POPULATION AGEING FACT SHEET

OVERVIEW

Population ageing results from increasing life expectancy and declining fertility. Throughout the last century higher living standards, advances in health, improved education and nutrition, as well as better welfare, have all contributed to population ageing.

Governments throughout the world are grappling with how best to meet the challenges of an ageing demographic. Policy responses include: Addressing low birth or migration rates, encouraging older people to stay in the workforce longer, increasing productivity and savings, designing more age-friendly cities, and reducing entitlements to rein in fiscal costs.

This fact sheet aims to provide some key information about population ageing in Australia and the world.

POPULATION AGEING IS

Unprecedented: The rate of population ageing in this century will be greater than any other. [1]

Pervasive: Japan, Germany, and Italy are currently the only countries where more than 20% of the population is aged 65+, but the proportion of older people is increasing almost everywhere. By 2050 there are expected to be 83 countries with over 20% of their population aged 65+.[2]

Enduring: Global fertility and mortality rates are expected to keep declining for some time, so we are unlikely to return to the younger population age structures of the past.

Profound: Globally, the number of people aged 65+ is expected to triple between 2010 and 2050 to 1.5 billion, with significant implications for social and economic activity.

COUNTRIES WHERE MORE THAN ONE FIFTH OF THE POPULATION WAS 65 OR OVER IN 2010
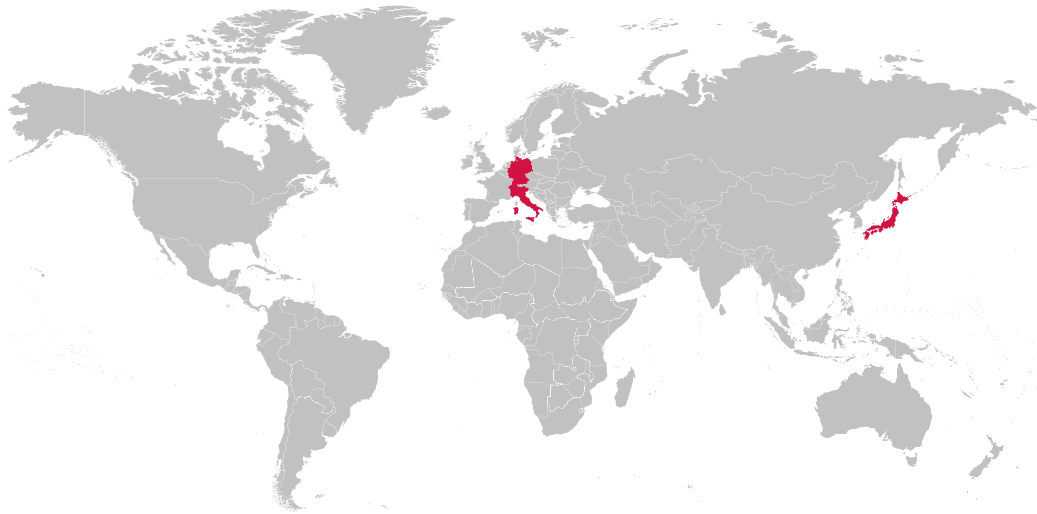
COUNTRIES WHERE MORE THAN ONE FIFTH OF THE POPULATION IS EXPECTED TO BE 65 OR OVER IN 2050
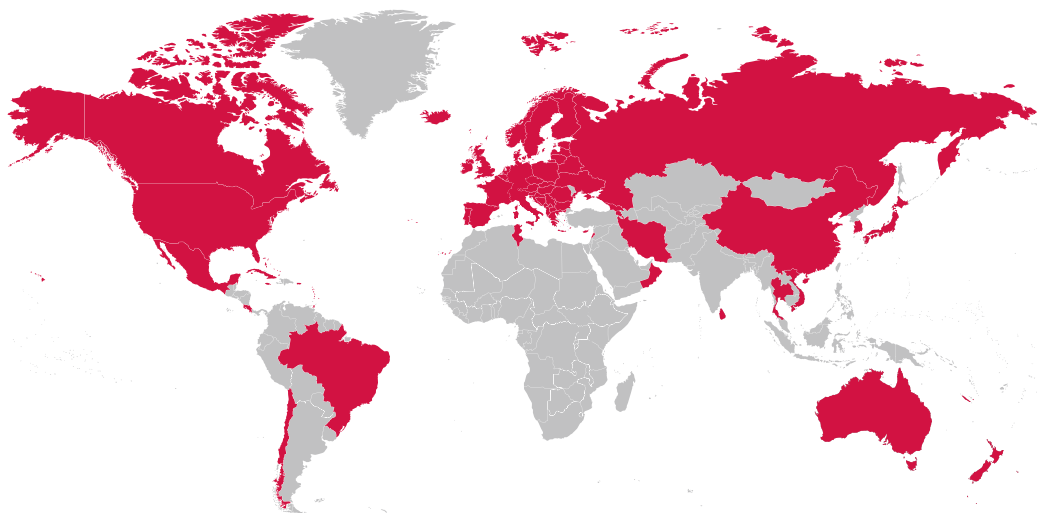
KEY IMPACTS

