth of the oldest-old population (annual % increase)				
	2000-2005	2010-2015	2020-2025	2030-2035	2040-2045
<b>Melanesia</b>	<b>9.6</b>	<b>4.3</b>	<b>4.8</b>	<b>6.1</b>	<b>6.6</b>
Fiji*	0.0	4.9	5.3	5.0	3.4
New Caledonia	1.5	4.3	5.2	4.1	3.4
Papua New Guinea	6.0	4.7	4.7	6.4	7.0
Solomon Islands	18.0	4.1	4.4	4.4	6.7
Vanautu	-2.0	4.1	5.4	5.4	5.5
<b>Micronesia</b>	<b>8.1</b>	<b>4.0</b>	<b>3.2</b>	<b>6.1</b>	<b>4.3</b>
FSM	-1.8	2.3	1.4	7.6	1.5
Guam	5.9	5.4	3.1	4.5	3.9
Kiribati*	0.0	5.3	3.3	5.3	5.7
Marshall Islands	19.0	1.5	3.3	6.7	2.7
Nauru	2.5	7.5	8.1	8.3	5.3
Northern Mariana Islands	1.3	8.6	7.2	8.6	5.9
Palau*	0.0	-0.09	3.2	7.2	4.5
<b>Polynesia</b>	<b>14.7</b>	<b>3.7</b>	<b>3.6</b>	<b>4.9</b>	<b>3.4</b>
American Samoa	2.4	4.3	4.3	5.5	4.1
Cook Islands	5.5	5.0	2.1	1.8	3.7
French Polynesia	4.1	5.4	4.8	5.8	4.3
Niue	0.0	7.3	-2.0	5.9	0.8
Samoa	0.0	2.8	2.5	5.1	4.0
Tokelau	5.8	1.7	2.4	1.5	1.2
Tonga	18.3	2.6	2.2	2.2	0.7
Tuvalu	5.6	1.1	0.2	5.2	2.0
Wallis and Futuna	4.5	5.0	6.2	2.6	1.8

Source: UNFPA population projections, 2008

\* A growth rate of zero is a function of the base population lacking a breakdown of the 80 and over age group.

As a result of the faster rate of growth of the oldest old population, the proportion of the older population that is very old will increase steadily, as is evident from Table 18. In Polynesia and Micronesia, the oldest old will comprise 10 percent of the older population by 2030 and almost 16 percent by 2050. Palau, Tokelau Islands, Northern Mariana Islands, Samoa and Niue are among the countries projected to have a high proportion of their older population in the oldest old group.

**Table 18: Projected proportion of the older population that is aged 80 and older**

Country	Percent of population aged 60 and over that is 80 and over				
	2010	2020	2030	2040	2050
<b>Melanesia</b>	<b>9.2</b>	<b>3</b>	<b>6.7</b>	<b>8.5</b>	<b>11.3</b>
Fiji	7.2	8.1	10.5	14.7	16.8
New Caledonia	9.3	9.9	11.1	13.2	15.5
Papua New Guinea	5.5	5.7	5.8	7.6	10.3
Solomon Islands	7.8	7.8	7.5	7.0	9.1
Vanautu	9.5	9.2	10.0	11.6	13.5
<b>Micronesia</b>	<b>8.2</b>	<b>7.2</b>	<b>10.3</b>	<b>12.6</b>	<b>15.6</b>
FSM	9.6	7.2	9.5	16.5	11.8
Guam	9.2	10.0	11.1	13.8	16.2
Kiribati	8.0	7.8	7.6	10.8	12.9
Marshall Islands	3.5	3.4	5.6	9.1	10.2
Nauru	5.0	5.0	6.3	12.2	27.7
Northern Mariana Islands	8.4	6.2	8.9	13.9	9.5
Palau	10.1	6.4	7.0	12.8	20.4
<b>Polynesia</b>	<b>9.2</b>	<b>9.4</b>	<b>10.1</b>	<b>14.8</b>	<b>15.9</b>
American Samoa	7.6	8.0	9.4	13.9	15.7
Cook Islands	10.8	14.0	13.1	17.1	18.6
French Polynesia	8.0	8.7	9.6	13.8	15.9
Niue	10.4	16.4	13.5	20.6	17.3
Samoa	12.6	12.0	10.6	14.4	18.8
Tokelau	12.0	12.6	14.3	18.3	14.9
Tonga	13.4	15.4	16.3	21.3	19.1
Tuvalu	11.5	9.6	11.3	18.9	15.3
Wallis and Futuna	8.8	10.9	14.8	16.9	14.1

Source: UNFPA population projections, 2008

## 4.6 Increasing dependency burden

The “dependency burden” refers to the number of dependents relative to the number of “working age” persons. As populations undergo ageing, dependency shifts from youth dependency to old age dependency. The two types of dependency—youth and old age—can be expressed in similar kinds of indicators but substantively they have very different implications for health and welfare. The health services required by children are relatively inexpensive (immunization and treatment of infections) compared to the services required for the elderly, which might range from hip replacements to heart surgery to chemotherapy. Disability increases with age, including impaired sight or hearing or immobility. The education costs associated with youth dependency are obviously higher than those associated with old age dependency, which are usually minimal, but the costs of health care outweigh education costs by a substantial margin. In the case of health, more money may be spent (either by insurance companies or state-funded public health services) in the last few years of an individual’s life than in all previous years.

Two measures of old age dependency are shown in Table 19: the “potential support ratio” and the “parent support ratio”.<sup>11</sup>

Table 19 shows that the potential support ratio is projected to fall in almost all Pacific countries. The exceptions are Niue, Tokelau and Tonga. Elsewhere the ratio will decline, meaning that there will be fewer persons of working age relative to the number of elderly. Conversely, the parent support ratio is projected to rise significantly over the next four decades. The extreme example is Northern Mariana Islands (NMI) where, in 2050, there will be 38 persons aged 80 and over for every 100 persons aged 45-59. Aside from NMI, Palau, Nauru, and Niue will have parent support ratios over 20 by the year 2050. Two small Polynesian countries (Niue and Tokelau) will have a parent support ratio over 20 by 2025. This is no doubt a function of high rates of emigration that result in the children of the elderly living abroad. The population projections assume that emigration will continue although not to the extent that the islands become completely depopulated.

