

NEW ZEALAND

EMPLOYMENT AND ENVIRONMENTAL SUSTAINABILITY FACT SHEETS 2017

The *Employment and Environmental Sustainability Fact Sheets* series provides key features of employment and environmental sustainability performance. Jobs that are green and decent are central to sustainable development and resource productivity. They respond to the global challenges of environmental protection, economic development and social inclusion. Such jobs create decent employment opportunities, enhance resource efficiency and build low-carbon, sustainable societies. The fact sheets include the most recent available data for selected indicators¹ on employment and environmental sustainability: (i) employment in environmental sectors; (ii) skill levels; (iii) vulnerability of jobs; (iv) jobs in renewable energy; and (v) scoring on the Environmental Performance Index.

Figure 1. Map of New Zealand



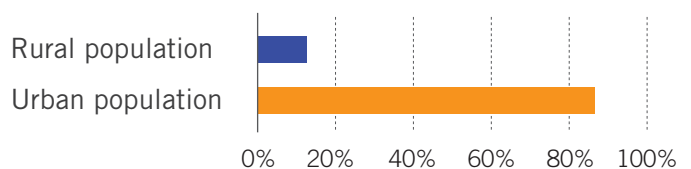
New Zealand² encompasses two main islands (North and South Islands) in the southern Pacific Ocean. Australia is approximately 1,500 km across the Tasman Sea (Fig. 1). Its population is mostly urban and growing, with a fertility rate of 2 children and life expectancy at 81.5 years. Around 65 per cent of the population is of legal working age (15–64 years) (Fig. 2).

Figure 2. Demographics for New Zealand

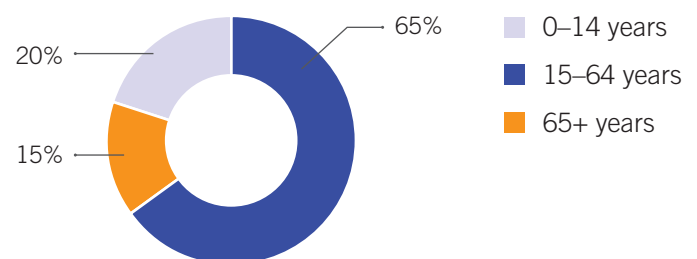
Population: 4.7 million



Population growth rate	Fertility rate	Life expectancy at birth
2.1%	2 children	81.5 years



Population age categories



Note: All data for 2016, except fertility and life expectancy, which are 2015.

Source: ILO compilation using World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org> (accessed 30 July 2017).

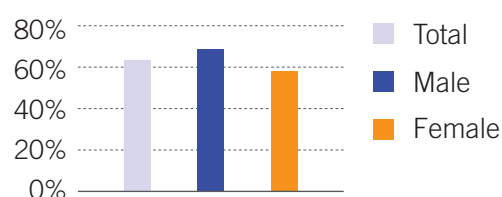
1. The fact sheet is based on available data only.

2. New Zealand became a member of the International Labour Organization in 1919, the year it was founded.

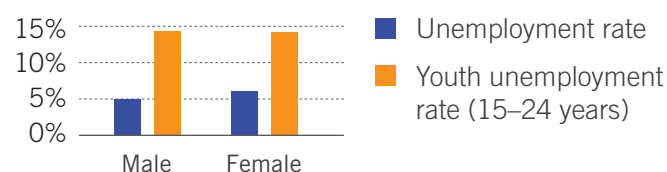
As of 2017, the labour force participation rate is 67.2 per cent and the employment-to-population ratio is 63.5 per cent. Both of those rates are more than 11 percentage points higher for men than for women. The total unemployment rate is 5.5 per cent, and the youth unemployment rate is 14.3 per cent, with gender parity in youth unemployment rate. The youth (aged 15–24 years) not in employment, education or training rate was 12 per cent in 2016. Formal employment is heavily reliant on services³ and on highly and medium-skilled occupations (Fig. 3).

