



Using the United Nations' Madrid indicators to better understand our ageing population





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# Using the United Nations' Madrid indicators to better understand our ageing population

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## Auditor-General's overview

The structure of New Zealand's population is changing in different ways, but the main change is that it is ageing. In 2006, there were two children for every older person. In 2023 – only 10 years from now – we could have more people aged 65 or older than we have children under 15.

Some regions will have older populations and age more quickly than others. When an increasing proportion of the population is on a fixed income, local authorities with the oldest populations are more likely to be the first to face challenges in paying for community services and maintaining, repairing, and replacing infrastructure.

One way or another, many public resources will be committed to responding to our ageing population. This is important for everybody. We expect that governments will spend more on superannuation, healthcare, and social support care (such as home-based support services and aged residential care). Spending on other services might decrease. The Treasury has considered the effect of New Zealand's ageing population on the country's financial sustainability in its 2013 report *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*. My Office's report on the Treasury's Statement is available on our website: [www.oag.govt.nz](http://www.oag.govt.nz).

There are many uncertainties about the effects of a changing population structure on individuals and on society as a whole. Having the right kind of data available is one component in being prepared for the future. Accurate, relevant data can be used to identify improvements or adverse consequences as the result of changes in society and in government policy, and can help support accountable and transparent decision-making.

New Zealand is not alone in having an ageing population, and worldwide ageing has been a focus of the United Nations. We found an international benchmark in the indicators that the United Nations uses to assess progress in putting into effect the Madrid International Plan of Action on Ageing (the Madrid indicators).

Because a report on the Madrid indicators had not previously been brought together for New Zealand, we decided to examine whether the data for each of the indicators showed improvements for older people over time. We have published our findings for each indicator online as they became available.

I hope that this report will stimulate discussion and action among public entities, parliamentarians, and the public.

### **What the Madrid indicators showed**

My staff found that the data needed to report on most of the Madrid indicators was available and was mostly collected and reported by public entities. This means that public entities have, at least, a minimum set of demographic data and data about older people that they can use.

The Madrid indicators include instrumental indicators that we call “building blocks”. Most of the building blocks, such as policies and plans that address older people’s needs for transport and health, were in place. The rest of the Madrid indicators are outcome indicators and data for most of these was available.

Sometimes data can look useful until you try to use it. We wanted to identify whether older people’s circumstances had improved over time. If we were able to produce a profile of the older population, it would tell us something about the data, and the results might be used for future comparisons. In publishing our findings online, we were able to bring together data from a range of sources to produce a profile of older people’s circumstances. Although there have been many improvements over time, older people did not experience these improvements evenly. Women, Pākehā, and people on higher incomes often (but not always) benefited more than men, non-Pākehā, and people on lower incomes.

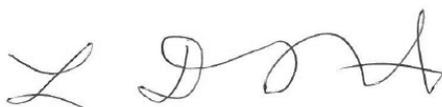
Some public entities had clearly given much thought to making their data accessible to audiences with less expertise in dealing with data. In this report, we identify the helpful data collection and reporting practices that we encountered. I encourage more public entities to adopt these practices where they can to improve accessibility and consistency. I agree with the Health Quality and Safety Commission, which told us that entities’ data collection and reporting practices should be helpful and responsive to public needs.

My staff found some common themes to do with collecting and reporting data that we would like public entities to consider. For example, it would help if public entities report data using consistent age groups, gave reasons for when data is updated, and considered how they might measure whether older people living in rural areas are disadvantaged in accessing public services.

### **The way we worked**

During this project, my staff progressively published the findings online to make the results available more quickly and to increase the transparency of our work. In some cases, we updated them when we got new information. I am interested in getting comments on this approach and whether we should do this more often.

I want to thank staff in the public entities that published data or gave it to my staff, and helped with interpreting it. I especially thank our main contacts and other staff from the Ministry of Health, Ministry of Social Development, and Statistics New Zealand, who worked on many of the indicators. Statistics New Zealand also provided thoughtful technical feedback on our draft report.



Lyn Provost  
Controller and Auditor-General

10 October 2013



# Glossary

**Mean** is the result of adding all the values in a set and dividing by the number of values in that set.

**Median** is the mid-point in a set of values – half the set are above the number and half the set are below the number.

**Older (men, women, people, or population)** means aged 65 years or older (65-plus), unless otherwise stated.

**Younger adults** means people aged between 15 and 64 years, unless otherwise stated.

**Younger people** means people aged up to 64 years, unless otherwise stated.



# Part 1

## Introduction

- 1.1 In this Part, we discuss:
- the Madrid indicators;
  - why we reported on the Madrid indicators;
  - the public entities involved; and
  - how we carried out our work.

### Preparing and addressing the Madrid indicators

- 1.2 In 2012, the United Nations Population Fund co-published a report on the progress made since 2002 in putting into effect the Madrid International Plan of Action on Ageing (the Madrid Plan).<sup>1</sup> The Madrid Plan set out to address the opportunities and challenges of ageing in the 21<sup>st</sup> century. A list of 50 demographic, outcome, and instrumental (building block) indicators (the Madrid indicators) was prepared to track progress in putting the Madrid Plan into effect. Appendix 1 lists the Madrid indicators.
- 1.3 In 2007, New Zealand published its mid-term report to the United Nations on progress meeting the Madrid Plan's objectives.<sup>2</sup> A detailed report considering each of the Madrid indicators, including statistics, was not part of New Zealand's report. Our project was the first to report on each of the Madrid indicators for New Zealand.

### Why we reported on the Madrid indicators

- 1.4 One way or another, a lot of public resources will be committed to responding to an ageing population. Governments are likely to spend more on superannuation, healthcare, and social support care, such as home-based support services and aged residential care. Therefore, this is an important topic for everybody, not only older people.
- 1.5 In our view, having the right kind of data is one component in producing good quality central and local government policy and services that respond to an ageing population. Data can be used to identify whether there have been improvements or adverse consequences over time. Data supports more accountable and transparent decision-making.
- 1.6 We looked for a way of seeing whether New Zealand's public entities had a set of data available to use to prepare for and respond to an ageing population.

1 United Nations Population Fund and HelpAge International (2012), *Ageing in the Twenty-First Century: A Celebration and A Challenge*, available at [www.unfpa.org/ageingreport](http://www.unfpa.org/ageingreport).

2 Office for Senior Citizens, Ministry of Social Development (2007), *Report from New Zealand/Aotearoa to the Commission for Social Development, United Nations, February 2007: Madrid International Plan of Action on Ageing*, available at [www.mfat.govt.nz](http://www.mfat.govt.nz).

We found an international benchmark in the Madrid indicators. Because the results for all the Madrid indicators had not previously been brought together, we decided to report on whether the results of the Madrid indicators showed improvements for older people over time. In theory, having building blocks should produce improvements.

- 1.7 We progressively published our findings online to make the results available more quickly and our work more transparent. We hope that people will use the links in the findings to explore the wide range of data that is publicly available.
- 1.8 We expect our work to answer some questions and raise others. We hope that this report will stimulate discussion among public entities, parliamentarians, and the public.

### **The public entities involved**

- 1.9 Reporting on the Madrid indicators requires collecting data from many public entities. We got some information from non-government organisations. Appendix 1 lists the organisations that held data for each indicator or were lead public entities for the topic.
- 1.10 This work differed from our customary performance audits because we did not audit the work of one or a group of public entities in a sector or progress in achieving the goals and objectives of a specific policy or programme. Instead, the Madrid indicators report on the cumulative effects of successive governments' policies and public entities' achievements over many years.

### **What this report does and does not do**

- 1.11 Appendix 2 gives more detail about how we analysed the data. In this Part of our report, we want to emphasise that we have reported only on what the Madrid indicators tell us about our ageing population and data collection and reporting practices – not what any other indicators might tell us.
- 1.12 We were pragmatic and flexible when public entities had data that was similar, but not identical, to a Madrid indicator. For example, we began by collecting data for people aged at least 60. We quickly changed to collecting data for people aged at least 65, because this age group is more commonly used to define older age in our country and data for this age group was easier to get.

- 1.13 We rounded numbers and percentages to the nearest whole number unless we had a good reason not to. Our findings for each indicator contain more detailed data, including the sources of data, and are available on our website at [www.oag.govt.nz/2013/ageing](http://www.oag.govt.nz/2013/ageing). We posted a few blogs at [blog.oag.govt.nz](http://blog.oag.govt.nz). We may publish more blogs in coming months.
- 1.14 Various data sets use different – and sometimes inconsistent – names to refer to ethnicities, including New Zealand European, Pākehā, and non-Māori. In this report, we use the term used in the source data.