**Table 19: Indicators of age dependency in Pacific Island countries 2000-2050**

Country	Potential support ratio (population 15-64/population 65 and over)			Parent support ratio (population 80 and over/ population 45-59x100)		
	2000	2025	2050	2000	2025	2050
<b>Melanesia</b>	<b>21.4</b>	<b>15.5</b>	<b>7.8</b>	<b>2.3</b>	<b>3.3</b>	<b>8.3</b>
Fiji	17.1	8.8	7.4	0.0*	8.0	16.3
New Caledonia	13.9	7.5	4.6	6.7	8.9	18.7
Papua New Guinea	26.6	19.5	10.3	2.3	2.7	7.4
Solomon Islands	17.4	19.2	10.0	2.6	3.8	6.9
Vanautu	20.5	14.5	9.7	8.3	6.2	11.1
<b>Micronesia</b>	<b>16.6</b>	<b>8.2</b>	<b>5.4</b>	<b>3.5</b>	<b>5.5</b>	<b>13.8</b>
FSM	18.7	10.1	8.2	7.3	7.2	9.1
Guam	13.7	7.5	5.2	4.5	8.3	18.6
Kiribati	15.7	14.5	8.7	0.0*	4.8	10.4
Marshall Islands	26.8	16.1	12.5	1.8	5.2	6.5
Nauru	13.0	6.0	4.6	0.0*	5.3	26.6
Northern Mariana Islands	58.4	6.9	4.8	3.3	3.5	38.8
Palau	13.0	6.0	4.6	0.0*	5.3	26.6
<b>Polynesia</b>	<b>12.9</b>	<b>7.4</b>	<b>5.6</b>	<b>3.2</b>	<b>8.9</b>	<b>14.2</b>
American Samoa	20.1	9.7	9.3	4.0	7.4	11.9
Cook Islands	10.3	8.0	5.9	6.1	14.1	19.9
French Polynesia	16.2	7.4	4.9	4.3	8.1	19.5
Niue	6.5	5.0	7.0	0.0*	21.8	22.3
Samoa	12.4	9.4	5.8	0.0*	9.0	18.1
Tokelau	11.4	10.6	11.0	3.9	13.4	10.4
Tonga	9.2	7.9	9.1	9.0	21.2	16.8
Tuvalu	11.7	7.1	7.8	5.2	10.5	13.3
Wallis and Futuna	12.0	7.8	5.3	0.0*	14.2	16.7

Source: UNFPA Population projections, 2008. \*The census did not show any persons 80 or over in these countries.

<sup>11</sup> These terms are defined in Chapter three and Annex I.

## 4.7 The feminization of ageing

As explained previously, male death rates are usually higher than female death rates across all age groups. Consequently, more women than men can be expected to survive into old age and as a result the majority of older people are women. Despite the high sex ratios in Pacific Island populations (indicating more males than females in the total population) the process by which women eventually outnumber men in older age groups is just as evident in the Pacific Islands as in other world regions, although not to the extent found in Europe or East Asia. In 2000, several Pacific countries had high sex ratios among the old (Table 20). The reasons for this vary between countries. In Western Melanesia (Vanuatu, Solomon Islands and Papua New Guinea) where the status of women is low, male life expectancy in older ages has been higher than female in some years. This is difficult to prove because all life table models assume the opposite and it is essential to use statistical models to produce life tables for these countries given their poor mortality statistics. Nevertheless, projections forward to 2050 indicate that the sex ratio of the older population will fall below 100 by that time and with only one exception (Federated States of Micronesia) women will form a majority of the older population.

The feminization of ageing is likely to be more pronounced in the small Polynesian and Micronesian countries of Tokelau, Niue, Cook Islands, American Samoa, Kiribati and Northern Mariana Islands.

**Table 20: Indicators of feminization of the old in Pacific Island countries 2000-2050**

Country	Sex ratio of population aged 60 years and over			Proportion of the 60 and over population that is female		
	2000	2025	2050	2000	2025	2050
<b>Melanesia</b>	<b>116.0</b>	<b>94.8</b>	<b>94</b>	<b>46.3</b>	<b>53.1</b>	<b>51.5</b>
Fiji	90.9	81.6	87.3	52.4	55.1	53.4
New Caledonia	91.8	88.8	89.5	52.2	53.0	52.8
Papua New Guinea	124.8	87.6	92.0	44.5	53.3	52.1
Solomon Islands	119.8	98.1	93.6	45.5	50.5	51.6
Vanuatu	121.6	91.3	89.1	45.1	52.3	52.9
<b>Micronesia</b>	<b>88.4</b>	<b>102.1</b>	<b>89.4</b>	<b>53.1</b>	<b>51.5</b>	<b>52.8</b>
FSM	86.4	89.4	99.8	53.6	52.8	50.0
Guam	93.0	90.8	96.5	51.8	52.4	50.9
Kiribati	70.5	73.5	79.1	58.6	57.6	55.8
Marshall Islands	93.8	84.7	88.0	51.6	54.2	53.2
Nauru	112.3	78.7	88.1	47.1	56.0	53.2
Northern Mariana Islands	113.0	143.4	82.4	46.9	41.1	54.8
Palau	80.7	119.6	94.5	55.3	45.5	51.4
<b>Polynesia</b>	<b>94.7</b>	<b>99.7</b>	<b>91.2</b>	<b>51.4</b>	<b>52.9</b>	<b>52.5</b>
American Samoa	92.9	83.0	85.3	51.8	54.7	54.0
Cook Islands	104.9	90.4	85.8	48.8	52.5	53.8
French Polynesia	99.1	93.6	88.6	50.2	51.7	53.0
Niue	88.4	78.6	81.3	53.1	56.0	55.0
Samoa	90.9	92.8	95.6	52.4	51.9	51.2
Tokelau	81.3	68.8	75.2	55.2	59.3	57.1
Tonga	93.8	77.9	90.1	51.6	56.2	52.6
Tuvalu	76.2	73.1	92.2	56.7	57.8	52.0
Wallis and Futuna	84.2	83.7	86.9	54.3	54.4	53.5

Source: UNFPA Population projections, 2008

## 4.8 Ageing in the Pacific Islands: some conclusions

This chapter has compared Pacific Island countries on a range of indicators of the extent and pace of population ageing. It is clear that ageing is occurring throughout the Pacific but there is a great deal of variation in the current extent of ageing and the speed at which the populations of the region are growing old. Given that population ageing is primarily a consequence of the demographic transition, it is not surprising that the countries that are the most advanced in the transition are the ones that already have a significant proportion of their populations aged 60 years and older and growing proportions of elderly aged 80 years and over.

The ranking of countries on the range of indicators employed in this study is not consistent across all indicators, in part because the direction and volume of international migration. Also, the current distribution of the population by age can have a confounding influence. What is clear, however, is that some countries consistently rank high on most indicators while others rank low. The countries that rank high - meaning that ageing is already significant and likely to continue rapidly - include: Niue, Tokelau Islands, Cook Islands, New Caledonia, Palau, and Guam. These are countries that have been passing through the demographic transition for several decades and have nearly completed this transition. Another common factor among them is that all of these countries experience significant international migration. In the case of New Caledonia and Guam, the net flow of migrants is inwards; for the other countries the net flow is outwards. While more research would be required to fully understand the role of migration in contributing to ageing, it is almost certain that the key factor is age-selective migration. In places where the young move out (for instance, education or labour related migration) or the old move in (for instance for retirement), ageing will accelerate—assuming other demographic factors are equal. Where both migration factors coincide the effect will obviously be cumulative.

It is also noteworthy that four of the six countries that are ageing most rapidly have populations below 21,000, and that two of them (Niue and Tokelau Islands) have populations below 2,000. These are truly the micro-populations of the region, all of which have been subject to heavy outward net migration flows.