Figure 3. Basic employment statistics for New Zealand, 2017

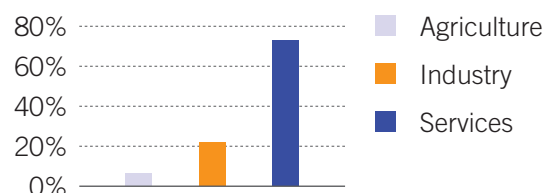
Employment-to-population ratio (15+ years)



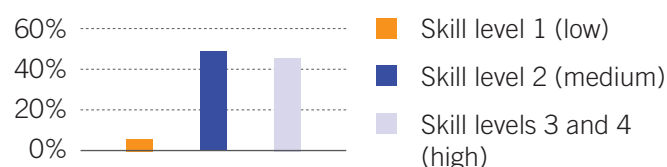
Unemployment



Employment by sector (15+ years)



Employment by occupation

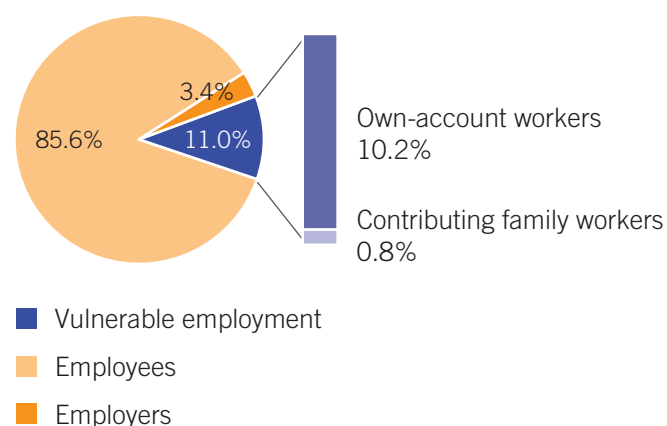


Note: ILO estimates. Labour force participation rate and unemployment: aged 15 years and older. Youth unemployment: aged 15–24 years. Employment by occupation: skill level 1 (low) for elementary occupations; skill level 2 (medium) for clerical, service and sales workers, skilled agricultural and trade workers, plant machinists and assemblers; and skill level 3 and 4 (high) for managers, professionals and technicians.

Source: ILO compilation using ILOSTAT, <http://www.ilo.org/ilostat> (accessed 17 July 2017).

Vulnerable employment in New Zealand accounts for 11 per cent of the labour force, with the majority of those workers having own-account status (Fig. 4). Own-account and contributing family workers are more likely to experience low job and income security than employees and employers, as well as lower coverage by social protection systems and employment regulation.

Figure 4. Vulnerable employment, by status, 2017



Note: Vulnerable employment includes own-account workers and contributing family workers.

Source: ILO compilation using ILOSTAT, <http://www.ilo.org/ilostat> (accessed 17 July 2017).

According to the *World Risk Report*,⁴ New Zealand has a low World Risk Index score. It ranks 116 (of 171 countries) because, despite its high exposure to natural hazards, it has the institutional capacity to respond and adapt. Only 0.9 per cent of the total land area is below 5 meters above sea level, even though 4.2 per cent of the total population lived in that area in 2010.⁵ According to the Emergency Events Database,⁶ there was an increase in natural disasters⁷ from the 1960s to the 1980s but a notable decline since then (Fig. 5). Associated damage costs since the 1960s has increased substantially (Fig. 5), however, mostly due to storms, floods, tropical cyclones, droughts, heat waves and fires which resulted in 76 deaths (1968–2016). Although New Zealand has well-established institutional capacity, further developing preventive measures to limit infrastructure and property damage and increasing capacity for small businesses to respond to climate events can be a source of decent job creation while increasing resilience.