## Part 2

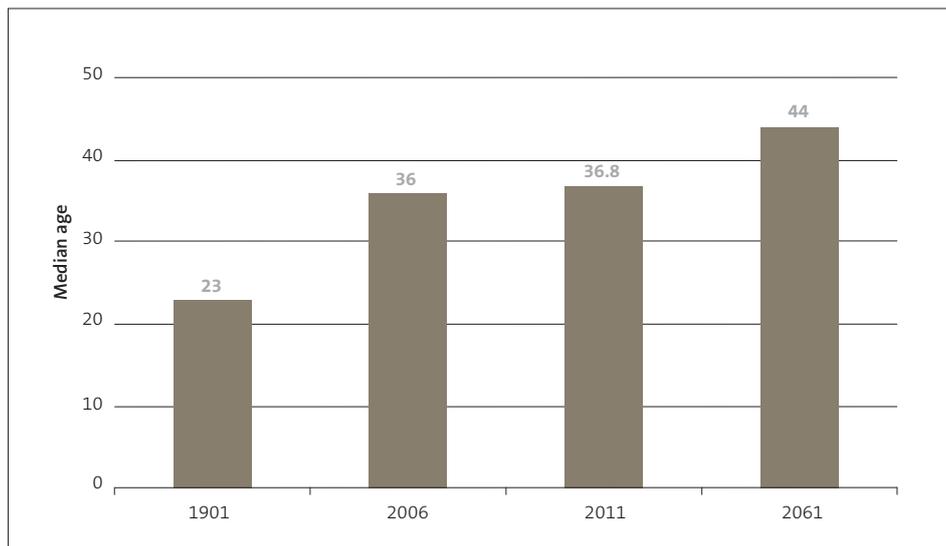
# Defining an ageing population

*The world has never experienced ageing on the scale we're about to live through.*

Simon Upton

- 2.1 In this Part, we explain what an ageing population is and compare New Zealand's median age with that of some other countries.
- 2.2 Looking at changes in the median age is an easy way of understanding how a population ages. Half the population is older and half the population is younger than the median age. A population is ageing when the median age is increasing. Figure 1 shows how the population has aged since 1901 and is projected to change by 2061.<sup>3</sup>

**Figure 1**  
Median ages in New Zealand, selected years from 1901 to 2061



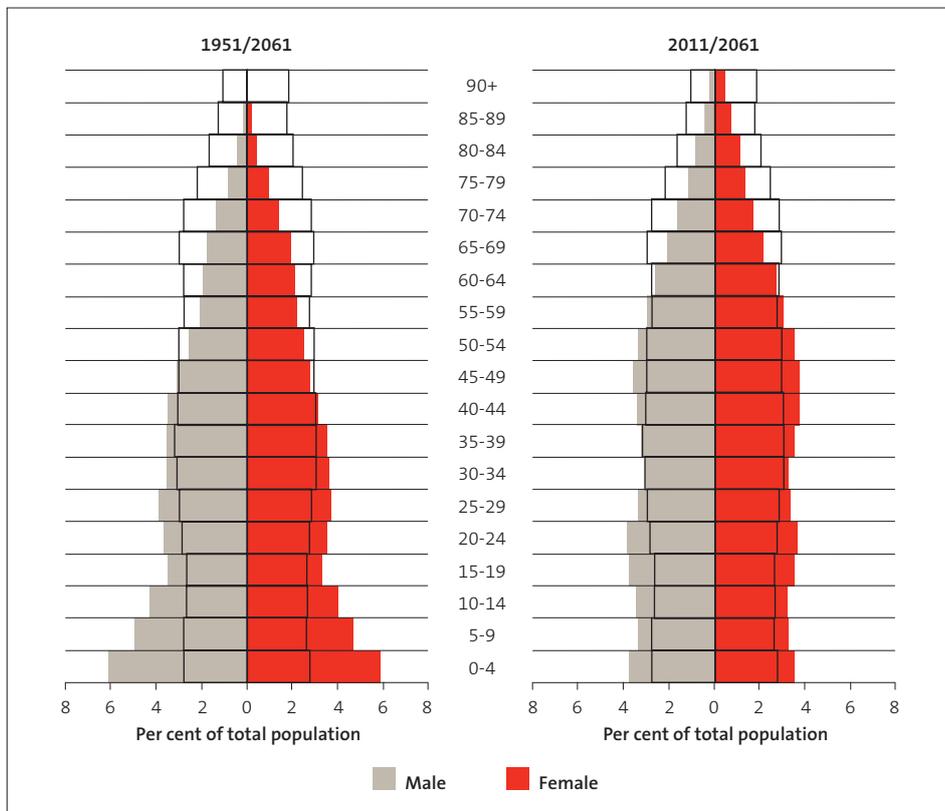
Source: Statistics New Zealand.

- 2.3 Low death rates (or increased life expectancy) and low birth rates are mainly responsible for ageing populations. Although life expectancy has increased in New Zealand, low birth rates have made a greater contribution to our ageing population.
- 2.4 Baby booms – large and small – affect the annual growth rates for different parts of the population. The rates differ from year to year but the general trend is the same – the proportion of people aged 0-39 years is decreasing and the proportion of people aged at least 40 is increasing.

<sup>3</sup> Different projection scenarios will produce different median ages. We used the information that Statistics New Zealand has published for schools at [www.stats.govt.nz](http://www.stats.govt.nz).

- 2.5 In 2006, children aged 0-14 years outnumbered people aged at least 65 by two to one. In 2011, the first of the post-World War II baby boomers reached age 65. By 2023, there are likely to be more older people than children.
- 2.6 Figure 2 shows how the spire shape of our population in 1951 is projected to change to a more rectangular or chimney shape by 2061. It shows that the proportion of the population in each five-year age group is becoming more alike. In 2013, we are two-thirds of the way through this change.

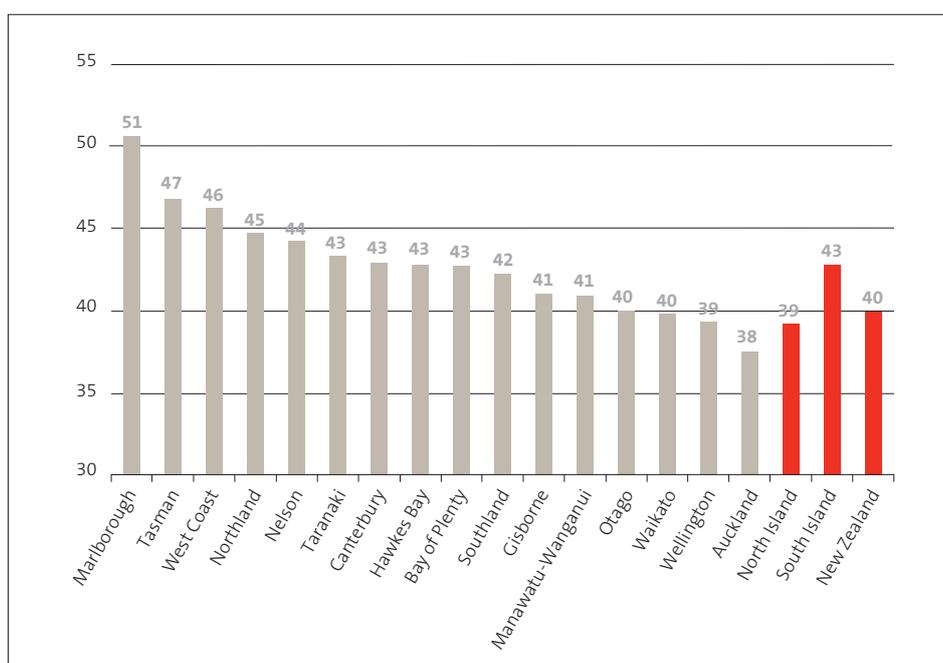
**Figure 2**  
**Projected change in the population profile by five-year age group, 1951, 2011, and 2061**



Note: In both graphs, the black outline is the population profile in 2061. In the left-hand graph, the shaded area is the population profile in 1951. In the right-hand graph, the shaded area is the population profile in 2011.  
 Source: Statistics New Zealand.

- 2.7 The projected median age differs considerably throughout the country. Figure 3 shows that all regions except Otago, Waikato, Wellington, and Auckland are projected to have median ages higher than the national median age in 2031.

**Figure 3**  
Projected median age by region, 2031

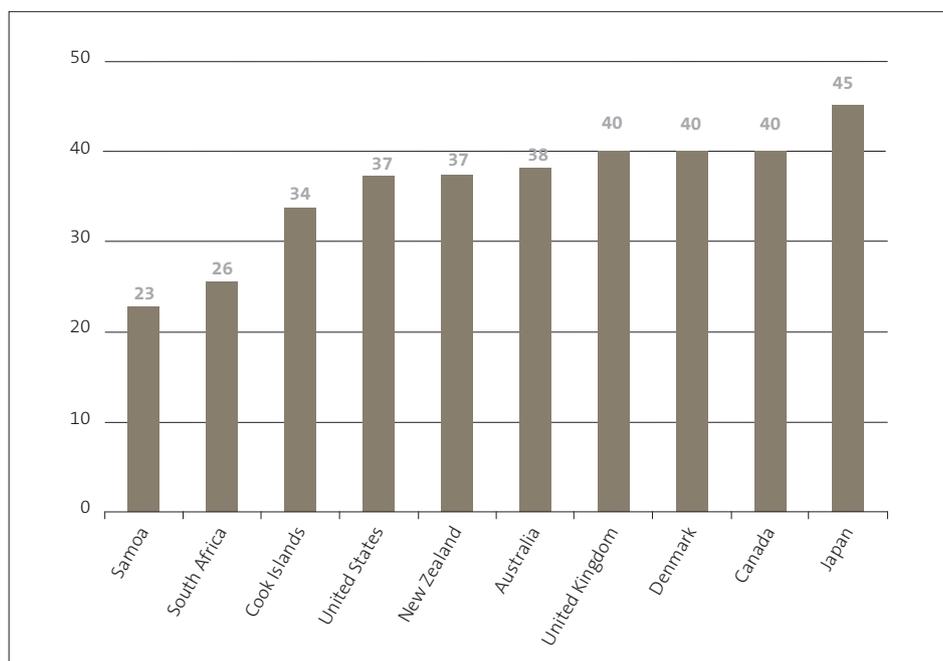


Source: Statistics New Zealand, 1996-2031 (2006-base, October 2012 update), medium projection.