The countries that have the lowest ageing indicators, and are therefore the least subject to population ageing, include: Federated States of Micronesia (FSM), Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, and Vanuatu. The first three of these are among the last countries in Micronesia to experience the onset of the demographic transition. The other three countries have already entered the demographic transition but change has been slow. All three have Total Fertility Rates well above 4 and life expectancy is among the lowest in the region. International migration from these countries is also very limited. These demographic conditions are not conducive to rapid population ageing. It follows that these countries, along with FSM, Marshall Islands and Nauru have more lead-time to prepare for an ageing population than the countries in which ageing is already taking place or is well advanced.

# 5 The Implications of Population Ageing in the Pacific Islands

## 5.1 Introduction

The challenges facing families, communities and societies as a population ages are universal but the social, economic, political and cultural context of each country determines the manner in which these challenges are addressed and the extent to which policies and programmes can be implemented. In the Pacific Islands, geographical factors place a significant constraint on all aspects of social and economic development and this clearly includes the design and implementation of policies and programmes to address population ageing. This chapter reviews the general implications of an ageing population and places the main issues in the context of Pacific Island conditions.

## 5.2 Health services

Increasing life expectancy presents an apparent paradox in that improved health conditions and lower mortality contributes to greater longevity; but those who live long lives will tend to experience higher rates of morbidity as they become older and will spend more time sick or disabled. With modern life-saving technology, it is possible for older persons to survive frequent life-threatening incidents (heart attacks, strokes, respiratory problems, cancers) that might have been fatal in the past. However, the availability of such life-saving treatment depends upon the level of development a country has reached and the funds available to supply such services—whether from a public or private health system.

Total health expenditure in a country is determined by a number of factors, including the technology of health care, national income, and the age structure of the population. Thus, an explanation for the growth of health care costs through time must look at all the determinants and not only age structure. In developed countries, however, per capita health expenditure rises steeply from about age 40-44 and reaches a peak at age 80-84, after which it levels off or drops, depending on the country.<sup>12</sup> In general, as the proportion of older persons in the population rises demands on the health care system increase, leading to higher health expenditure as a proportion of GDP.<sup>13</sup> In Australia, for example, it has been estimated that even allowing for other causes of increased health expenditure, its total cost in 2045-50 will be 30 percent higher on account of population ageing than it would be in the absence of ageing.<sup>14</sup>

In developing countries, including the Pacific Islands, increasing the budgetary allocation for health services in the face of so many other needs may involve difficult policy choices. In developing countries health services are frequently inadequate and already overburdened. In some countries, the resurgence of infectious disease is occurring at the same time that non-communicable diseases are growing in importance, thereby creating a “double burden” for the provision of health services.

The health services required for an ageing population tend to be both labour- and technology-intensive. In the Pacific the specialized technology and expertise required to address the needs of the old is often unavailable, even in the most developed Island countries. Most Pacific countries have established referral programmes whereby patients are sent abroad for treatment (to Australia, Hawaii or New Zealand) that is unavailable at home.<sup>15</sup> Given the high costs associated with referral to overseas facilities, access is highly restricted and “rationed”. Elderly patients are unlikely to receive high priority through these schemes which are generally focused on children and working age persons, although there is no discrimination on the basis of age alone.<sup>16</sup>

<sup>12</sup> This is evident in data for 14 member countries of the European Community measured in terms of share of GDP. See: Bjornerud and Martins (2005).

<sup>13</sup> It has been estimated in Canada that the population over age 65 accounts for 50% of hospital costs but comprises 12.6% of the population. See: Canada Institute for Health Information (2003).

<sup>14</sup> Australian Government, Productivity Commission (2005)

<sup>15</sup> Cancer patients from French Polynesia are frequently sent to New Zealand, for treatment.

<sup>16</sup> The New Zealand Ministry of Health operates two medical schemes to assist Pacific Islanders to obtain medical treatment: (1) the Visiting Medical Specialist Scheme, which sends specialists to the

Another arrangement is for specialized medical staff to be brought to the Islands on a periodic or rotational basis. Such arrangements are frequently voluntary on the part of the overseas medical staff or otherwise financed by international NGOs or private health providers. Such arrangements may be effective on a small scale and where the necessary ancillary facilities (operating theatres, etc) are available and maintained. But it is precisely the establishment and maintenance of medical facilities that presents a major challenge to health budgets in the Pacific. Only the largest urban centres are likely to have the required facilities and in many cases these are in private hospitals catering for the small minority of persons who can afford private treatment or have some form of health insurance.

As in many aspects of health, a preventive approach is likely to be more cost-effective than a curative one. Thus, a priority in the International Plan of Action on Ageing (Madrid 2002) is “advancing health and well-being into old age”. Addressing this priority requires a range of policies and actions, including: (a) promoting health and well-being throughout life; (b) ensuring universal and equal access to health care services; (c) addressing HIV/AIDS among older people; (d) training health care providers on the needs of the older population; (e) addressing the mental health needs of the elderly; (f) maintaining functional capacity throughout the life course.

Many of the required policy measures under these headings can be taken by Pacific Island countries experiencing ageing without incurring prohibitive expenditures. Such measures as the promotion of healthy lifestyles, including improved nutrition, can and should be tailored to the local culture and the available foods. From both an economic as well as a health perspective it makes good sense for Pacific Island countries’ governments to restrict the import of certain processed foods that threaten domestic food production and contribute to unhealthy diets in many of the Pacific Island countries. In the Pacific, geographic factors are a primary cause of unequal access to health and social services. Outer islands and remote communities are the most difficult to service because of the high cost and unreliability of transport and communications.

### 5.3 Long-term care

The older population is much more likely to suffer from disability or impaired capacity than other age groups and the disability may become permanent. The most common disability is loss of mobility. Loss of hearing, poor eyesight and mental illness or cognitive disorders may also occur. In extreme cases disability may require long term care that goes beyond medical treatment as such and the care required to maintain a reasonable quality of life may be beyond the capacity of the immediate or extended family.

In the Pacific, the care of old people in the family home is a strongly held value and this remains the typical arrangement. So long as life expectancy was below 60 years, the proportion of older persons in the population was low and infectious rather than non-communicable diseases were the main cause of death. Home care was a practical and appropriate arrangement. As life expectancy rises and non-communicable rather than infectious diseases become the main cause of death, home care becomes less feasible. Disability arising from non-communicable disease may require constant (24/7) attention and assistance by persons with appropriate training in geriatric medicine. Death from cancer, for example, may be preceded by a long period during which intensive care is required. Such assistance is not available in the average home in the Pacific.

As ageing proceeds in the Pacific, the development of more formal types of long-term, institutional care to support or supplement home care will become essential. The need will be greatest where ageing is most advanced and where the care-giving population has been depleted by migration. This applies most obviously in the Polynesian countries and Fiji. In some countries—Cook Islands, Niue and Tokelau—the

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Islands to provide treatment in-country; (2) the Medical Treatment Scheme, which finances the travel of Pacific Islanders to New Zealand for treatment unavailable in their home country. One criterion of eligibility is that there is a good prognosis that the patient will have a healthy life for at least five years after the treatment.

population holds New Zealand citizenship and can potentially avail themselves of long-term care in that country. Other Pacific Island countries—most obviously Fiji, Samoa and Tonga—have substantial migrant populations residing in Australia, New Zealand and the United States. These migrant communities are potentially able to finance long-term care for their elderly, either in their home countries or in their adopted homes. The issue of long-term care therefore intersects with issues of migration, multiple citizenship and also pension rights and transferability.

