

TONGA

EMPLOYMENT AND ENVIRONMENTAL SUSTAINABILITY FACT SHEETS 2019

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 recently available data for selected indicators on employment and environmental sustainability: (i) employment in environmental sectors; (ii) skill levels; (iii) vulnerability of jobs; (iv) jobs in renewable energy; (v) scoring on the Environmental Performance Index; and (vi) air quality.

DEMOGRAPHICS

Tonga¹ is a South Pacific island nation consisting of 171 islands, with only 45 of them inhabited (Fig. 1). Its population is mostly rural and growing, with a fertility rate of 3.6 children and life expectancy of 73.3 years. Around 58 per cent of the population is of legal working age (15–64 years) (Fig. 2).

Figure 1. Map of Tonga

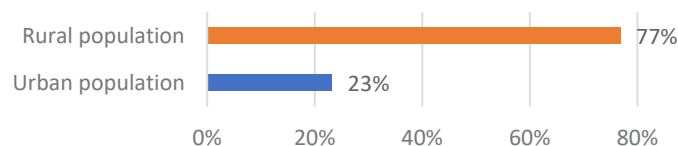


Figure 2. Tonga population statistics

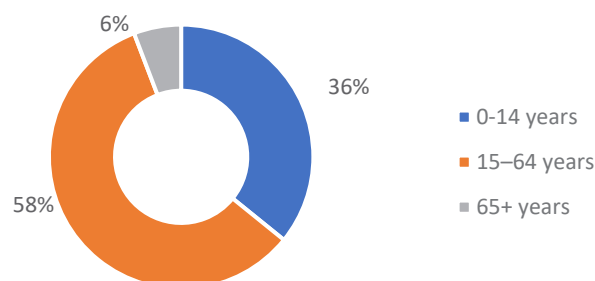
Population:² 0.11 million



Population growth rate	Fertility rate	Life expectancy at birth
0.8%	3.6 children	73.3 years



Population age categories



Note: data is for 2017, except fertility rate and life expectancy (2018 data).

Source: ILO compilation using World Development Indicators, last updated: 28/06/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> and UN ESCAP Statistics. http://data.unescap.org/escap_stat/ (accessed on 18 July 2018).

¹ Tonga became a member of the International Labour Organization in 2016.

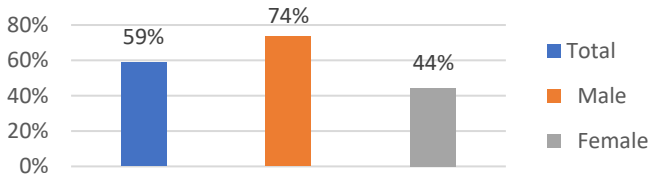
² Population data based on 2017 data.

LABOUR FORCE

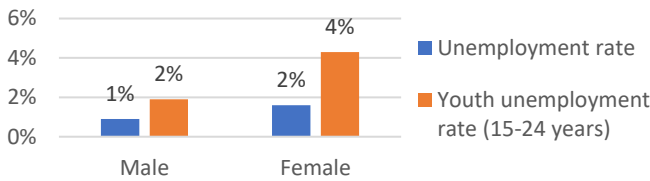
In 2018, the labour force participation rate was 59.5 per cent and the employment-to-population ratio was 58.8 per cent. Both these rates are more than 29 percentage points higher for men than for women. The total unemployment rate was 1.2 per cent, and the youth unemployment rate was 2.7 per cent, with the female youth unemployment rate 2.4 percentage points higher than the male rate. Employment is nearly evenly divided among services (37 per cent), agriculture (31.5 per cent) and industry (31.5 per cent) and is mainly in medium-skilled occupations (Fig. 3).