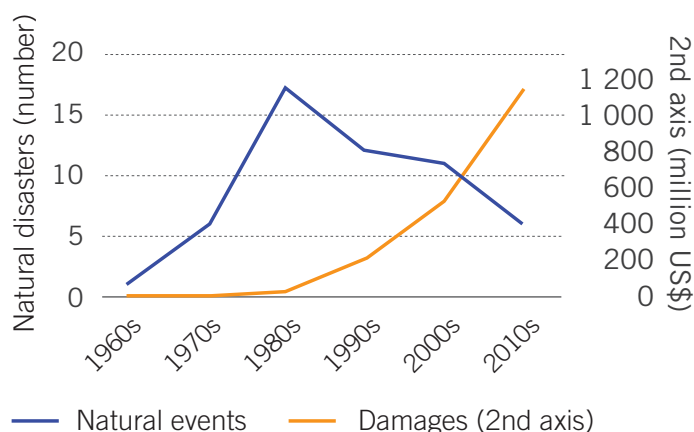
3. Informal employment (self-employed and contributing family members) is excluded from the agriculture calculations.

4. Bündnis Entwicklung Hilft and United Nations University: *World risk report 2016* (Berlin, 2016), <http://weltrisikobericht.de/english/>.

5. World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org/>.

6. EM-DAT: The Emergency Events Database – Université catholique de Louvain (UCL) – CRED, D. Guha-Sapir – www.emdat.be, Brussels, Belgium.

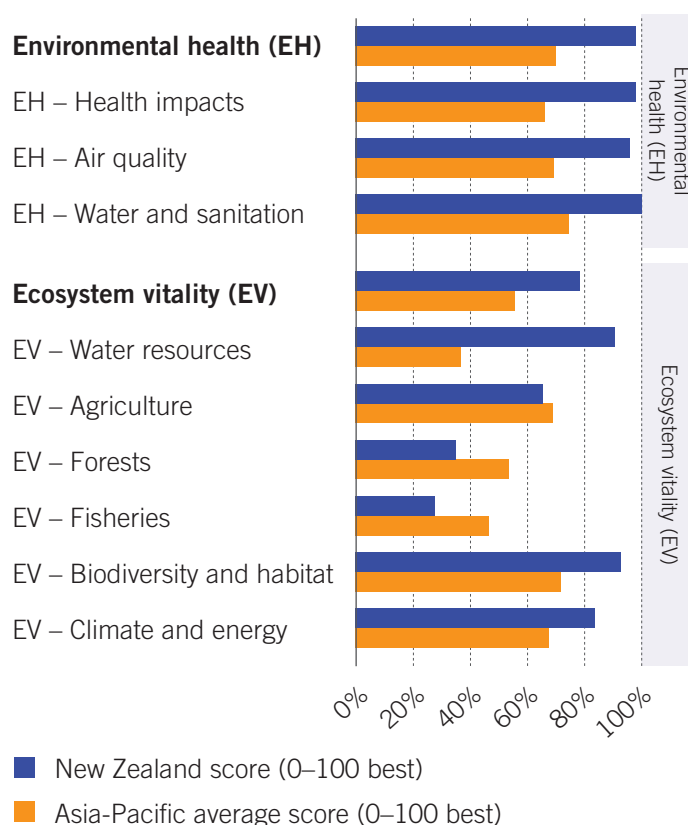
7. Climatological, hydrological and meteorological disasters.

Figure 5. Natural disaster occurrence and damage costs in New Zealand, 1960s–2010s

Note: Natural events include climatological, hydrological and meteorological disasters. 2010s data are only for the first half of the decade.

Source: ILO compilation using EM-DAT: The Emergency Events Database – Université catholique de Louvain (UCL) – CRED, D. Guha-Sapir – www.emdat.be, Brussels, Belgium.

New Zealand ranks 11 of 180 countries in the Environmental Performance Index (EPI), with a score of 88 (with 0 furthest from the high-performance benchmark target of 100). New Zealand outperforms the average score for Asia and the Pacific in most of the EPI categories (Fig. 6). Despite the excellent overall performance in environmental health, there is room for improvement within ecosystem vitality (in agriculture, forests and fisheries). Action to improve ecosystem vitality, climate change and resilience to weather disasters have the potential to provide job creation, green economy growth and innovation in the country.