More research is needed on the implications of ageing for long-term care in the Pacific Islands. First, more analysis of census and survey data on disability patterns by age is required. Second, more information on the living arrangements of the older population is needed, including the living arrangements of older persons who are also disabled. Rural/urban differences would be an important cross-cutting dimension of this analysis. Studies of present arrangements for institutional care in the Pacific are also needed. Within the context of the cultural values and preferences of Pacific Islanders, options for strengthening institutional care need to be explored. This challenge includes finding the right balance between informal (family) and formal (facility-based) care.

## 5.4 Family and community support

Specialized institutional care may be more comfortable for those suffering from a disability, but for many families in the Pacific the decision to place an elderly relative in an institution is difficult, often because it suggests that the family is unwilling or unable to meet their cultural obligations. Across the Pacific, the cultural norm is that children support their parents in exchange for the support that parents provided to their children. For the oldest old, however, this expectation is increasingly difficult to satisfy, and the oldest old are the fastest growing age group in many countries. Furthermore, a range of societal changes, including urbanization, formalization of work, migration, and nuclearization of the family (in short, “modernization”) are undermining the willingness and capacity of younger families to meet the cultural expectation of their parents and grandparents.

The “feminization” of ageing means that older women are more likely to suffer because of these changes and are also more likely to be living alone. On the other hand, many grandmothers perform child-care tasks and may prefer to live in a co-residential family arrangement so long as their own health permits. In Asia, co-residency is declining and institutionalization increasing. It is unlikely that these trends are occurring in the Pacific to a similar extent but concrete data are currently lacking. In the long run it is inevitable that institutionalization will increase, but the form of institutionalization may be different from that found in more developed countries.

It would be useful for Pacific countries in which ageing is occurring rapidly to assess the types of institutional arrangements that are potentially the most suitable for societies in which the extended family is still the strongest social unit even though it is coming under strain. In the industrially developed countries, retirement “villages” that combine individual residence with hospital and hospice services provide a sharp contrast to the single-family home in which most people live their lives. In the Pacific, however, some variant on “village” living is common and a village type living arrangement for the elderly would not be such a radical departure from customary residence.

Informal care-giving, particularly to the oldest old, can be stressful and care-givers can easily become overburdened—especially when attempting to balance child care and employment obligations. Community care involving volunteers or extended family members can ease the pressure on the immediate family. Commonly such arrangements do not involve compensation for the care giver, but there are limits to generosity and, as dependency burdens increase, compensation in some form may be called for.

It is important to acknowledge that informal care does not, and cannot, replace professional care. What is generally required is a continuum of care from a range of sources—family, community, hospitals or clinics and hospices. The appropriate mix of these forms depends in part on individual and cultural preferences, personal needs, and availability.

The issue of institutional versus family care also intersects with the issue of housing options. Many elderly people may prefer “independent living” to living with family or other older people. But independent living also raises issues of transport and mobility, especially among those who may suffer a disability. In urban areas, the transport needs of the older population can partially be met by subsidized public transport and the modification of vehicles to meet the access requirements of the old and infirm. In rural or outer island areas in the Pacific the impediments to mobility tend to be much greater, especially where sea travel is concerned.

## 5.5 Work, income and social protection

Priority direction 1 of the IPAA 2002 is to ensure that older persons are “full participants in development... and share in its benefits”. This priority arises because ageing carries with it the possibility that the purposeful and meaningful social and economic roles of the elderly will be taken away from them. Social and economic participation encompasses a wide variety of activities, including work and employment, involvement in decision-making and expressive culture.

With regard to work and employment, it is a widely accepted principle, expressed in the IPAA 2002, that older persons should have the opportunity to work for as long as they wish and are able to do so productively. In reality there are many obstacles to the full employment of older persons. In the Pacific, public sector employees may face compulsory retirement at the age of 50, 55 or 60.<sup>17</sup> Private sector practice may follow the public sector on the grounds that older persons should yield their jobs to younger people who are more educated and qualified and wish to form their own families. This argument is certainly compelling in countries where the proportion of youth in the population remains high or is still rising and where formal employment opportunities are limited. But employment growth should in any case be at the heart of macroeconomic policies and would avoid the “zero-sum” situation whereby the old have to yield to the young through a virtual “rationing” of jobs.

More flexible retirement policies might result in compromise arrangements whereby older workers past retirement age would combine part-time work with mentoring and training functions. In the Pacific, where human resource capacity constraints are widely evident such solutions could be particularly appealing.

In the Pacific, as in most developing countries, the majority of the elderly population spent their working lives in the rural village economy or the urban informal sector. Consequently, the possibility of “retirement” in the sense of being in receipt of a pension does not exist. Personal savings are usually minimal or non-existent. In the village economy, the capacity to work depends mainly on the health and disability status of the elderly, assuming that they have the usual access to planting land and the typical array of capital goods.

The principle of “employment for all” is supported by the IPAA 2002, but achieving this objective is difficult, particularly in rural settings. Older women, for example, face many obstacles, including low levels of education or even illiteracy, lack of job experience, skills or qualifications. The provision of micro-credit for the elderly is one strategy that could assist older men and women continue to earn an income beyond their own subsistence. Another related principle enunciated by IPAA is “lifelong access to education and training”. Given rapid changes of technology, older people who wish to work and are capable of working may nevertheless require re-training. In the Pacific, the concept of adult education is little known and polytechnics are oriented almost entirely to the young. In rural areas and outer islands, opportunities to obtain occupational training or re-training are usually minimal. Government support for the retraining of older workers is virtually non-existent.

<sup>17</sup> In January 2007, the Fiji government reduced the retirement age for civil servants to 55 from 60 years.

Other forms of social protection include contributory or non-contributory pension or superannuation schemes. The scope and effectiveness of these schemes in the Pacific is not well known. Some countries (Papua New Guinea and Fiji, for example) have national provident funds to which both public and private employees contribute. Non-contributory old age pensions are paid in Cook Islands, Niue and Samoa. But the amounts involved are small both in relation to needs and the government budget. Attempts to increase the old age pension in Niue failed because the government budget could not sustain it. Pacific Islanders who have worked for at least 20 years in New Zealand and have reached retirement age are able to receive their New Zealand superannuation in their home countries under certain conditions. The value of these payments is well in excess of what Island governments could afford. In effect, superannuation sourced from abroad plays a similar role in the island economy as migrant remittances. These payments are usually indexed to inflation in the country of origin, rather than the country where the recipient actually lives.

Research is needed on the full range and effectiveness of social protection schemes available to the elderly in Pacific Island countries. Household Income and Expenditure Surveys are a potential source of data on the number of older persons receiving pension or old age social security payments. HIES can also provide data on the poverty status of the elderly using various measures of poverty. Complete destitution is rare in the Pacific, especially in rural areas where the traditional village economy remains intact. The presence of beggars in Pacific towns suggests that destitution may exist in urban areas but what can be observed on the street needs to be interpreted with caution.