- 2.8 The pace of ageing differs by region. Between 2011 and 2031, Marlborough's median age is projected to increase by seven years (from 44 years to 51 years) and Auckland's median age will increase by four years (from 34 years to 38 years).

2.9 New Zealand is not alone in experiencing an ageing population. The populations of many developed and developing countries are ageing. Figure 4 compares New Zealand's median age with the estimated median ages of a few other countries. It shows that Japan's population is older than ours and our population is older than the populations of South Africa and Samoa. Japan's population is declining, unlike New Zealand's.

**Figure 4**  
Estimated median ages for selected countries, 2010



Source: United Nations (2013), *World Population Prospects: The 2012 Revision*, esa.un.org.

## Part 3

# Applicability of the Madrid indicators

*Population ageing is one of the most significant trends of the 21<sup>st</sup> century.*

United Nations Population Fund

- 3.1 In this Part, we discuss whether the Madrid indicators are applicable to New Zealand.

**Most of the Madrid indicators are applicable to a New Zealand context and the data needed to report on most of them was available. This means that public entities have a minimum set of data available to use in responding to an ageing population.**

- 3.2 Much of the data we used to report on the Madrid indicators was collected in the census and other national surveys or held in national databases. Some of the Madrid indicators are considered so significant that they are or will be Tier 1 official statistics.<sup>4</sup> Several of the Madrid indicators address matters discussed in the *Report of National Science Challenges Panel (2013)*.<sup>5</sup>
- 3.3 In some instances, the matters addressed by some indicators were dealt with many years ago (such as access to good sanitation or a universal pension) or are not significant problems facing older people (such as HIV/AIDS).
- 3.4 Some Madrid indicators could be applied in our country differently than in some other countries. For example, being connected to electricity is taken for granted in New Zealand, but is not in many less developed countries. However, fuel poverty<sup>6</sup> might be more pertinent, given the flow-on effects on older people's health, health service use, and ability to work, provide support to others, or keep living in the community. A study published in 2010 found that more New Zealanders die in winter than any other season. The risk is higher among people with low income, those living in rented accommodation, and those living in cities. The exact causal mechanisms are not known but could include poorer health status, cold homes, and household crowding.<sup>7</sup>

4 These are the minimum statistics that the Government agrees to collect.

5 The report is available from the Ministry of Business, Innovation and Employment's website at [www.msi.govt.nz](http://www.msi.govt.nz).

6 Fuel poverty is discussed with reference to child poverty in McChesney (2013), 'Child poverty: the "fuel poverty" dimension', *Policy Quarterly*, Vol. 9, Issue 2, pages 40-46, available at the Institute for Governance and Policy Studies' website at [www.igps.victoria.ac.nz](http://www.igps.victoria.ac.nz).

7 Hales, S. et al (2010), "Seasonal patterns of mortality in relation to social factors", *Journal of Epidemiology and Community Health Online First*, available at [www.otago.ac.nz](http://www.otago.ac.nz).



## Part 4

# Helpful practices when reporting

*The two words “information” and “communication” are often used interchangeably, but they signify quite different things. Information is giving out; communication is getting through.*

Sydney J Harris

- 4.1 In this Part, we identify the practices that we found most helpful in reporting on the indicators.
- It is not often that one of our projects requires us to get data from such a wide range of public entities. Some public entities had clearly given a lot of thought to making their data accessible to audiences with less expertise. We identified good practices that we encourage public entities to adopt.**
- 4.2 We encourage public entities to adopt as many of the practices in this Part as they can to get the maximum value from the data and improve the quality of reporting to the public and other public entities.
- 4.3 We found it useful when public entities:
- wrote reports that answered the likely questions that people might have about a topic;
  - identified the changes in the data that were statistically significant;
  - used consistent methods for reporting results so that changes over time could be identified;
  - reported data using consistent age groups for older people, younger adults, and children, which made it easier to bring together data from several sectors; and
  - clearly identified the public entity with lead responsibility for a document (usually in the citation reference near the front of the document) when the logos of more than one organisation were on the cover.
- 4.4 It was helpful when entities published data tables alongside their report so that we could see all the data collected, not only the data that was highlighted in the report, and published supporting data tables alongside analyses and conclusions so that we could check them.
- 4.5 It helped when data was reported in 10-year age groups and 65-plus when the sample sizes were too small to produce statistically reliable results for five-year age groups.
- 4.6 In our view, technical and detailed reports should always include a plain English report or summary for less expert audiences.

- 4.7 It was useful when:
- the dates that reports were published were on the document (not just the website);
  - the date that the next report on a topic would be published was provided in a document or on a website;
  - statistics were provided to support statements in reports that x or y was more or less likely to happen;
  - survey sample sizes were large enough to produce reliable statistics by age group, sex, and ethnicity; and
  - confidence intervals were given for survey and/or sample statistics.
- 4.8 Using meaningful time series to show trends and having reporting cycles coincide with the availability of new or updated data was also helpful.
- 4.9 Outcome indicators that clearly stated what goal or standard was sought and publishing and reporting against indicator frameworks were useful.
- 4.10 Examples of these helpful practices can be found in:
- the Inland Revenue Department's KiwiSaver evaluation reports;
  - Statistics New Zealand's reports and online tools;
  - the Ministry of Health's reports on the New Zealand Health Survey; and
  - the Ministry of Transport's indicator framework and travel survey reports.

## Part 5

# Matters for public entities to consider

*... social and demographic changes have profound implications for policy makers, planners, administrators, and others interested in population ageing.*

Statistics New Zealand

- 5.1 In this Part, we discuss some matters that we would like public entities to consider and, as needed, respond to. They are:
- measuring rural disadvantage for older people;
  - defining age groups consistently;
  - choosing suitable sample sizes for national surveys; and
  - the reasons for different reporting periods.

**It may be possible to analyse existing indicators by rural and urban status to measure rural disadvantage. Bringing together data by age is more difficult when inconsistent age groups are used. We found that survey and sample sizes were sometimes too small to produce statistically reliable profiles for older people by sex and ethnicity, but that more use could be made of other data to fill in some gaps. We were able to bring together a report on the Madrid outcome indicators but the “shelf life” of data was not always clear.**

- 5.2 Statistics New Zealand has told us that it is currently represented on an international task force to improve the availability, accessibility, and comparability of statistical data to support ageing-related policy-making. Addressing the issues that we discuss in this Part would also contribute to improved comparability, analysis, transparency, and cost-effective use of data.

### Measuring rural disadvantage

- 5.3 The Ministry of Social Development reports that the data needed to create an indicator of disadvantage for rural people for the Positive Ageing Strategy is not available. With 86% of the population in urban areas, there are problems in ensuring the same access to services for the other 14%. We consider it unlikely that a useful single measure of rural disadvantage for older people is possible. Entities agreed with our view in their feedback on our draft report.
- 5.4 The question of whether differences in access to services between urban and rural communities have negative effects on rural people is important. Statistics New Zealand told us that there might be opportunities to analyse existing indicators of older people by rural and urban status to get a picture of how the circumstances of older people in rural areas compare to their urban counterparts.

- 5.5 If public entities have not already done so, we encourage them to consider how they can assess whether differences in access to services have any negative effects on rural people, and consider what can be done to lessen those effects.<sup>8</sup>

### Defining age groups consistently

- 5.6 In our report, we have defined older people as people aged 65 years or older. In some reports, older people were considered to be aged 15 or more; in others, 40 or more; and in others, 65 or more. We understand that some flexibility is useful, but greater consistency could be even more useful.
- 5.7 Data tables were not always published, which made it difficult for us to reorganise the data to make the age groups more similar. This made it more difficult for us to report consistently on the Madrid indicators and makes it more difficult for anyone else to do something similar for other purposes.
- 5.8 Statistics New Zealand has published a statistical standard for age on its website, which includes recommended categories for reporting on age.<sup>9</sup> We encourage public entities to use the standard in collecting and reporting data.
- 5.9 Statistics New Zealand told us that there is an increasing shift towards making official statistics available from online databases. This gives users flexibility to get reports on categories of data, such as age group, to meet their needs. We encourage other public entities to consider whether they could also make their statistical data available online.

### Choosing sample sizes for national surveys

- 5.10 There is often a tension between the cost of not having data, having poor quality data, getting a large enough sample to produce reliable statistics, and getting statistics updated in a timely way. These tensions can be amplified in a country with a small population that is unevenly and widely dispersed and during times of economic restraint.
- 5.11 We tried to report on the Madrid indicators by age group, sex, and ethnicity. Most of the time, it was not possible to do this because sample sizes were not large enough for the older age group. From our discussions with public entities, there are no easy solutions to this issue and the cost-benefit of some potential solutions is questionable.

<sup>8</sup> For example, in August 2010, we reported on whether district health boards had been able to ensure that primary health after-hours services were available within 60 minutes' drive for 95% of a district health board's population. Our report, *District health boards: Availability and accessibility of after-hours services*, is available at [www.oag.govt.nz](http://www.oag.govt.nz).