Figure 3. Basic employment statistics for Tonga, 2018

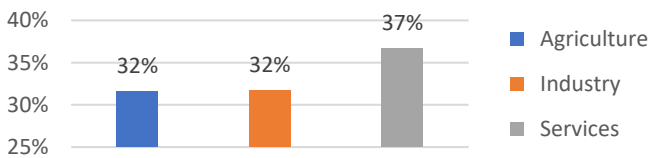
Employment-to-population, 2018 (15+ years)



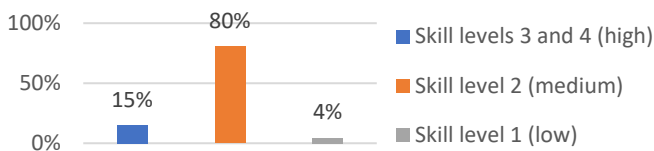
Unemployment, 2018



Employment by sector, 2018 (15+ years)



Employment by occupation, 2018

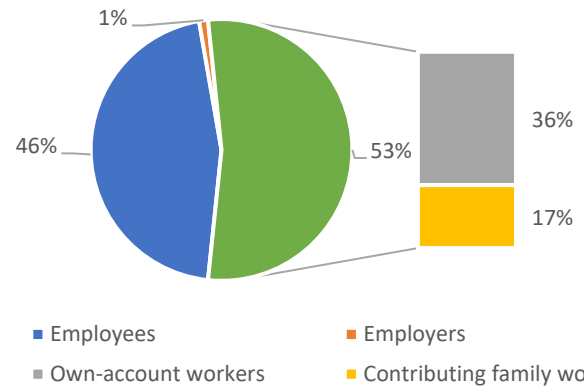


Note: ILO estimates. Labour force participation rate and unemployment: aged 15 years and older. Youth unemployment: aged 15–24 years. Employment by occupation: skill level 1 (low) for elementary occupations; skill level 2 (medium) for clerical, service and sales workers, skilled agricultural and trade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

Source: ILO estimates and compilation using ILOSTAT, www.ilo.org/ilostat (accessed 18 July 2018).

Vulnerable employment in Tonga as of 2018 accounted for 53.3 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, 2018

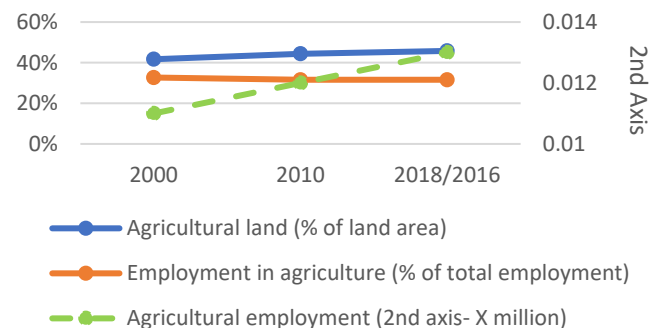


Note: ILO estimates. Vulnerable employment includes own-account workers and contributing family workers from ILO status of employment data.

Source: ILO estimates and compilation using ILOSTAT, www.ilo.org/ilostat (accessed 18 July 2018).

Rural population growth was 0.9 per cent in 2017. The share of agricultural land in total land area increased by 4 percentage points between 2000 and 2016, and agricultural employment also increased from 0.011 million to 0.013 million people. The share of agricultural employment in total employment fell by approximately 1 percentage point due to slightly faster job creation in other sectors (Fig. 5).