An older population supported by fewer people of working-age presents a range of economic and social issues, including:

- Slower economic growth given fewer people participate in economic activity
- Increases in health costs as a result of higher utilisation of health services as the population ages and higher expectations of health care resulting from technological advances
- Unsustainable pension schemes as the ratio of contributors to beneficiaries decreases
- Increasing pressure on aged care systems and on family support structures
- Inadequate formal safety nets and legal protection in developing countries as informal support is eroded

KEY RESPONSES

There are a number of responses available to both the government and the private sector to offset the impact of population ageing, including:

- Investing in capital and productivity of the smaller workforce
- Increasing migration or implementing an active population policy by encouraging higher fertility
- Encouraging and enabling older people to work longer
- Containing future pension cost via greater private saving and realistic pension promises
- Containing future health cost through reform at the market level and preventative health at an individual level
- Designing cities that are age-friendly

Measuring population ageing: Changes in the age structure of the population can be measured in different ways: The median age, population pyramids, proportions of older people in the population, and the dependency and support ratios.

Demographic transition: Demographic transition is the process by which a population moves from a situation of high fertility and high mortality to a situation of low fertility and low mortality. The theory suggests that mortality falls first followed later by the fall in fertility. Population ageing is a result of the later stages of demographic transition, that is, when fertility falls. The impact of falling mortality on population ageing is small relative to the impact of falling fertility.

Dependency ratio: The number of people of traditional retirement age (aged 65 and above) for every 100 people who are of traditional working-age (aged 15–64). Sometimes referred to as the old-age dependency ratio distinguishing it from child and total dependency. In 2010, Japan had the highest dependency ratio in the world of 36.

Support ratio: The number of people of traditional working-age (aged 15–64) for every person who is of traditional retirement age (aged 65 and above). It is essentially the inverse of the dependency ratio—the lower the support ratio the older the population age structure. Australia's support ratio is expected to fall from 5 in 2010 to 2.7 by 2050.
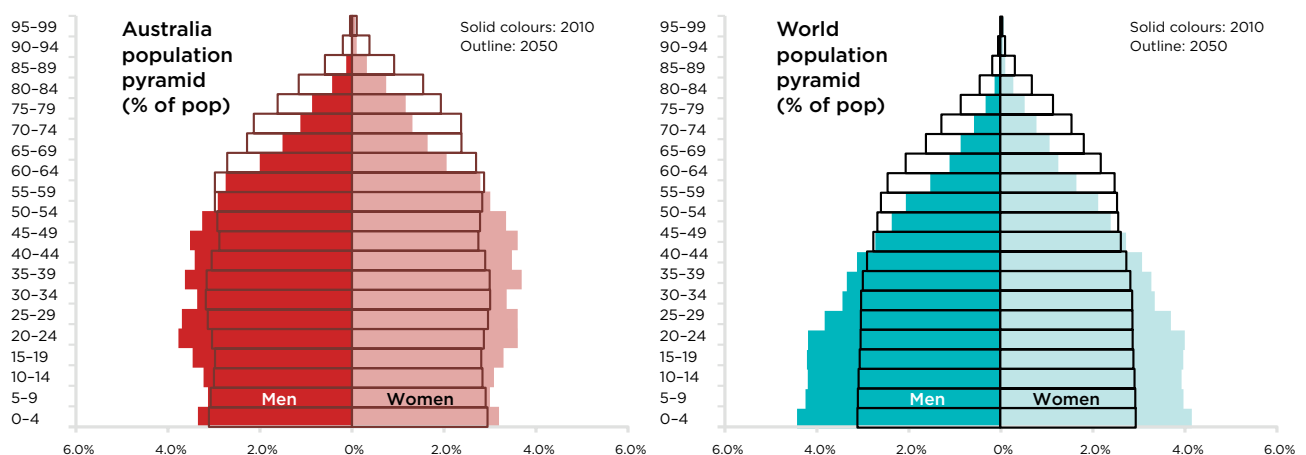
Life expectancy / longevity: Often used interchangeably, but longevity more often refers to individual or maximum survival whereas life expectancy is an average for a population. Life expectancy can be estimated at birth or at a given age on a period or cohort basis. Period life expectancy, which is applied to a group of people born in the same year, assumes that age-specific mortality rates in a given year will remain constant in successive years across time.

Mid-life longevity: Refers to changes in survival probability or life expectancy at later ages (e.g., 50 or 60). Historic improvements in life expectancy have been mostly due to lower mortality at birth. In the developed world more recent improvements have been mostly due to lower mortality at later ages.