Research is also required on current and future impact of old age security on government budgets. This is obviously more urgent in those countries that have already begun to experience population ageing; but all countries can benefit from a review of the potential budgetary impact of ageing given that the creation of investment funds to supplement or replace the direct contribution from annual budgets is a long term strategy with a time frame of decades rather than years.

## 5.6 Conflict and emergency situations

The older population is particularly vulnerable during emergency situations arising from natural disasters, epidemics or civil war. The elderly suffer more in natural disasters (cyclones, tsunamis and earthquakes) due to their impaired mobility. During epidemics the older population is likely to have higher infection rates and death rates than younger adults. In conflict situations the needs of the elderly may suffer disproportionately as their existing support systems come under threat.

In countries experiencing a generalized HIV/AIDS epidemic, the older population may be forced to become caregivers to their grandchildren if the parental generation has died. If grandchildren are also infected the strain on elderly grandparents may be serious, possibly leading to their impoverishment. This aspect of the HIV/AIDS epidemic has so far received little attention in the Pacific. Papua New Guinea is currently the only country in this region where this is likely to be a serious issue.

In the Pacific, natural disasters such as cyclones, tsunamis, droughts, floods and earthquakes are common. Every Pacific Island country has taken steps to develop disaster preparedness and contingency plans and a great deal of technical assistance is being provided to the region to assist in this process. An assessment of the extent to which existing plans address the special needs of the elderly would be useful.

Considering that many elderly in the Pacific are economically vulnerable and depend to a large extent on subsistence agriculture for their survival, the impacts of climate change are likely to affect the elderly more than other population groups. As traditional work opportunities such as fishing and agriculture diminish or become less appealing, the younger generations may opt to migrate, leaving the elderly behind. Salt water intrusion, adverse weather conditions, and diminishing fish stocks may further threaten the chances of the elderly to provide for themselves.

## 5.7 Positive aspects of ageing

In Pacific Island cultures, older people are normally given a great deal of respect and even veneration. In those Pacific societies in which chiefly titles are inherited by primogeniture, chiefs may hold their titles to an old age and only upon their death is the title transferred to the next right-holder. Even in those Pacific societies lacking inherited chiefly titles, older people—men in particular—are given respect as sources of traditional knowledge and skills and arbitrators of disputes or conflict.

In urban settings, however, this cultural respect is eroding. Traditional skills are less relevant and the functions of chiefs more obscure. The role of the elderly in economic development may not be obvious. The savings of the elderly provide a pool of investment capital either directly in bank savings or indirectly through pension funds or stocks and bonds. Older workers may be more productive than younger ones because of their experience, motivation and lower rates of absenteeism. But the public image of the elderly may focus more on the negative aspects, such as the costs of their health care.

The promotion of a positive image of older people is an important objective of the IPAA. In the Pacific, where custom and tradition are still respected (even if this respect is eroding under globalization) this task is less difficult than it might be in a fully industrialized and monetized economy. Examples of how the traditional knowledge and skills of the old can contribute to resilience to and recovery from natural disasters would not be difficult to find given the frequency of cyclones, floods and droughts. In a number of Pacific Island countries projects are currently underway to harness this knowledge in efforts to strengthen community development and reduce the potential impact of natural disasters and economic crises.

## 6 Policy and implementation issues in the Pacific Islands

### 6.1 International frameworks

International agreements often provide the broad framework within which individual countries design social policies and programmes. Population ageing was not an international issue during the first half of the 20<sup>th</sup> century because the populations of most countries were becoming younger and “youth” was the demographic group of prime concern. The issue of ageing populations was first raised in the United Nations by the Government of Malta in 1969. The first World Assembly on Ageing was held in Vienna in 1982 resulting in the Vienna International Plan of Action on Ageing. In 1991 the United Nations Principles for Older Persons was adopted and 1999 was declared the International Year of Older Persons.

These international initiatives were undertaken while the phenomenon of population ageing was largely concentrated in the industrially developed countries. By the time of the Second World Assembly on Ageing held in Madrid in 2002, ageing had begun to occur in developing countries. This came about because many developing countries had experienced a rapid “demographic transition” to low mortality and fertility without necessarily achieving the level of economic development that was previously thought necessary to bring the transition about. The demographic transition became partially detached from the economy due to the central role of government policies and programmes somewhat independently of the level of development.

As a result of the appearance of population ageing in less developed countries (LDCs), the Second World Assembly on Ageing (2002) selected “Ageing and Development” as its first “priority direction”. While many of the issues raised under this priority are also relevant to the more developed countries (MDCs), the socio-economic context of LDCs raises a number of issues that are unique to them. Two examples can be used to illustrate this. First, in LDCs many people are becoming old whilst still illiterate and innumerate. Second, most of the elderly in the LDCs have spent their working lives in the urban informal sector or in rural village economies. This contrasts with the situation in MDCs where literacy is universal—even among the old—and the majority of the elderly are eligible for contributory or non-contributory pension plans and other forms of old age social security. It follows that the challenges facing developing countries undergoing population ageing are more daunting than in the MDCs, even though conceptually similar.

The overall aim of the Madrid International Plan of Action on Ageing 2002 (MIPAA) is to “...ensure that persons everywhere are able to age with security and dignity and to continue to participate in their societies as citizens with full rights”. To achieve this, the Plan of Action identifies three priority directions:

- I. Older persons and development
- II. Advancing health and well-being into old age
- III. Ensuring enabling and supporting environments

Under each of these priority directions a set of objectives is identified along with recommended actions that governments can take. The following section notes those objectives and actions of particular relevance to the Pacific Islands.

## **I: Older persons and development**

At the highest level, the main policy recommendation is that the issue of ageing should be incorporated within the social and economic policies, strategies and actions of countries, including poverty reductions strategies and plans. Older persons should be full participants in development processes and share in its benefits. Public policy should focus on the elimination of the barriers that prevent older persons from participating in social, cultural and economic activities. Given that ageing is occurring at a rapid rate in some countries, it follows that the contribution of the older population to development will increase in the future and impediments to their participation should be removed to the maximum extent possible.

### **I (a) Enhanced recognition of the social, cultural, economic and political contribution of older persons.**

Governments can undertake a range of actions to achieve this objective, including measures to encourage volunteering by the elderly and advocating among employers on the benefits and advantages of employing older persons.

### **I (b) Participation of older persons in decision-making at all levels.**

Among other actions to achieve this, governments can encourage and facilitate the formation of organizations of older persons and make it possible for these organizations to represent the older population in key decision-making bodies.

### **I (c) Employment opportunities for all older persons who want to work and are able to do so productively.**

In rural settings in which most production is related to subsistence this objective may not be difficult to achieve. In the Pacific, subsistence production generally carries on well into old age, although the nature of the work changes according to physical capacity. Given Pacific land-tenure systems, the old are usually the landowners and make their own decisions as to what work to do and when. In urban setting, however, the situation is different. In particular, labour markets determine who can work and the terms and conditions of the work. However, governments can advocate for the use of older workers by employers and facilitate the self-employment of older workers, for example by providing credit for small-scale enterprise. Policies should also aim to increase the labour force participation rates of older women, who tend to suffer most from discrimination in the labour force. Introducing more flexible retirement policies that eliminate disincentives to work beyond the statutory retirement age would be useful for those who wish to continue working.