Figure 5. Agricultural land and agricultural employment, 2000-2018



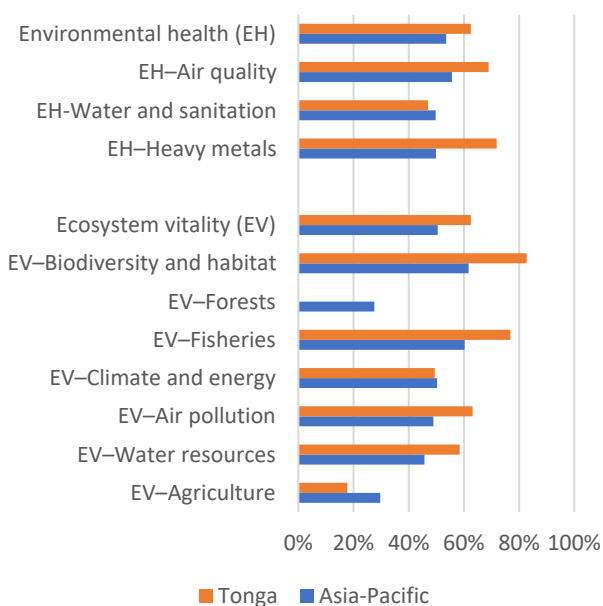
Note: The latest data for agricultural land is from 2016 and other data is from 2018.

Source: ILO compilation using World development indicators, last updated: 28/06/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 20 July 2018).

ENVIRONMENTAL ISSUES

Tonga ranks at number 57 of 180 countries in the Environmental Performance Index (EPI),³ with a score of 62.5 (with 0 being furthest from the high-performance benchmark target of 100). Tonga outperforms the average score for Asia and the Pacific (Fig. 6) in some of the EPI categories, including air quality, heavy metals, biodiversity and habitat, fisheries, air pollution and water resources. However, there is room for improvement, especially in environmental health (in water and sanitation) and ecosystem vitality (in forests, climate and energy, and agriculture). Action to address climate change and improve environmental health, ecosystem vitality and resilience to weather disasters all have the potential to provide job creation, green economy growth and innovation in Tonga.

Figure 6. Environmental performance index for Tonga, 2018



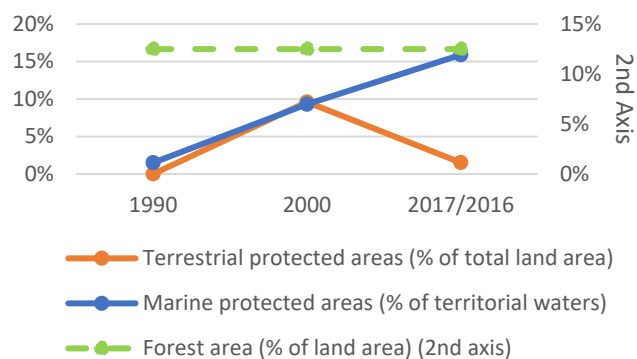
Note: Score 0 (worst) -100 (best). Asia-Pacific: data is for ILO member states in the region, excluding Cook Islands, Marshall Islands, Palau and Tuvalu.

Source: ILO compilation using "2018 EPI Scores - Current". EPI Yale.

Forest area remained steady between 1990 and 2016, at 13 per cent of total land area. From 1990 to 2017, the share of terrestrial protected area increased, reaching 9.6 per cent of total land area and then decreased sharply, down to 1.5 per cent of total land area. The proportion of marine protected area increased

significantly, by 14.4 per cent (Fig. 7). There will be greater prospects for employment opportunities if there is a commitment to transition to a low carbon and resource-efficient economy, such as jobs in resource management and environmental services.⁴

Figure 7. Forest area, terrestrial and marine protection area, 1990-2017

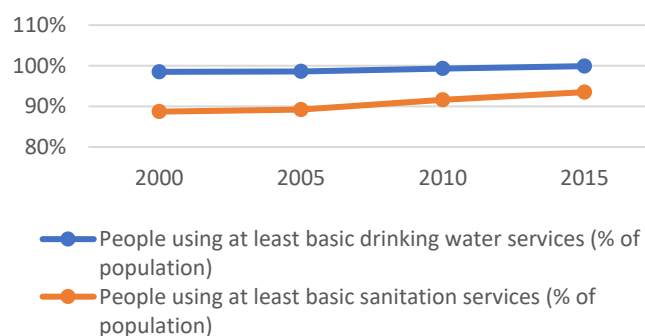


Note: data for forest area is from 2016 and other data is from 2017.