<sup>9</sup> The standard is available from [www.stats.govt.nz](http://www.stats.govt.nz) under the Surveys and Methods tab. See section 4 (output) of the Age standard for options on reporting age.

- 5.12 We discussed with public entities whether more use could be made of the census to complement the quantitative data that surveys collect, and whether sample sizes for some surveys could be increased. However, Statistics New Zealand told us that the response rate to household surveys has decreased over recent years. Imposing extra burden on respondents would be likely to increase this trend and adversely affect the quality of survey data.
- 5.13 Partly in response to this trend, Statistics New Zealand is considering how it might transform the census from the current model (where respondents are asked a range of questions about themselves and their dwelling) to a model where census information is obtained, as far as possible, from administrative sources.<sup>10</sup> Statistics New Zealand is investigating alternative approaches and is planning to give its first progress report to the Government in late 2013.
- 5.14 Statistics New Zealand also told us that public entities have other methods potentially available to them for meeting the demand for more reliable data on older people. The options include:
- making more use of administrative data;
  - combining data from several instances of the same survey (data pooling);
  - combining data from different sources and surveys (data linking); and
  - using special statistical techniques (such as small domain estimation techniques) to get more value from existing data.
- 5.15 Statistics New Zealand is placing emphasis on making more use of existing data and is working closely with public entities to achieve this.

### Different reporting periods

- 5.16 In publishing our findings for each indicator online, we have brought together a range of data from a range of public entities at [www.oag.govt.nz/2013/ageing](http://www.oag.govt.nz/2013/ageing). We hope that people will use the findings to compare updated data. More recent data is available for some of the outcome indicators, and data from the 2013 census will update many more.<sup>11</sup>
- 5.17 We were not able to identify trends for some indicators because data had not been collected often enough to make comparisons. In other cases, data collection practices had changed, which made it difficult to compare past and current data. Nevertheless, the findings give us a perspective on older people's circumstances and we briefly summarise the findings from the Madrid outcome indicators in Part 8.

<sup>10</sup> Administrative data is the data that public entities collect routinely, such as crime statistics, projections based on survey data, data on hospital stays, and electoral roll data. It is not collected using a survey or census.

<sup>11</sup> The schedule for releasing reports on the census data is available at the Statistics New Zealand website, [www.stats.govt.nz](http://www.stats.govt.nz).

- 5.18 Even though the data is reported for different periods, Statistics New Zealand told us that this is not necessarily a problem and it is usual practice to do this. The frequency with which surveys are run depends on how susceptible the phenomenon in question is to change. Some phenomena, such as disability status, change more slowly. Others, such as labour force participation, change quickly and are reported more often. The most recent population data available to us was from the 2006 census.
- 5.19 However, the “shelf life” of the data was not obvious to us when we looked for it. On their websites, public entities often state when the next survey is due and when data from it will be reported. We would have found it helpful if the reason for the frequency for collecting and reporting data was explained.

## Part 6

# Some demographics

*The future is inherently uncertain. ... birth, death, and migration patterns do change, often unpredictably, as does the resulting population.*

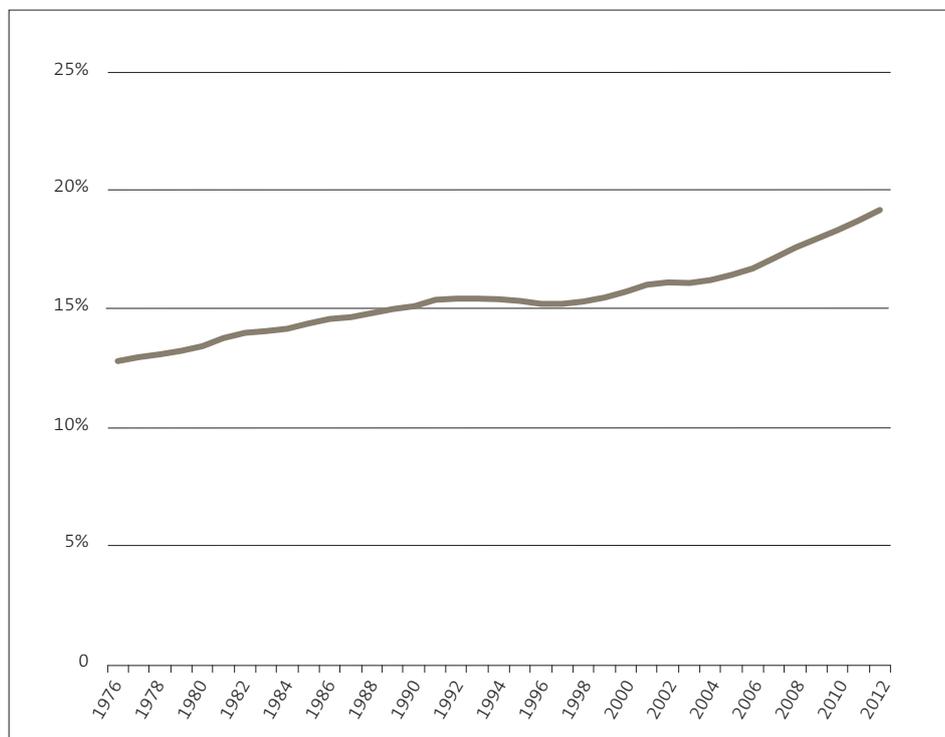
Geoff Bascand

- 6.1 In this Part, we report on the Madrid Plan's demographic indicators. Our detailed findings are available at [www.oag.govt.nz/2013/ageing](http://www.oag.govt.nz/2013/ageing).

**Older people make up an increasing proportion of the population in all regions except Auckland, and the pace of change has increased. Three women for every two men reach age 80. The older population is projected to continue to be dominated by people identifying as “European” or “New Zealander”, although their share will decrease. After reaching pensionable age, about one-third of older people changed their home address but most stayed with the same regional council area.**

- 6.2 When a population is ageing, older people make up an increasing proportion of the total population. Figure 5 shows that the proportion of people aged 60-plus in the population increased from 13% in 1976 to an estimated 19% in 2012.

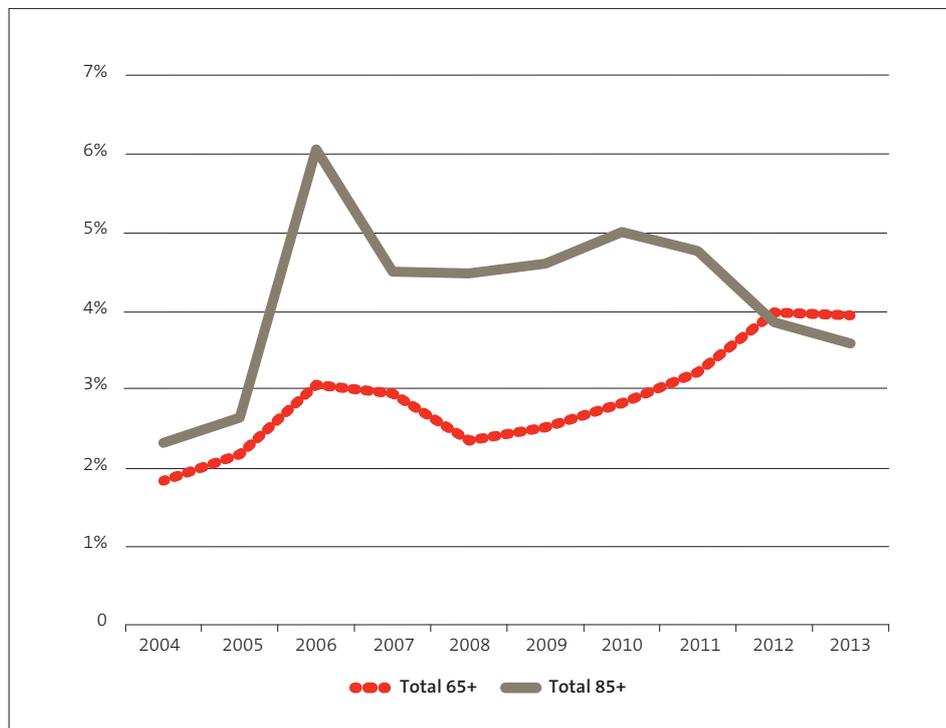
**Figure 5**  
**Proportion of New Zealand's population aged at least 60, 1976-2012**



Source: Statistics New Zealand. See also *Indicator 1: Number and proportion of older persons* on our website.

- 6.3 Within the older population, the number in the 65-plus age group grew more slowly than the 85-plus age group. Figure 6 shows that from 2006, the annual rate of population growth for people aged 65-plus was between 2% and 4%. From 2006, it was between 4% and 6% for people aged 85-plus.