### **I (d) Equality of opportunity throughout life with respect to continuing education, training and retraining as well as vocational guidance and placement services.**

At the basic level, many elderly need literacy and numeracy training. Others need training in computer use given the current importance of IT. In the Pacific, vocational training is mainly focussed on youth, as might be expected given the still high proportion of youth in the population. However, improving adult literacy now would ensure that fewer persons will be illiterate or innumerate on reaching old age. Without literacy other forms of training cannot occur.

Older persons may be effective teachers, trainers and volunteers and their life-long experience can be utilized to much greater effect than is often the case. Policy measures can be taken to mobilize the expertise of older people to enable them to participate as mentors, mediators and advisers. Volunteering is an effective means to do this where the older persons are not lacking basic income but where their potential is not being utilized.

### **I (e) Reduction of poverty among older persons**

A core objective of the MIPAA 2002 is the reduction of poverty among older persons. In spite of the emphasis placed on poverty eradication in current international frameworks (such as the MDGs), poverty

among the elderly receives insufficient attention. Elderly women are particularly vulnerable to poverty because of their lower educational achievement and more limited labour force experience. The feminization of poverty is a particular risk in the case of the elderly. The analysis of poverty using HIES and similar surveys should ensure that the poverty status of female-headed households is assessed by age as well as geographical region so as to ensure that programmes to reduce poverty are appropriately focussed.

### **I (f) Promotion of programmes to enable all workers to acquire basic social protection/ social security, including where applicable pensions, disability insurance and health benefits**

In the long run, the prevention of poverty in old age requires social security programmes. Thus, a key policy objective of the MIPAA 2002 is the development and implementation of policies aimed at ensuring that all persons have adequate economic and social protection in old age—including the development of innovative social security programmes for persons working in the informal sector. In the Pacific, most countries have pension or superannuation schemes for public servants and private sector workers but rural village workers and urban informal sector workers are generally not covered. Some countries pay social security payments to the elderly while others provide assistance to the elderly who are destitute. A review of social protection/social security systems is needed—particularly in those countries that are ageing rapidly. A central issue is how to provide coverage to the self-employed and informal sector workers and the rural village population.

## **II: Advancing Health and well-being into old age**

Health issues are at the forefront of concerns about ageing. Good health is a vital individual asset. There is no doubt that ageing increases the risk of poor health and disability. There can often be a large discrepancy between life expectancy and life expectancy adjusted for the number of years spent sick or disabled.<sup>18</sup> There is a wide range of possible actions that governments can take to prevent ill health in older ages, but individual responsibility certainly plays a part.

### **II (a) to reduce the effect of factors that increase the risk of disease and consequently potential dependence in older age.**

A major objective under this heading is the development of a wide range of policies to prevent ill-health among older persons. Actions to be undertaken include the promotion of healthy lifestyles, which implies the reduction of known risk factors such as lack of exercise, unhealthy diets, alcohol consumption and tobacco use that contribute to ill health in later life. The elderly also need access to sufficient food and adequate nutrition.

### **II (b) Ensuring that the old have universal and equal access to health care services.**

While this is a major challenge in urban areas, it is exceptionally difficult to achieve in the remote outer islands of the Pacific, which are burdened by poor transport and communications as well as small populations. The small scale of these islands limits the scope of economic development as well as the range of services that can be provided locally. The absence of the types of health care services that the old require is likely to provide an additional incentive to out-migration leading to ever-greater concentration of population in urban areas. When these populations were young, migration was driven by the education needs of young people; with ageing, the needs of the elderly will possibly become the main incentive. Strengthening of

18 Two concepts attempt to capture this phenomenon: (1) YLD refers to the number of years lived with a disability; (2) DALYs refer to the sum of the years of potential life lost due to premature mortality and the years of life lost due to disability or ill health.

primary health care to address the needs of the elderly would go some way towards reducing the incentive to migrate in order to access services.

The reorientation of health services toward the needs of the elderly will require expanded educational opportunities in gerontology and geriatrics for health professionals. Training needs include a focus on mental health. In the Pacific, where the family will continue to be the main provider of residential care for the elderly for some time to come, education programmes focussed on family care providers are also necessary in order to provide care-givers with the information they need to be effective and to avoid unnecessary institutionalization.

Addressing the needs of the disabled will be a particular challenge in the Pacific Islands. Aside from the non-independent territories, few Pacific countries have sufficient specialists to serve current needs. Surgeons, heart specialists, urologists, ENT specialist are all in short supply, in part due to the emigration of medical personnel and in part because of the lack of supporting institutions and the relatively low salaries on offer. These challenges are difficult to address in the Pacific Islands given that economic growth has been extremely slow and government revenues have stagnated.

### **III: Ensuring enabling and supportive environments**

Governments at all levels have a particular role to play in addressing issues of the “living environment” in which the elderly find themselves. First and foremost is the issue of appropriate and affordable housing.

#### **III (a) “Ageing in place” in the community with due regard to individual preferences and affordable housing options.**

The underlying principle is that the elderly should be able to make the choice of living independently, living with family or in institutional care. The MIPAA 2002 urges governments to encourage “independent living” but acknowledges that this raises issues of mobility, including transport and the design of dwellings to suit those with impaired mobility or other disabilities. Urban spaces should be free of barriers to mobility and access.

Community care and “ageing in place” is the preferred policy for many governments and this approach is particularly suitable in the Pacific with its largely intact extended family system. But family caregivers may become overburdened in the absence of support and community care can be under-resourced. Consequently, a continuum of affordable care options is desirable. Family caregivers need access to information and training to better perform their role. In some contexts, older women are themselves caregivers for the oldest old or for grandchildren and therefore need appropriate support.

#### **III (b) Eliminate all forms of neglect, abuse and violence of older persons and create support services to address elder abuse**

The mistreatment of the elderly is present in many social contexts and takes various forms, including abuse, neglect and physical violence. Older women are particularly vulnerable to neglect and psychological abuse. There is some evidence that elderly persons tend to be seen as ‘soft targets’ by criminals and are thus more vulnerable to crime. Governments can raise public awareness of these problems and pass legislation to address the worst forms of elder abuse. Governments also have a major role to play in enhancing the public image of older persons and highlight their contribution to the economy, society and culture. Positive images of the elderly can help to reduce discrimination against them.

## **6.2 Implementation issues**

The Madrid International Plan of Action on Ageing, 2002 provides the broad framework of recommendations within which national governments, NGOs, civil society and other actors can address population ageing.

National governments have the primary responsibility of translating these global recommendations into national plans and strategies.