Source: ILO compilation using World development indicators, last updated: 28/06/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (Accessed on 19 February 2019).

Since 2000, there has been a slight increase in access to basic drinking water, to an average of 99.9 per cent in 2015, and access to basic sanitation, to an average of 93.5 per cent in 2015 (Fig. 8). Both are still below the ideal threshold of 100 per cent. Improvement in water supply and sanitation access could provide decent job opportunities in the future.

Figure 8. Basic drinking water and sanitation access, 2000-2015



Source: ILO compilation using World development indicators, last updated: 21/05/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 25-06-2018).

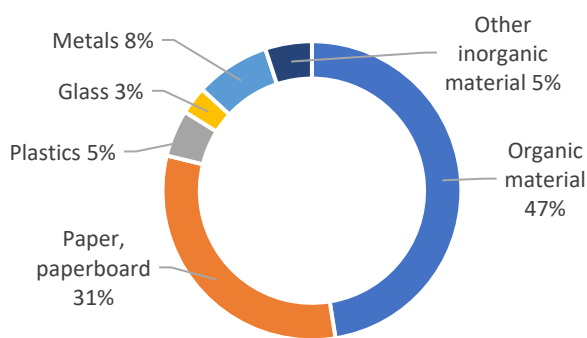
Growth of the urban population in Tonga has meant an increase in solid waste. Waste collection varies between

³ Yale Center for Environmental Law & Policy / Center for International Earth Science Information Network at Columbia University. "2018 EPI Scores - Current". EPI Yale. Retrieved 14-06-2018. Available: <https://epi.envirocenter.yale.edu>

⁴ 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>.

the inner cities and the country’s outer urban areas. According to the World Bank, municipal solid waste generation in Tonga in 2004 was 3.7 kilograms per capita per day and is expected to decrease to 3.5 kilograms per capita per day by 2025.⁵ The majority of the waste in 1994 was organic (47 per cent), followed by paper and paperboard (31 per cent) (Fig. 9). The much-needed implementation of a municipal waste management system for collection, safe and sustainable disposal, recycling and composting practices could create more green jobs that help the environment and general health.

Figure 9. Waste composition, 1994



Note: Data for textile waste composition is not available.

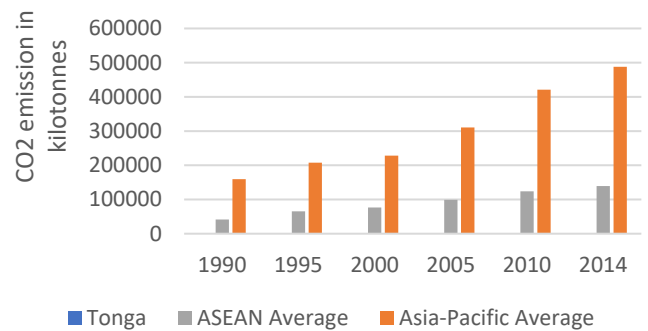
Source: ILO compilation using UNSD-Environment statistics (released on 30-Apr-2018; <https://unstats.un.org/unsd/envstats/qindicators.cshml>) (accessed on 20 July 2018).

AIR QUALITY

The carbon dioxide (CO²) emission levels for Tonga have increased gradually by an average of 2 per cent from 1990 to 2014 (Fig. 10).⁶ The increase was due to the following major sources: transport fuel (primarily for land transport); followed by electricity generation.⁷ The level of emissions is so much lower than the Asia-Pacific and ASEAN averages that it appears negligible.

The PM_{2.5} (atmospheric particulate matter with a diameter of less than 2.5 micrometres) emission levels for Tonga show a decreasing trend between 2000 and 2016 (Fig. 11). Overall PM_{2.5} emission levels did not exceed the World Health Organization’s Air Quality Guideline threshold level, thus indicating low emissions. Tonga shows significantly lower levels of emission than the ASEAN and Asia-Pacific averages.