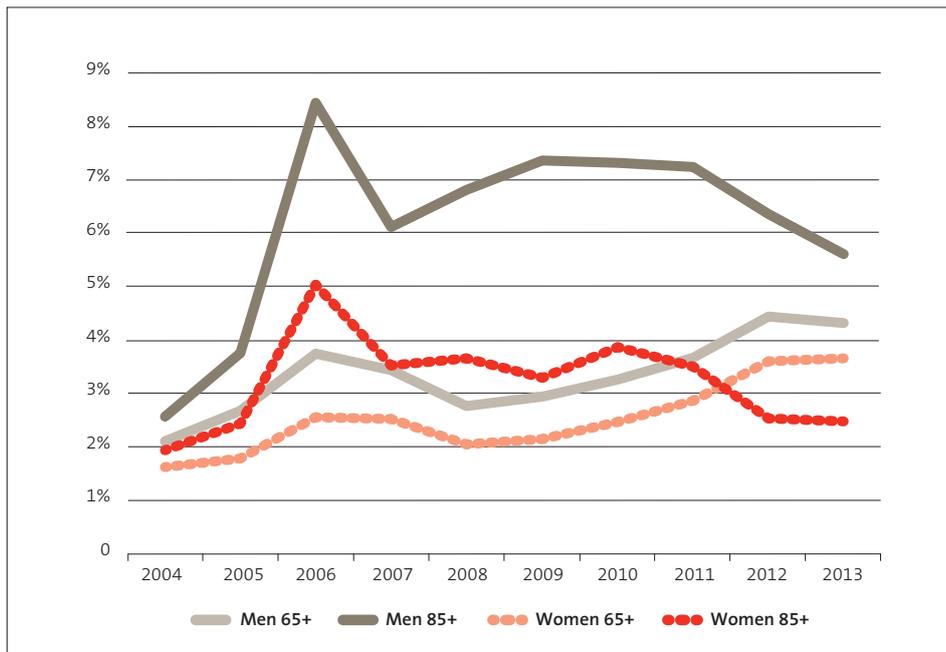
**Figure 6**  
Annual population growth rate for people aged at least 65 and people aged at least 85, 2004-13



Source: Statistics New Zealand. See also *Indicator 3: Population growth* on our website.

- 6.4 Figure 7 shows that the annual rate of population growth was higher for men aged at least 85 than it was for men aged at least 65 and for women in both age groups. The higher growth rate for men aged 85-plus partly reflects the smaller older male population and more rapid gains in male life expectancy in recent decades. In contrast, the growth rate of older women in the same age groups is lower because their population numbers were higher to begin with.

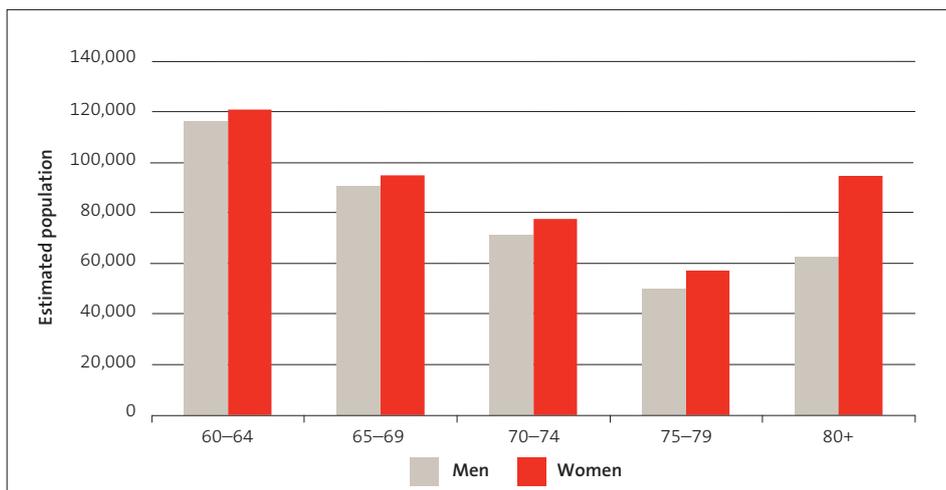
**Figure 7**  
Annual population growth rate for men and women aged at least 65 and at least 85, 2004-13



Source: Statistics New Zealand. See also *Indicator 3: Population growth* on our website.

6.5 Figure 8 gives a snapshot of the estimated number of men and women aged at least 60 by age group at the end of 2011. There were more women than men in each age group. For the 80-plus age group, there were three women for every two men. The estimated total population aged at least 60 was 837,000.

**Figure 8**  
Estimated population aged at least 60, by sex and five-year age group, at 31 December 2011



Source: Statistics New Zealand.

- 6.6 The 2013 census will confirm the ethnic make-up of the older population. However, projections for 2012 were that 87% of people aged at least 60 would identify with “European” or “New Zealand” ethnicity, 6% with Māori ethnicity, 6% with an Asian ethnicity, and 3% with a Pacific ethnicity.<sup>12</sup> Broadly speaking, most older people will continue to identify as “European” or “New Zealander”, although their proportion is decreasing.
- 6.7 Census data is the best source of data about where older people live. Between the 1996 and 2006 censuses, every region except Auckland experienced an increase in the proportion of older people in its population. Figure 9 lists some relevant findings from the 2001 and 2006 censuses.

### Figure 9

#### Some findings about ageing population from the 2001 and 2006 censuses

<b>Between the 2001 and 2006 censuses:</b>
• the proportion of older people living in rural areas increased faster than in urban areas;
• 68% of older people lived at the same address as they had in the previous census; and
• only 7% of older people who changed address moved to another region.
<b>The 2006 census found that:</b>
• 89% of older people lived in urban areas;
• older people made up 13% of the total urban population;
• older people made up 10% of the total rural population;
• 31% of older people lived alone;
• 40% of older women lived alone (a decrease from 43% in 2001); and
• 20% of older men lived alone.

Source: Statistics New Zealand. See also *Indicator 2: Older persons living in urban areas* on our website.

- 6.8 In 2008/09, an estimated 5% of older people lived in residential care. At least 9% of older people were said to be receiving home-based support services in the community. However, this latter figure was underestimated because it was calculated using Ministry of Health data and did not include data on similar services funded by the Accident Compensation Corporation and the Ministry of Social Development.
- 6.9 Compared to other age groups, few older people were international migrants. In the year to 30 June 2012, 2269 older people moved to New Zealand and 1543 older people left the country. This was about 2% of all permanent and long-term arrivals and 2% of all permanent and long-term departures.

<sup>12</sup> These numbers add up to more than 100% because some people identify with more than one ethnicity and all responses are included.

## Part 7

# Putting building blocks in place

*A society for all ages encompasses the goal of providing older persons with the opportunity to continue contributing to society.*

United Nations Population Fund

- 7.1 In this Part, we summarise our findings for the building block (or instrumental) indicators for the three priority areas identified in the Madrid Plan, which are:
- older people and development;
  - advancing health and well-being into old age; and
  - ensuring enabling and supportive environments.
- 7.2 Instrumental indicators assess whether governments have introduced legislation, programmes, or policies in certain areas. Our detailed findings are available at [www.oag.govt.nz/2013/ageing](http://www.oag.govt.nz/2013/ageing).

**All but two of the building block indicators to promote older people's well-being and participation in the life of the country are in place. However, some national strategies lack frameworks to measure effectiveness and identifying long-term results can be difficult because of the way that data is reported.**

### Keeping older people involved

- 7.3 The Madrid indicators' building blocks to support older people's development were mostly in place.
- 7.4 The Madrid indicators have highlighted the importance of increasing the employment of older workers and delaying their complete retirement. In New Zealand, almost no-one can be forced to stop working because of age,<sup>13</sup> there is a universal pension that is not affected when other income is earned and is not asset tested, and other legislative barriers to employing older people have been removed. To that extent, there are policy settings that do not hinder older people getting and keeping jobs.
- 7.5 The Madrid Plan considers that guidance is needed for public entities and others to consider:
- changes to the structure of a country's population;
  - increases in the number of older people; and
  - how their policies will affect older people.

<sup>13</sup> Judges must retire at age 70 but can be employed in other roles.

- 7.6 In New Zealand, the *New Zealand Positive Ageing Strategy* (2001) (the Positive Ageing Strategy) provides the framework for preparing and understanding government policy with implications for older people.<sup>14</sup> It addresses the last of the three aspects highlighted in paragraph 7.5.
- 7.7 In 2007, an indicator framework was set up to allow for monitoring and reporting the progress towards achieving the Positive Ageing Strategy. The method used to report on the indicator framework makes it difficult to identify long-term trends and whether the results achieved represent good progress.
- 7.8 Natural disasters often disproportionately affect older people, which is why humanitarian groups consider older people to be a vulnerable group in need of special protection. Local authorities, government departments, and crown entities have requirements and guidance to identify vulnerable people in the community and plan to meet their needs. This includes older people, especially those living in residential care or receiving publicly funded home-based support services.
- 7.9 Public entities are expected to consult with relevant parties. It is good practice to consult people of all ages when preparing policies and making decisions that affect them. Most public entities are required to consult when introducing new policies or making significant amendments to policies. Guidelines for doing this effectively continue to be refined. This applies as much to older people as it does to other age and interest groups.

### Helping older people stay healthy and well

- 7.10 All but one of the building blocks to advance health and well-being into old age were in place.
- 7.11 There are national health and disability strategies that include older people's health needs, and a wide range of guidelines have been published to promote the health and welfare of older people. Subordinate documents identify current priorities, which include older people. However, the lack of indicator frameworks to assess how effective the Health of Older People Strategy and the Disability Action Plan are, and inconsistent practices for reporting on the New Zealand Health Strategy, make it more difficult to evaluate long-term results.
- 7.12 New legislation allows for minimum levels of care for health and disability services to be prescribed, ways to audit how services are delivered,<sup>15</sup> and various ways to complain about the standard of care, treatment, and rehabilitation.
- 7.13 Primary health services are designed to be accessible to most people. Guidelines have been introduced to help ensure that services are seen as culturally

<sup>14</sup> In this report, we discuss other strategies, programmes, and policies that consider the needs of older people.