Fertility: Commonly refers to Total Fertility Rate (TFR). TFR in a given year represents the average number of children that women would have in a lifetime if they experienced that year's age-specific fertility rates.

Demographic dividend: The economic advantage of a large working-age population, relative to old and young dependent cohorts, in the first stages of the demographic transition.

The increasingly older population age-structure is what we refer to as population ageing

Australia population pyramid (% of pop)
Solid colours: 2010
Outline: 2050
Men / Women

World population pyramid (% of pop)
Solid colours: 2010
Outline: 2050
Men / Women

AUSTRALIA

DEVELOPED WORLD/ OCED COUNTRIES

1.9 the current average number of children per woman (total fertility rate) in Australia, down from 3.3 in the 1950s.

1.7 the current average number of children per woman (total fertility rate) in the world's more developed regions[3], down from 2.8 in the 1950s.

89 the projected Australian female life expectancy at birth in 2050, up from 83 in 2010 (period estimates).

84 the projected Australian male life expectancy at birth in 2050, up from 79 in 2010 (period estimates).

86 the projected female life expectancy at birth in the world's more developed regions in 2050, up from 81 in 2010 (period estimates).

80 the projected male life expectancy at birth in the world's more developed regions in 2050, up from 74 in 2010 (period estimates).

29% the increase in average life expectancy at age 65 in the three decades to 2009 in Australia. Recent gains in life expectancy have been in later life, taking families, governments, and markets, by surprise.

39% the projected dependency ratio (those aged 65+ as a proportion of those aged 15–64) in Australia in 2050, up from 20% in 2010.

25% the increase in average life expectancy at age 65 in 28 OECD countries in the three decades to 2009.[4]

45% the projected dependency ratio (those aged 65+ as a proportion of those aged 15–64) in the world's more developed regions in 2050, up from 24% in 2010.

7.2m the estimated number of Australians 65+ in 2050, up from 3m (or 2.5 times as many) in 2010. The Australian working-age population (15–64) is expected to be only 1.2 times as large in 2050 as it was in 2010, at about 19m.

1.1m the estimated number of Australians aged 85+ in 2050, up from 0.4m or around four times as many as in 2010. 53% of Australians aged 85+ need help or assistance in one or more of the three core activity areas of daily living.[5]

340m the estimated number of people aged 65+ in the world's more developed regions in 2050, up from 200m in 2010. The working-age population (15–64) in the regions is expected to drop by 9% between 2010 and 2050 to 760m.

45m the estimated number of people aged 85+ in the world's more developed regions in 2050, up from 24m in 2010. The global population of those aged 85+ is expected to increase to 150m by 2050 from 42m in 2010.

10.3% the projected public expenditure (states and commonwealth) on health in 2050 as a proportion of GDP, up from 6% in 2010.[6] Australian Treasury projects the cost (excl. states) to be 7.1% of GDP, up from 4%, with 40% of the increase due to demographic change.[7]

4.9% the projected Australian Government expenditure on the Age Pension and Disability Support Pension in 2050 as a proportion of GDP, up from 3.6% in 2010.[8]

10.9% the projected average public expenditure on health in 33 OECD countries in 2050 as a proportion of GDP, up from 6.5% in 2010.[6]

11.4% the projected average cost of pensions in 32 OECD countries in 2050 as a proportion of GDP, up from 8.4% in 2010.[8]

1.8% the projected Australian Government expenditure on long term (aged) care in 2050 as a proportion of GDP, up from 0.8% in 2010.[7]