Formulating strategies to address population ageing is a new challenge for Pacific Island governments. Only two Pacific countries (Vanuatu and Federated States of Micronesia) attended the 2002 Second World Assembly on Ageing that adopted the International Plan of Action, and these countries are not among those that are ageing most rapidly at present. There is clearly a need for individual countries to assess their ageing situation and to commence the process of developing strategies and action plans with the assistance and support of international agencies. Of the 11 Pacific countries that reported their population policies to the United Nations in 2007, seven did not respond to the question on ageing while the remaining five described ageing as a “minor concern”, including one that is among the fastest ageing countries in the Pacific.<sup>19</sup>

A United Nations General Assembly resolution in 1995 called on the UN Regional Commissions to take the lead in formulating action plans on ageing. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) organized a regional meeting in Macao (1998) and adopted the “Macao Declaration and Plan of Action on Ageing” (MPA). UNESCAP subsequently organized a regional seminar in Shanghai (2002) which formulated a strategy for the implementation of both the MPA and MIPAA. The Shanghai Implementation Strategy (SIS) reiterates the main policy goals and strategies elaborated in the MIPAA and the MPA and recommends actions that governments should undertake to achieve these goals, including:

- Establish a comprehensive and systematic framework for gathering data and information and undertaking research to identify the circumstances and needs of older persons as well as policy options;
- Encourage the use of the Research Agenda on Ageing for the Twenty-first Century endorsed by the Valencia Forum 2002.
- Enhance the participation of NGOs, older persons' associations and other sectors of civil society in the implementation of the regional and international plans of action on ageing;
- Establish indicators to measure the impact of strategies to assist Governments and other national actors in the implementation process;
- Develop, in those countries that do not yet have a national policy or plan of action on ageing, measures that would allow a systematic review of the implementation of their commitments on ageing.

While the involvement of Pacific Island countries in formulating the Macao Declaration and Plan of Action on Ageing and the Shanghai Implementation Strategy appears to have been minimal, half of all countries have established “National Coordinating Bodies” on ageing, as recommended by the Macao Declaration. These countries include: Cook Islands, Fiji, Kiribati, Marshall Islands, Palau, Papua New Guinea, Samoa, Tonga, Vanuatu and Guam. The majority of these bodies are governmental in nature and mostly located within Departments or Divisions of social welfare. There is no evidence that any Pacific Island country has formulated a national action plan on ageing, although Papua New Guinea has reported that a policy framework was established in 2000 and the policy itself is under development. Similarly, only one country (Marshall Islands) has conducted a survey of programmes available for the elderly. There is no evidence to suggest that any Pacific Island country has prepared or commenced a research programme on ageing issues.

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<sup>19</sup> United Nations Department of Economic and Social Affairs (2008).

## 7 Conclusions and recommendations

### 7.1 Conclusions

- As in other world regions, population ageing is occurring in the Pacific Islands and will accelerate in the coming decades. Current trends in fertility and mortality are unlikely to change significantly in the near future, so ageing would appear to be inevitable and irreversible. International migration will contribute to ageing in Polynesia and Micronesia as the young emigrate and returnees are concentrated in the older ages.
- The pace of ageing varies widely between sub-regions and individual countries. Ageing is occurring most rapidly and is most advanced in the small countries of Polynesia and Micronesia. The countries that are projected to have the oldest populations by 2050 are those that are linked to more developed countries on the Pacific rim, either as dependent territories or through close migration and socio-economic relationships. The pace of ageing is much lower in Melanesia with the exception of Fiji and New Caledonia.
- By 2050, the number of persons aged 60 and over in the Pacific is projected to increase from 376,000 in 2000 to 2.25 million by 2050. The oldest old (80 and over) is presently the fastest growing age group and will increase from around 19,000 in 2000 to 270,000 by 2050—a fourteen-fold increase.
- While the majority of elderly in the Pacific will be women, the feminization of aging is unlikely to reach the levels of the More Developed Countries. Among the oldest old, however, over 60 percent are likely to be women by 2050.
- Ageing is likely to be more pronounced in rural than urban areas, but insufficient analysis has been done at the country level to confirm whether this is generally true or applies to selected countries only.
- The poverty status of the elderly in the Pacific has not been studied in depth but it is likely that the older population living in rural and outer island areas is more likely to suffer hardship than their urban counterparts—in part because of their greater vulnerability to natural disasters.
- The extended family remains largely intact across the Pacific Islands and will be the main provider of care for the elderly for the foreseeable future. But the social solidarity of the family is weakening under the influence of urbanization, internal and external migration and changing attitudes and values. Family support will need to be supplemented by stronger government programmes in the future.
- Traditional Pacific cultures accorded the elderly much prestige and respect and this remains largely true today. This ensures that the older are unlikely to be mistreated or abused. However, family ties are weakening and the potential for abuse, neglect, or victimization from other crimes may be increasing.
- Formal social security schemes are not well developed in the Pacific outside those countries that

remain territories of more developed countries. Pension and superannuation schemes mainly cover public sector and formal private sector workers. Rural village workers and urban informal sector workers are largely uncovered by contributory schemes but may have access to government assistance if destitute.

- The transferability of superannuation benefits to the Pacific Islands for persons who have spent their working lives as residents of New Zealand or Australia provides a security floor for some island residents. This and other Island-metropolitan links need to be taken into account when assessing the extent of social protection in migration-oriented countries—particularly in Polynesia.
- The development of policies or strategies to address population ageing is at an early stage in the Pacific. Half of the countries in the region have established National Coordinating Bodies to address ageing issues but these do not appear to have been very active.

## 7.2 Recommendations

While the priorities outlined in the Shanghai Implementation Strategy remain valid and relevant for the Pacific, these priorities should be re-ordered to reflect the current situation in the Pacific Islands region—as follows:

- National Coordinating Bodies should be set-up in those countries that presently lack them. International agencies, particularly ESCAP, should stand ready to provide the financial and technical assistance that countries may require.
- In those countries that have National Coordinating Bodies, a review of the structure, activities and effectiveness of these bodies should be undertaken. International agencies can also provide support to facilitate these reviews.
- National and international efforts need to be undertaken to greatly expand the knowledge base on population ageing and its implications in individual Pacific Island countries and across the region and its sub-regions. The Research Agenda on Ageing in the Twenty-first century endorsed in Valencia in 2002 can be used to identify the key issues on which research is required.
- Research is urgently needed to assess the poverty status of the elderly in the Pacific Islands. Recent DHS and HIES may provide scope for further analysis. Further analysis of disability data from censuses and surveys is also recommended.
- A knowledge sharing network needs to be established linking all Pacific countries regardless of political status. Given the variations across the region in population ageing, those countries in the early stages can share valuable lessons with those that will age later. NGOs, civil society, international agencies should also participate in the network.
- A public information programme is required to raise awareness of ageing trends and their implications among both service providers and the general public.
- Conduct a comprehensive review of the national infrastructure and enabling environment for addressing the needs of the older population and identify the key weaknesses.
- Review the regional arrangements for monitoring the implementation of the Madrid International Plan of Action on Ageing and the Macao Programme of Action for the Asia-Pacific region.