<sup>15</sup> We published a report on *Effectiveness of arrangements to check the standard of services provided by rest homes* in December 2009 and a follow-up report in September 2012. Both reports are available at [www.oag.govt.nz](http://www.oag.govt.nz).

appropriate. Policies are in place to make it cheaper for people with high healthcare needs to use primary health services. Statistics are kept about the proportion of people who have not accessed services because of cost. The Accident Compensation Corporation has identified that older clients may need extra help after being injured and some of its co-ordinators specialise in providing these services.

- 7.14 Public entities hold data about the number of geriatric facilities and beds. However, data about the specialist health workforce has yet to be collected in enough detail to report on the number and proportion of medical practitioners qualified in geriatrics or the health of older people despite difficulties recruiting and training specialist medical practitioners being recorded in 2004. Health Workforce New Zealand told us that it is working with the Medical Council of New Zealand to collect this data.<sup>16</sup>

### **Ensuring that enabling and supportive environments for older people are in place**

- 7.15 The building blocks are in place to ensure enabling and supportive environments for older people.
- 7.16 Having accessible transport makes it easier for older people to take part in social and leisure activities, volunteering, and paid work. The SuperGold Card and other new policies increasingly make public transport physically accessible to older people and make it cheaper to use at off-peak times.<sup>17</sup> All disabled people can use subsidised mobility taxi services. Public entities collect data and report on whether older people have access to a motor vehicle.
- 7.17 There are national legislation and programmes to protect older people from abuse and neglect, poor quality health and disability services, scams and crimes, and age-discrimination.

16 Health Workforce New Zealand, set up in 2009, has overall responsibility for planning and developing the health workforce and is part of the Ministry of Health. See [www.healthworkforce.govt.nz](http://www.healthworkforce.govt.nz).

17 See the SuperGold Card website, [www.supergold.govt.nz/](http://www.supergold.govt.nz/).



## Part 8

# A statement on older people's circumstances

*... with the right measures in place to secure health care, regular income, social networks, and legal protection as we age, there is a "longevity dividend" to be reaped by current and future generations.*

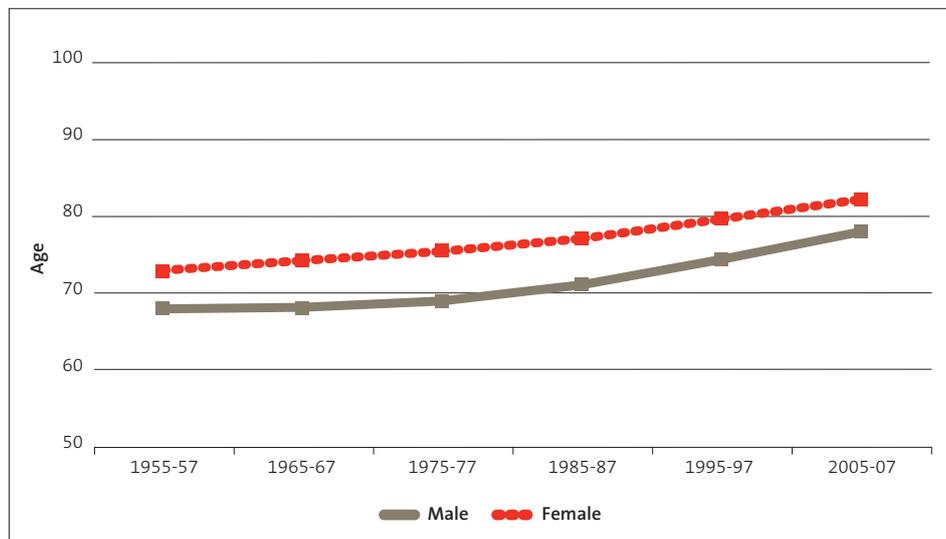
United Nations Population Fund

- 8.1 In this Part, we make a general statement about older people's circumstances based on the data we reported for the Madrid outcome indicators.
- We found that data was available for most of the Madrid outcome indicators. This enabled us to make an overall statement on older people's circumstances. Although there have been many improvements over time, older people did not experience these improvements evenly. Women, Pākehā, and people on higher incomes often (but not always) benefited more than men, non-Pākehā, and people on lower incomes.**
- 8.2 Human ageing is one of the big challenges facing the developed world and there is much that is uncertain about its effects on older people and the rest of the population. Access to good quality and timely data might help us to better assess and prepare for the effects of ageing.
- 8.3 We were able to find much of the data needed to report against the Madrid indicators. Our online findings reports give more detail for each indicator than is practical to reproduce in our report. However, we are able to make an overall statement that summarises what the indicators showed.
- 8.4 For each of the Madrid outcome indicators and its relevant reporting period, we found that:
- Results were often better for older people than for younger people. For example, older people reported higher rates of life satisfaction and health status and lower rates of loneliness than younger adults. However, some indicators were affected by historical practices – for example, older people were less highly qualified than younger people.
  - Over time, results were often improving, such as in disability rates, life expectancy (see Figure 10), independent life expectancy (see Figure 11), and the mortality rate from non-communicable diseases (see Figure 12). However, results were worse for some indicators, such as the housing affordability rate (Figure 13) and the mortality rate from accidents and injuries (see Figure 12).
  - Older men and women and ethnic groups did not show uniform improvements. For example, life expectancy is longer for women than men (see Figure 10), and longer for non-Māori than Māori (see Figure 14) where the gap

in life expectancy has been affected by changes in data collection practices on ethnicity.

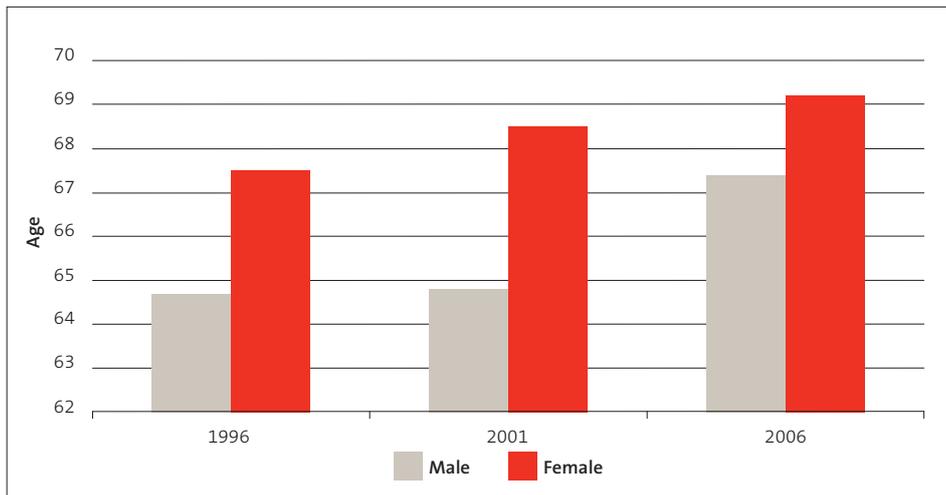
- Older people with higher income levels had better results than older people on lower incomes. For example, older people living in economic hardship were more likely to feel lonely and report lower health status, and an increase in older people's economic standard of living resulted in a larger decrease in loneliness than for younger people.

**Figure 10**  
Total population life expectancy at birth, 1955-57 to 2005-07



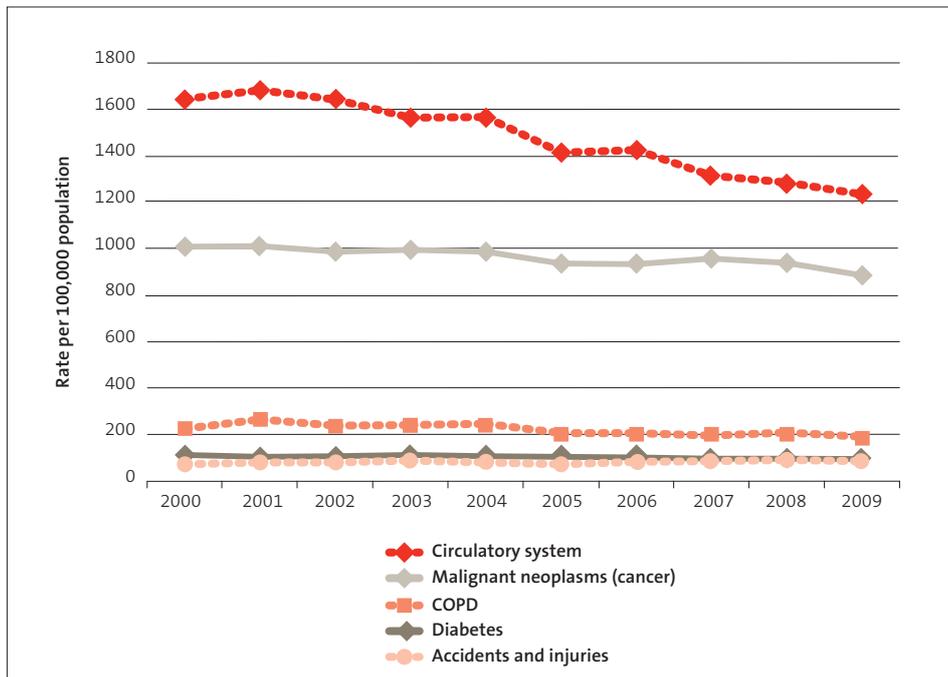
Source: Statistics New Zealand. See also *Indicator 23: Life expectancy* on our website.