60% the projected labour force participation rate for all adults 15+ in Australia in 2055–60 (based on no policy changes), down from 65% in 2010. Greater proportions of older people decrease the total participation rate.[9]
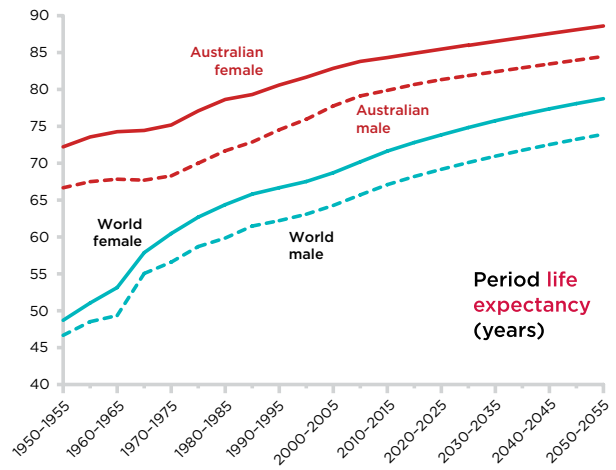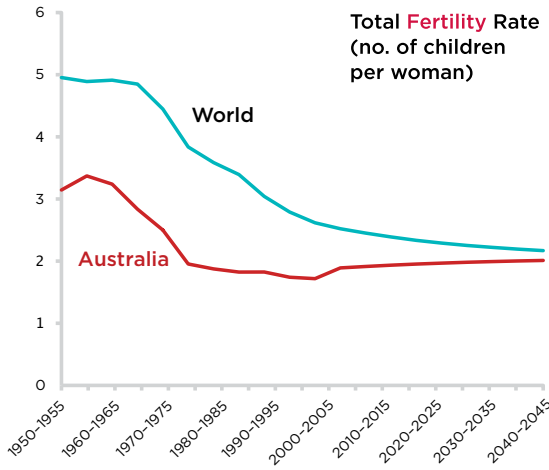
2.4–3.3% the projected average public expenditure on long term (aged) care in 30 OECD countries in 2050 under an optimistic and pessimistic scenario, up from 1.1% in 2005.[10]
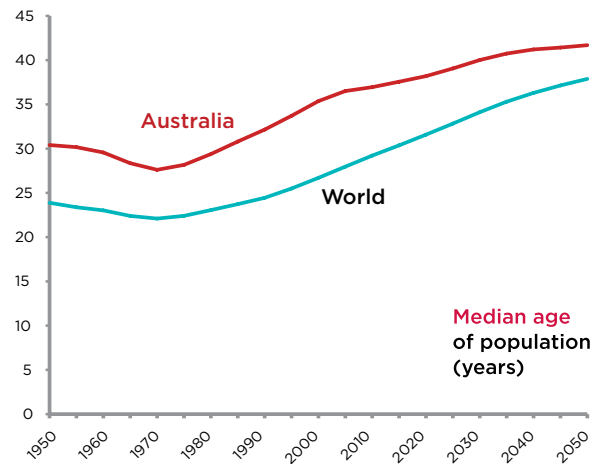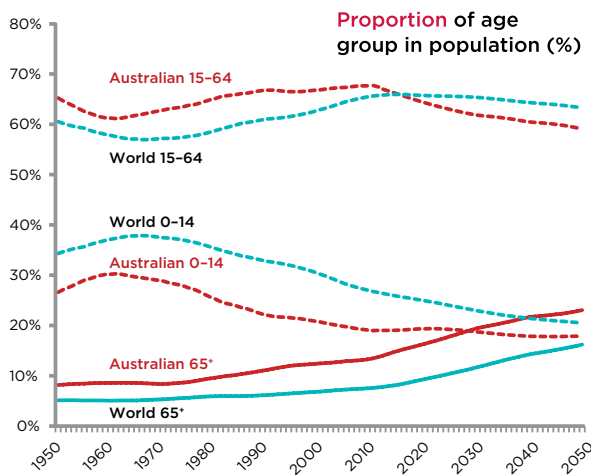
55% the projected labour force participation rate for all adults 15+ in 34 OECD countries in 2055–60 (based on no policy changes), down from 60% in 2005–2010.[10]

Historical and projected trends show declining **fertility** and increasing **life expectancy**

Total **Fertility** Rate (no. of children per woman)

World

Australia

Australian female

Australian male

World female

World male

Period **life expectancy** (years)

This means a greater **proportion** of older people in the population and higher **median ages**

Proportion of age group in population (%)

Australian 15–64

World 15–64

World 0–14

Australian 0–14

Australian 65⁺

World 65⁺

Australia

World

Median age of population (years)

Based at the University of New South Wales (UNSW) with nodes at the Australian National University (ANU) and the University of Sydney, the ARC Centre of Excellence in Population Ageing Research (CEPAR) is a unique collaboration bringing together academia, government and industry to address one of the major social challenges of the twenty first century.

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NOTES AND REFERENCES

Population ageing was first described in these terms in United Nations (2002) 'World Population Ageing: 1950–2050'
Unless otherwise stated, figures quoted and charts constructed are based on CEPAR calculations using data from United Nations (2011) 'World Population Prospects, the 2010 Revision'
'More developed regions' denotes the UN definition, which includes all Northern American and European countries (including Russia), Japan, Australia and New Zealand
CEPAR calculations based on data from Human Mortality Database (2013)
Australian Bureau of Statistics (2011) 'Census table builder, AGEP by ASSNP'
IMF (2010) 'Macro-Fiscal Implications of Health Care Reform in Advanced and Emerging Economies'; See also figures in OECD report in footnote 8, which project public health costs in Australia of 7.9–9.7% of GDP in 2050
Australian Commonwealth (2010) 'Intergenerational Report'
OECD (2011) 'Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries'
OECD (2012) 'Looking to 2060: Long-term global growth prospects'
OECD (2010) 'OECD Health Policy Studies: Value for Money in Health Spending'