### 7.3 The way forward

The primary responsibility for developing national action plans and strategies to address population ageing lies with national governments, but international agencies, NGOs, civil society organizations can all play a part in supporting government efforts. Within the UN system, responsibility for supporting the implementation of the Madrid International Plan of Action on Ageing 2002 has been given to the regional commissions. In the Pacific this role is played by UNESCAP. The UNFPA also has a major role to play by virtue of the Plan of Action of the International Conference on Population and Development (1994) which includes actions to address population ageing. UNFPA also has an important role to play in producing in-depth situational analyses through the analysis and dissemination of data on the elderly from censuses and surveys. ESCAP and UNFPA should work together to improve the knowledge base on ageing in the Pacific. WHO has an important role to play with regard to health care issues as well as the ILO with regard to its expertise in the area of social protection. UNDP's expertise and mandate in the area of poverty reduction is important in contributing to a multi-sector approach to ageing issues.

Given the relative inattention given to ageing issues by Pacific Island governments, it is important to promote awareness of the Madrid International Plan of Action on ageing among island governments and relevant NGOs.

Inter-governmental cooperation between Pacific Island governments should be fostered, particularly through knowledge-sharing. Given the variation across the region in the pace and timing of ageing, those countries that started the process earlier can provide valuable lessons that can be shared with those countries that will age later. Knowledge sharing should also extend beyond the Pacific Island region to the wider Asia-Pacific region. Many Asian countries retain strong extended family structures as found in the Pacific and face similar challenges in balancing home and institutional care.

The other countries that make up the greater Oceania area, namely Australia and New Zealand, are also important because their populations have been ageing for some time and both countries have put in place national strategies to address ageing issues that can provide lessons for Pacific countries.

# Annex I: Definitions of key ageing indicators

## Ageing Index

The ageing index is the number of persons aged 60 and over per 100 persons aged 0-14.

## Dependency ratio

The total dependency ratio is the number of persons aged under 15 plus persons aged 65 and over per 100 persons aged 15 to 64. It is the sum of the youth dependency ratio and the old age dependency ratio.

The **youth dependency ratio** is the population 0-14 years per 100 persons 15-64 years.

The **old-age dependency ratio** is the number of persons aged 65 years and over per 100 persons aged 15 to 64 years.

## Life expectancy

**Life expectancy** at a specific age is the average number of additional years a person of that age could expect to live if current mortality levels observed for ages above that age were to continue for the rest of that person's life. In particular, life expectancy at birth is the average number of years a newborn would live if current age-specific mortality rates were to continue.

## Median age

The **median age** is the age that divides a population into two groups of the same size, such that half the population is younger than this age, and the other half is older.

## Parent support ratio

The **parent support ratio** is the number of persons aged 85 years or over per 100 persons aged 50-64. (In this report the parent support ratio is calculated as the number of persons 80 years or over per 100 persons aged 45-59.)

## Potential support ratio

The potential support ratio is the number of persons aged 15 to 64 per every person aged 65 or over.

## Sex ratio

The **sex ratio** is the number of males per one hundred females in a population. The sex ratio may be calculated for a total population or for a specific age group.

## Survival rate

The **survival rate** to a specific age X the proportion of newborns in a given year that would be expected to survive at age X if current mortality trends were to continue for at least the next X years. Survival rates are derived from the life table, which is an analytical procedure designed to produce life expectancy and other measures of survivorship, based on prevailing age-specific death rates.

## Total fertility rate

The **total fertility rate** is the average number of children a woman would bear over the course of her lifetime if current age-specific fertility rates remained constant throughout her childbearing years (normally between the ages of 15 and 49). The current total fertility rate is an indicator of the level of fertility at a given time.

## Annex II: UNFPA Population projections: A note on Methodology

The population projections used in this report have been obtained from two sources. In Chapters 2-4, which provide an overview of aging in world regions—including Melanesia, Micronesia and Polynesia—projected population data and indicators have been taken from the 2004 revision of the official UN population projections prepared by the Population Division of the United Nations Department of Economic and Social Affairs (UNDESA). The actual source publication is the report *World Population Ageing 2007* (UNDESA 2007). In chapter 5, which describes the expected patterns of ageing in individual Pacific Island countries, a separate set of projections was carried out by the UNFPA Sub-regional Office, Suva, Fiji for the purposes of this study. As explained in the text, UNDESA projections do not provide detailed demographic data for the countries or territories of the Pacific with populations under 100,000. The total populations of these countries have been included in the sub-regional totals for Melanesia, Micronesia and Polynesia, but it is not possible to obtain country-specific figures. Furthermore, UNDESA projections do not provide totals for the sum of the sub-regions because these are subsumed within the larger area known as Oceania, which includes the sub-regions plus Australia and New Zealand.

To obtain country-specific data, and Pacific-wide totals, the methodology employed was to extend the population projections carried out by the Secretariat of the Pacific Community (SPC), Statistics and Demography Programme, from 2030 to 2050. The base populations, fertility, mortality and migration inputs and assumptions used in SPC's 2005-2030 projections were kindly supplied to the author.<sup>20</sup> The projections were subsequently re-run from 2000 to 2050 so as to match in time the UNDESA projections for the larger countries and the sub-regions. The computer programme employed was DEMPROJ, a sub-set of the Spectrum package supplied by The Futures Group.

Some adjustments were required to run the projections, as follows:

- (1) In those countries for which a year 2000 base population was not available from SPC, the 2000 population by age and sex was estimated by interpolation.
- (2) Where more recent input data was available than used by SPC in its 2008 update of projection inputs (such as fertility data from recent Demographic and Health surveys) these data were used as appropriate.

The broad assumptions employed by SPC in projecting Pacific populations to 2030 were employed in these projections. In the case of fertility, SPC had estimated a year in which it was assumed that the TFR would reach the replacement level of 2.2. In some cases this date was well beyond the end year of 2030. In these cases, the present set of projection retained this assumption and set the TFR as constant at replacement level up to 2050. In those cases where TFR had already fallen below replacement, this level (for example 1.8) was projected to continue through to 2050 without further change.

A similar approach was adopted for the mortality assumptions. Where life expectancy had reached a high level by 2030 only gradual change to 2050 was permitted up to a maximum life expectancy at birth of 80 years. This is the maximum limit accepted by the DEMPROJ programme but it is also a realistic maximum for Pacific conditions.

In the case of international migration, the extension of the SPC's assumptions up to 2030 through to 2050 would have been unrealistic in some countries. In the Cook Islands, for example, constant rates of emigration through to 2050 would result in severe depopulation of the country. It was therefore assumed that net migration would trend downwards in those countries that are already heavily affected by migration.

<sup>20</sup> The cooperation of SPC is gratefully acknowledged. The use of the projection input provided by SPC and the subsequent modification of these inputs is the responsibility of the author alone, not SPC

Some further adjustment of the inputs and assumptions was made after consistency checks were made between the SPC's own projection results and the results obtained from the UNFPA projections. There is broad agreement between the projections carried out for the present study and those produced by SPC where the dates coincide. There is also broad general agreement with the UNDESA's projections for those countries for which the UNDESA Population Division has done projections but the results are not necessarily identical in all respects.

It should be noted that for these projections, as is the case for SPC's projections, only one set of assumptions has been employed.

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