**Figure 11**  
Independent life expectancy for men and women at birth, 1996, 2001, and 2006



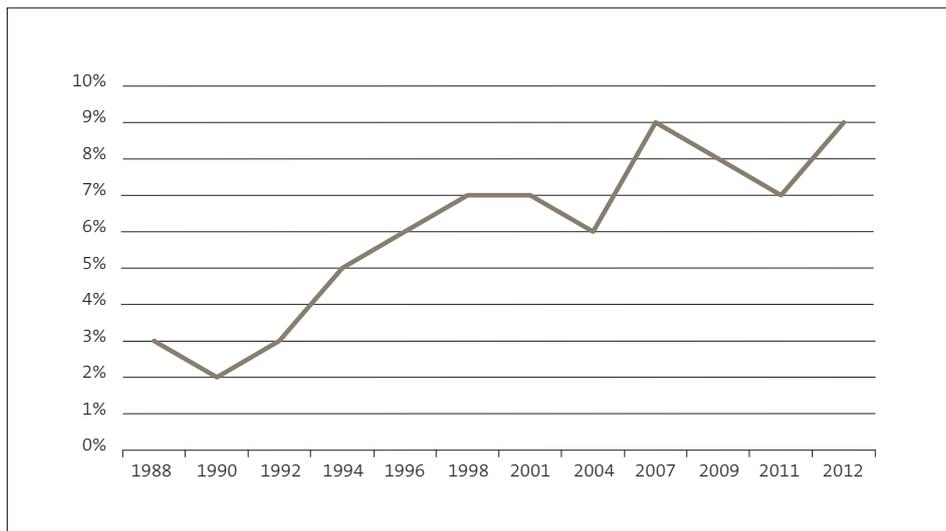
Source: Statistics New Zealand. See also *Indicator 24: Disability-free life expectancy* on our website.

**Figure 12**  
Mortality rates per 100,000 population for people aged 60-plus for selected non-communicable diseases and accidents and injuries



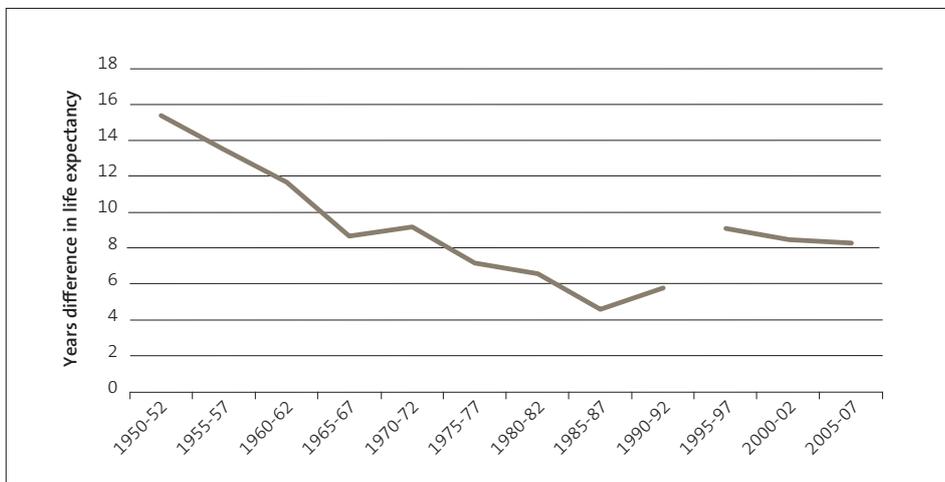
Source: Ministry of Health. See also *Indicator 25: Non-communicable diseases* and *Indicator 26: Mortality rates* on our website. "COPD" means chronic obstructive pulmonary disease. "Accidents and injuries" includes deaths from poisoning, falls, motor vehicle crashes, suicide, and drowning.

**Figure 13**  
**Proportion of older people in households with housing cost outgoings-to-income ratio greater than 30%, for selected years from 1988 to 2012**



Source: Ministry of Social Development (2013), *Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2012*. See also *Indicator 7: Official poverty line* on our website.

**Figure 14**  
**Difference in life expectancy at birth between Māori and non-Māori, 1950-52 to 2005-07**



Note: New death registration forms were introduced in 1995, which is why there is a break in the data between 1990-92 and 1995-97. The two sets of data are not directly comparable.

Source: Statistics New Zealand. See also *Indicator 23: Life expectancy* on our website.

# Appendix 1

## List of the Madrid indicators

We analysed most Madrid indicators by age and sex. We analysed each indicator by ethnicity where it was practical to do so.

<b>Basic demographic indicators</b>		<b>Source of data or lead agency</b>
1.	Number and proportion of older persons aged 60-plus in the population	Statistics New Zealand
2.	Proportion of older persons living in urban areas	Statistics New Zealand
3.	Rate of population growth of older persons	Statistics New Zealand
4.	Proportion of older persons living alone	Statistics New Zealand
5.	Proportion of older persons by type of living arrangement	Statistics New Zealand
6.	Proportion of older persons who are migrants by type of migration (national, international)	Statistics New Zealand
<b>Priority direction 1: Older persons and development</b>		
<b>Outcome indicators</b>		
7.	Proportion of the population living below national poverty line (ages 15-59 and 60-plus)	Ministry of Social Development
8.	Proportion of the population living below international poverty line (\$1.25 a day) for ages 15-59 and 60-plus	Ministry of Social Development
9.	Literacy rate benchmarked against literacy rate of adults aged 25-59	Ministry of Education
10.	Highest educational attainment of older persons benchmarked against highest educational attainment of adults aged 25-59	Statistics New Zealand
11.	Proportion of older persons covered by some form of old age income security programme (contributory or non-contributory) by poverty status	Inland Revenue Ministry of Social Development Veterans' Affairs New Zealand
12.	Labour force participation of older persons	Statistics New Zealand
13.	Unemployment rate of older persons benchmarked against the labour force under age 60	Statistics New Zealand
14.	Proportion of older persons providing and receiving support (such as monetary and care) to younger members of family/ community neighbourhood)	Ministry of Social Development Statistics New Zealand
15.	Proportion of older persons living in households with access to landline or cellphone or personal computer	Statistics New Zealand
16.	Proportion of older persons reported voting in last general election benchmarked against proportion for general population	Electoral Commission Statistics New Zealand

<b>Instrumental (or building block) indicators</b>		
17.	Inclusion of specific needs of older persons in all phases (preparedness, relief and reconstruction) of humanitarian and disaster relief programmes	Ministry of Civil Defence and Emergency Management
18.	Number of national level organisations of older persons represented in government policy-making processes	All*
19.	Inclusion of issues of older persons relating to the three priority areas of the Madrid Plan (development, health, and enabling environments) in national and sectoral development plans, including poverty reduction strategies	Ministry of Social Development
20.	Existence of statutory retirement age	Ministry of Business, Innovation and Employment
21.	Existence of universal pension	Ministry of Social Development
22.	Existence of policies facilitating employment of older persons (such as no age-discrimination and special tax incentives for employment of elderly)	Ministry of Business, Innovation and Employment
<b>Priority direction 2: Advancing health and well-being into old age</b>		
<b>Outcome indicators</b>		
23.	Life expectancy at birth, at age 60, and at age 80	Statistics New Zealand
24.	Disability-free life expectancy at birth, at age 60, and at age 80	Ministry of Health Statistics New Zealand
25.	Mortality rates of older persons from non-communicable diseases	Ministry of Health
26.	Mortality rates of older persons from external causes (homicide, suicide, accidents)	Health Quality and Safety Commission Ministry of Health Ministry of Transport
27.	Proportion of older persons covered by medical insurance	Accident Compensation Corporation Ministry of Health Health Funds Association of New Zealand
28.	Proportion of older persons reporting satisfaction with quality of life and their health, benchmarked against general population	Ministry of Health Ministry of Social Development Statistics New Zealand
29.	Disability rate, benchmarked against the disability rate for persons aged 15-59	Statistics New Zealand
30.	Prevalence of risk factors in older persons (such as smoking, physical inactivity, overweight/obesity, and alcohol abuse)	Ministry of Health

\* All government agencies with policy-making responsibilities that affect older people.