Figure 6. Environmental Performance Index 2016 for New Zealand

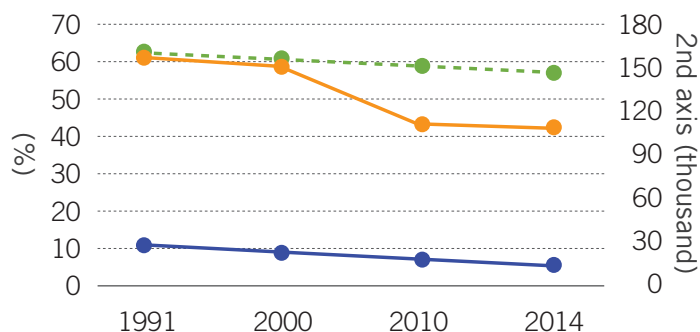
Note: Score 0–100 best. Asia-Pacific: Each score is an average of all data for ILO member States in the region, excluding four countries with no data (Cook Islands, Marshall Islands, Palau and Tuvalu).

Source: ILO compilation using, A. Hsu et al.: 2016 *Environmental Performance Index* (New Haven, CT, Yale University, 2016), www.epi.yale.edu.

Rural population growth was 1.6 per cent in 2015. The share of agricultural land in total land area, although still large, decreased between 1991 and 2014, while agricultural employment dropped from 161,000 to 146,000 people. The share of agricultural employment in total employment fell by approximately 5 percentage points due to the combination of declining agricultural employment and job creation in other sectors (Fig. 7). Forest area slightly increased its share of total land area between 1990 and 2014, to 38.6 per cent, while the terrestrial protected area increased 7.9 percentage points, to 32.5 per cent in 2014. Marine protected area increased, from 4.7 per cent in 1990 to 12.5 per cent of total territorial waters in 2014 (Fig. 8). In 2015, 6.1 per cent of all employment was in the agriculture, forestry and fishing sector (Fig. 9). Although the country's reliance on agriculture is stagnating, there are opportunities for job creation for sustainable production and organic farming. There will be greater prospects for employment

opportunities with the commitment to transition to a low-carbon and resource-efficient economy, such as jobs in resource management and environmental services.⁸

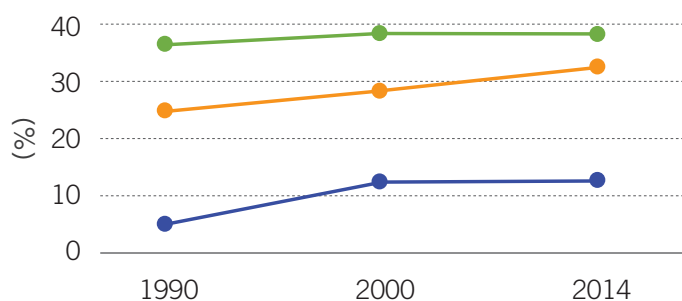
Figure 7. Agricultural land and agricultural employment, 1991–2014



- Agricultural land (% of land area)
- Employment in agriculture (% of total employment)
- Agricultural employment (thousand, 2nd axis)

Source: ILO compilation using World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org/>; ILOSTAT, <http://www.ilo.org/ilostat> (accessed 30 July 2017).

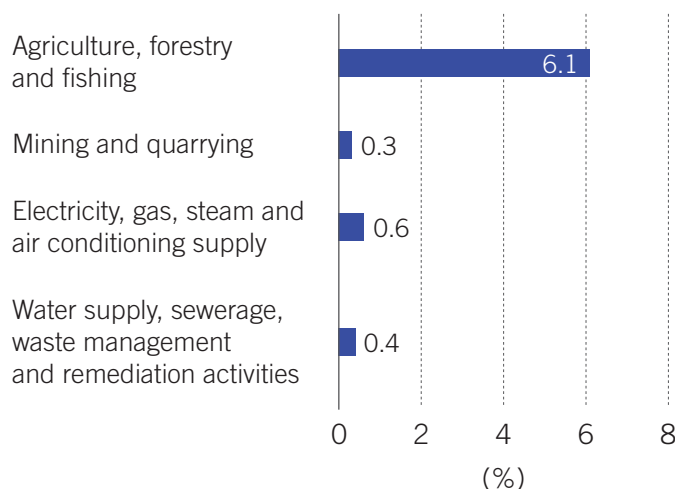
Figure 8. Forest area and terrestrial and marine protected areas, 1990–2014



- Terrestrial protected area (% of total land area)
- Marine protected area (% of terrestrial waters)
- Forest area (% of land area)

Source: ILO compilation using World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org/> (accessed 30 July 2017).

Figure 9. Employment in sectors with strong green jobs potential, 2015



Note: These sectors have the most potential for green job opportunities. Employment by selected 1-digit sector level (ISIC-Rev. 4, 2008).

Source: ILO compilation using ILOSTAT, <http://www.ilo.org/ilostat> (accessed 16 November 2017).

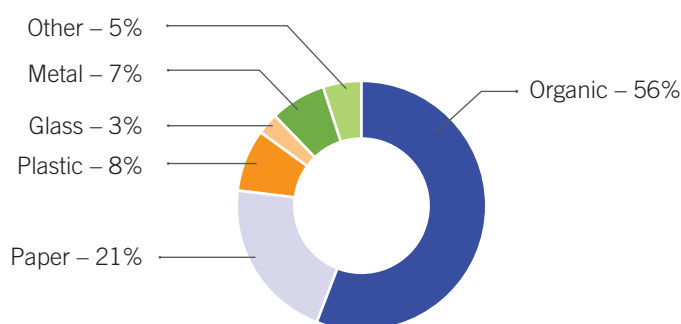
All New Zealand households have access to improved water supply and sanitation.⁹ According to the World Bank and based on the most recent available data,¹⁰ the country's municipal solid waste generation in 2006 was 3.68 kg per capita per day and is expected to drop slightly, to 3 kg per capita per day, by 2025. The majority of the waste in 1995 was organic (at 56 per cent), followed by paper (at 21 per cent) and plastics (at 8 per cent) (Fig. 10). In 1995, 85 per cent of waste was disposed into landfill and 15 per cent was recycled.¹¹ Only 0.4 per cent of the country's labour force was employed in water supply, sewerage, waste management and remediation activities in 2016 (Fig. 9). There will be great potential for further job creation as the reliance on landfill decreases and recycling and composting become standard practice.

8. Organisation for Economic Co-operation and Development: The jobs potential of a shift towards a low-carbon economy, *OECD Green Growth Papers*, No. 2012/01 (Paris, 2012), <http://dx.doi.org/10.1787/5k9h3630320v-en>.

9. World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org/>.

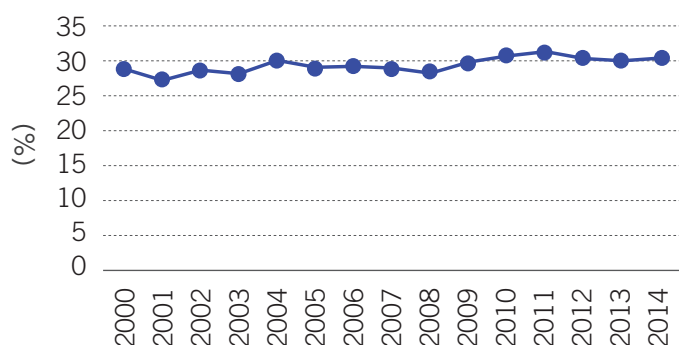
10. World Bank: *What a waste: A global review of solid waste management* (Washington, DC, 2012).

11. *ibid.*

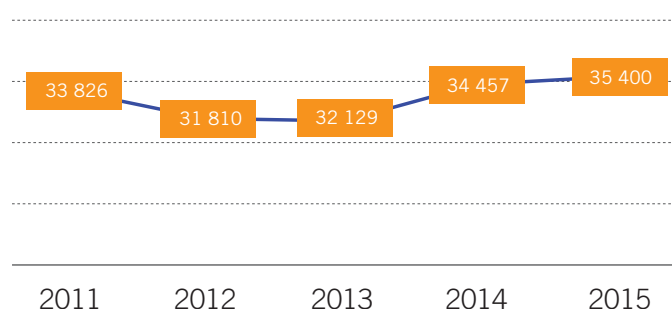
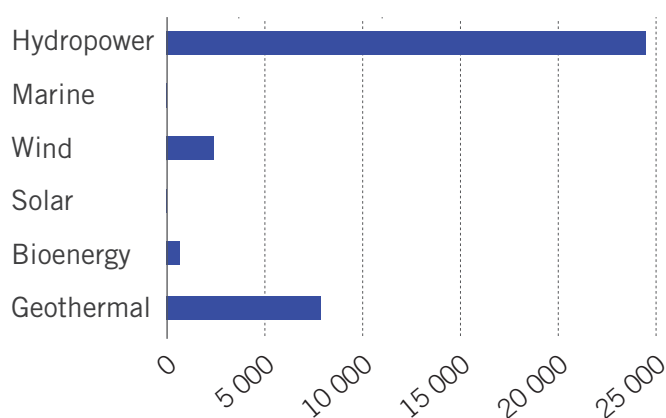
Figure 10. Waste composition, 1995