31.	HIV prevalence among older persons, benchmarked against general population	Ministry of Health
32.	Prevalence of mental health problems among older persons by diagnosis	Ministry of Health
33.	Proportion of older persons reporting to be informed about various aspects of HIV/AIDS, benchmarked against general population	Ministry of Health
<b>Instrumental (or building block) indicators</b>		
34.	Number and proportion of physicians with specialised training in geriatric care or healthcare of older persons	Ministry of Health
35.	Number and proportion of primary healthcare workers (such as nurses, physical therapists, district health workers, lab technicians, social workers) with geriatric training	Ministry of Health
36.	Inclusion of data on older persons in national HIV/AIDS statistics (both infected and caregivers)	Ministry of Health
37.	The national health plan addresses the specific needs of older persons	Ministry of Health
38.	The national disability plan specifically addresses the needs of older persons	Office for Disability Issues, Ministry of Social Development
39.	Number and proportion of public/private healthcare facilities with geriatric care	Ministry of Health
40.	Existence of primary healthcare services specifically designed for older persons	Accident Compensation Corporation Ministry of Health
41.	Existence of guidelines and standards of healthcare provision and rehabilitation services for older persons	Accident Compensation Corporation Ministry of Health
42.	Availability of training programmes in care giving skills and medical care for older caregivers of HIV/AIDS patients	Ministry of Health
<b>Priority direction 3: Ensuring enabling and supportive environments</b>		
<b>Outcome indicators</b>		
43.	Proportion of older persons living in households with safe water, improved sanitation, and access to electricity	Local authorities Ministry of Business, Innovation and Employment Ministry of Health
44.	Proportion of older persons living on their own who need assistance with activities of daily living and are receiving support	Office for Disability Issues, Ministry of Social Development Statistics New Zealand

45.	Proportion of older persons reporting neglect, abuse, or violence	Ministry of Social Development Ministry of Justice New Zealand Police
46.	Reported incidences of neglect, abuse, or violence of older persons	Age Concern Ministry of Social Development New Zealand Police
47.	Proportion of older persons reporting discrimination/loss of respect because of age	Ministry of Social Development Statistics New Zealand
<b>Instrumental (or building block) indicators</b>		
48.	Existence of a national policy to make transportation accessible to older persons	Ministry of Transport Ministry of Social Development
49.	Existence of national legislation to combat elder abuse	Health and Disability Commissioner Ministry of Health Ministry of Justice
50.	Existence of national programmes to combat elder abuse	Ministry of Health Ministry of Social Development

## Appendix 2

# How we analysed the data

Our intention was to get most of the data we needed from published sources. This was partly to reduce the workload on public entities, and partly to check whether the information was accessible to the public. We assessed “accessibility” in two ways: could we find the information, and could we understand the information? Sometimes we asked public entities to give us data when we could not find it online. On other occasions, we did not do this but said in our indicator report that the data was available from the public entity.

We adapted the Madrid indicators to collect data by ethnicity as well as age and sex. However, it was not always possible to report on an indicator by age, sex, and ethnicity because sample sizes were too small to produce reliable statistics for two or three variables at a time. For example, it was common for data to be reported by ethnicity alone or by ethnicity and sex. We found it was less common for data to be reported by age and ethnicity together or by age, sex, and ethnicity together.

In the findings already published online, we rounded numbers and percentages to no more than two decimal points. We published the supporting data for each graph and gave references to any published sources so that people could find the data we used and any extra information they might be interested in.

One of our initial objectives for this work was to find out how public entities used the data that was collected. We were not able to answer this question easily for most Madrid indicators because sometimes public entities collect data for their own use and at other times they collect data for use by others. Each indicator finding published online has a brief comment about why the data was collected and its use. As part of its work to advise the Government on options for collecting official statistics (see Part 5), Statistics New Zealand told us that it is doing work to find out how census data is used and by whom.



## Appendix 3

### Further reading

Affording Our Future Conference (2012), conference papers from a range of speakers are available at [www.victoria.ac.nz](http://www.victoria.ac.nz).

Bell, David and Rutherford, Alasdair (2013), *Older workers and working time* (discussion paper no. 7546), Institute for the Study of Labor, [www.iza.org](http://www.iza.org).

Bloemen, Hans et al (2013), *The causal effect of retirement on mortality: Evidence from targeted incentives to retire early* (discussion paper no. 7570), Institute for the Study of Labor, [www.iza.org](http://www.iza.org).

Boston, Jonathan and Davey, Judith A. (2006), *Implications of population ageing: Opportunities and Risks*, Institute of Policy Studies, School of Government, Victoria University of Wellington.

Dalziel, Robert (2008), *Ageing populations: Strategies for best practice*, University of Birmingham and Audit Commission, [www.inlogov.bham.ac.uk](http://www.inlogov.bham.ac.uk).

Dixon, Sylvia (2009), *Who hires older workers? A first look at industry variations in recruitment of mature workers*, [www.stats.govt.nz](http://www.stats.govt.nz).

Dixon, Sylvia and Hyslop, Dean (2008), *The employment and retirement transitions of New Zealanders aged in their 60s: Evidence from LEED*, [www.stats.govt.nz](http://www.stats.govt.nz). *Global Burden of Disease profile: New Zealand*, [www.healthmetricsandevaluation.org](http://www.healthmetricsandevaluation.org).

Independent Monitoring Mechanism of the Convention on the Rights of Persons with Disabilities (2012), *Making disability rights real: Annual report*, [www.dpa.org.nz](http://www.dpa.org.nz), or [www.hrc.co.nz](http://www.hrc.co.nz), or [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz).

Khawaja, Mansoor, and Boddington, Bill (2010), Informing the debate on population ageing in New Zealand: The role of Statistics New Zealand, *New Zealand Population Review*, Vol. 36, pages 117-135.

Khawaja, Mansoor, and Boddington, Bill (2009), Too early to retire? Growing participation of older New Zealanders in the labour force, *New Zealand Population Review*, Vol. 35, pages 75-93.

Koopman-Boyden, Peggy and Waldegrave, Charles (editors) (2009), *Enhancing wellbeing in an ageing society: Monograph No.1*, Population Studies Centre and Family Centre Social Policy Research Unit, [www.weas.net.nz](http://www.weas.net.nz), [www.familycentre.org.nz](http://www.familycentre.org.nz), or [www.waikato.ac.nz](http://www.waikato.ac.nz).

Lavarack, John and Ohlin, Jackie (2013), *Looking ahead: A guide for local government practitioners' use of demographic data*, Australian Centre of Excellence of Local Government, [www.ancelg.org.au](http://www.ancelg.org.au).

Ministry of Social Development (2007), *Positive Ageing Indicators 2007*, [www.msd.govt.nz](http://www.msd.govt.nz).

Ministry of Social Development (2011), *Briefing to the incoming Minister, New Zealanders: Getting older, doing more*, [www.msd.govt.nz](http://www.msd.govt.nz).

Ministry of Social Development (2011), *The business of ageing: Realising the economic potential of older people in New Zealand: 2011-51*, [www.msd.govt.nz](http://www.msd.govt.nz).

Office of the Prime Minister's Science Advisory Committee (2013), *The role of evidence in policy formation and implementation: A report from the Prime Minister's Chief Science Advisor*, [www.pmcsa.org.nz](http://www.pmcsa.org.nz).

Office for Senior Citizens, Ministry of Social Development (2007), *Report from New Zealand/Aotearoa to the Commission for Social Development, United Nations, February 2007: Madrid International Plan of Action on Ageing*, [www.mfat.govt.nz](http://www.mfat.govt.nz).

Office of the Auditor-General (2013), individual reports on the Madrid indicators, [www.oag.govt.nz](http://www.oag.govt.nz).

Perry, Bryan (2013) *Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2012*, [www.msd.govt.nz](http://www.msd.govt.nz).

*Report of National Science Challenges Panel* (2013), [www.msi.govt.nz](http://www.msi.govt.nz).

Statistics New Zealand (2004), *Older New Zealanders – 65 and beyond*, [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009), *Ageing of ethnic groups*, [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009), *The impact of structural population change*, [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009), *Internal migration of New Zealand's 65+ population*, [www.stats.govt.nz](http://www.stats.govt.nz).

Statistics New Zealand (2009), *The legacy of past childbearing decisions*, [www.stats.govt.nz](http://www.stats.govt.nz).

The Treasury (2013), *Affording our Future: Statement on New Zealand's Long-term Fiscal Position*, [www.treasury.govt.nz](http://www.treasury.govt.nz). A wide range of supporting background, analytical, and research papers is also published on the Treasury's website.

United Nations Population Fund (New York) and HelpAge International (London) (2012), *Ageing in the twenty-first century: A celebration and a challenge*, [www.unfpa.org/ageingreport/](http://www.unfpa.org/ageingreport/).

World Health Organisation (2002), *Active ageing: A policy framework*, [www.who.int/en/](http://www.who.int/en/). Other active ageing documents are available on the same website, such as *Towards age-friendly primary health care*.

# Publications by the Auditor-General

Other publications issued by the Auditor-General recently have been:

- Annual Report 2012/13
- Using development contributions and financial contributions to fund local authorities' growth-related assets
- Commentary on *Affording Our Future: Statement on New Zealand's Long-term Fiscal Position*
- Annual Plan 2013/14
- Learning from public entities' use of social media
- Inquiry into Mayor Aldo Miccio's management of his role as mayor and his private business interests
- Managing public assets
- Insuring public assets
- Evolving approach to combating child obesity
- Public sector financial sustainability
- Education for Māori: Implementing *Ka Hikitia – Managing for Success*
- Statement of Intent 2013–2016
- Central government: Results of the 2011/12 audits
- Health sector: Results of the 2011/12 audits
- Transport sector: Results of the 2011/12 audits
- Local government: Results of the 2011/12 audits
- Crown Research Institutes: Results of the 2011/12 audits
- Inquiry into decision by Hon Shane Jones to grant citizenship to Mr Yang Liu
- Ministry for Primary Industries: Preparing for and responding to biosecurity incursions

## Website

All these reports, and many of our earlier reports, are available in HTML and PDF format on our website – [www.oag.govt.nz](http://www.oag.govt.nz). Most of them can also be obtained in hard copy on request – [reports@oag.govt.nz](mailto:reports@oag.govt.nz).

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