Source: ILO compilation using World Bank: *What a waste: A global review of solid waste management* (Washington, DC, 2012).

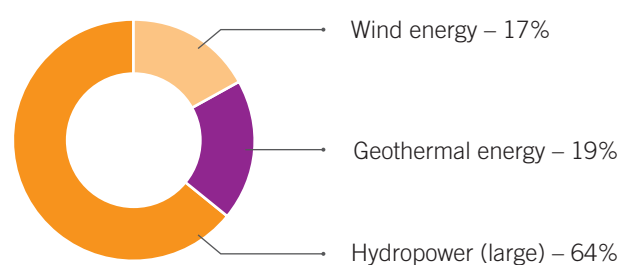
In 2014, more than 95 per cent of the country's population relied primarily on clean fuel and technology, in the sense that they do not create indoor pollution within the home.¹² The share of renewable energy in total energy consumption fluctuated between 2000 and 2014, although there was a slight increase. In 2014, the share of renewable energy was 30.9 per cent (Fig. 11). Renewable energy generation declined between 2011 and 2012, but it has since been on the increase, with hydropower and geothermal the main sources in 2015 (Fig. 12). In 2016, 3,600 people were employed in the renewable energy sector, with 64 per cent of them in hydropower (Fig. 13). The New Zealand employment rate in electricity, gas, steam and air conditioning was 0.6 per cent in 2015 (Fig. 9). With the need for increasing reliance on renewable energy, these utility subsectors will provide job opportunities in the future.

Figure 11. Renewable energy share in total final energy consumption, 2000-14

Source: ILO compilation using UN: SDG indicators: Global database (2017), <https://unstats.un.org/> (accessed 17 July 2017).

Figure 12. Renewable energy generation, 2011-15**Total renewable energy electricity generation (GWh)****Renewable energy electricity generation (GWh), by technology 2015**

Source: ILO compilation using International Renewable Energy Agency: Dashboards (2017), <http://resourceirena.irena.org/gateway/dashboard/> (accessed 17 July 2017).

Figure 13. Renewable energy employment, by energy source, 2016

Note: Data limitations apply for certain technologies in certain countries. The lack of data reported for any specific technology may thus be indicative of a data gap, rather than the absence of renewable energy jobs using that technology.

Source: ILO compilation using International Renewable Energy Agency: Dashboards (2017), <http://resourceirena.irena.org/gateway/dashboard/> (accessed 17 July 2017).

12. The proportion of population with primary reliance on clean fuels and technology is calculated as the number of people using clean fuels and technologies for cooking, heating and lighting divided by total population reporting any cooking, heating or lighting, expressed as a percentage. "Clean" is defined by the emission rate targets and specific fuel recommendations (against unprocessed coal and kerosene) included in the normative World Health Organization guidelines for indoor air quality; see the data for household fuel combustion, <https://unstats.un.org/sdgs/metadata/files/Metadata-07-01-02.pdf>.

Better data collection relating to the green economy and the environmental sector would be valuable for policy-makers in New Zealand and Asian-Pacific countries. Better data on green and decent jobs is particularly needed to assess the impact of climate change and climate-related policies on social inclusion. Without better data, it will be difficult to determine what policy changes are needed to assure a just transition to environmental sustainability and to monitor progress going forward.

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