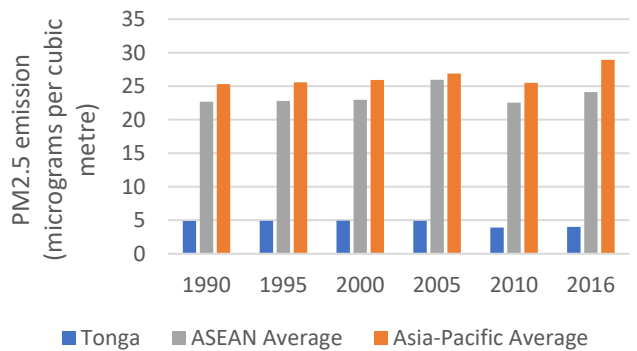
Figure 10. CO² emissions for Tonga, 1990-2014



Note: Data for ASEAN and Asia-Pacific are the average of all the ILO member states of the regions. Asia-Pacific: data excludes Cook Islands, Timor-Leste (1990, 1995, 2000).

Source: ILO compilation using World Bank indicators; <https://data.worldbank.org/indicator/EN.ATM.PM25.MC.M3?view=chart> (accessed on 04-07-2018).

Figure 11. PM_{2.5} emissions for Tonga, 1990-2016



Note: Data for ASEAN and Asia-Pacific are the average of all the ILO member states of the regions. Asia-Pacific: data excludes Cook Islands, Palau and Tuvalu.

Source: ILO compilation using World Bank indicators; <https://data.worldbank.org/indicator/EN.ATM.PM25.MC.M3?view=chart> (accessed on 04-07-2018).

Applying the Just Transition Guidelines, an area of possible intervention includes efforts to reduce harmful emissions, which could potentially generate green jobs in high emitting sectors such as transportation and fuel-intensive industries. Reducing emissions is a significant challenge, which can be achieved not only by mitigation methods but also by adapting to, and coping with, the changes required by the transition to a low-carbon economy.

⁵ World Bank: *What a waste: A global review of solid waste management* (Washington, DC, 2012).

⁶ The value is calculated on the basis of CAGR (Compound Annual Growth Rate)

⁷ Kingdom of Tonga, *intended nationally determined contributions. Towards achieving the objective of the United Nations Framework Convention on Climate Change. 4 December 2015.*

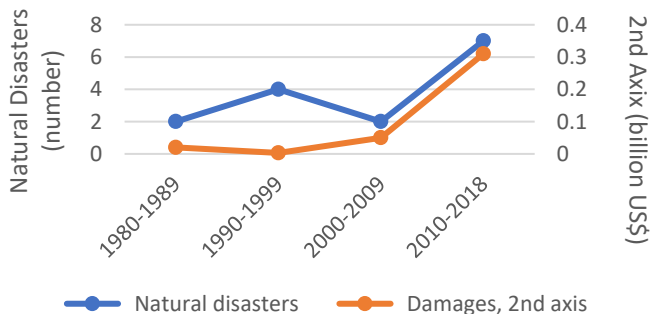
<http://www4.unfccc.int/ndcregistry/PublishedDocuments/Tonga%20First/Tonga%20INDC.pdf>

CLIMATE CHANGE IMPACTS

According to the *World Risk Report*,⁸ Tonga is among the top five high risk countries in the world. It ranks number 2 of 171 countries because of its very high exposure and high vulnerability to natural disasters and environmental damage, and limited institutional capacity to cope and adapt. Part of the country’s vulnerability relates to the 7.5 per cent of the total population who, in 2010, lived in the 7.3 per cent of the total land area below 5 metres above sea level.⁹

According to the *Emergency Events Database*,¹⁰ there was a substantial increase in natural disasters¹¹ and associated damage costs between 2009 and 2018 (Fig. 12). The natural disasters in that time were mostly tropical cyclones and droughts. Damage costs have increased significantly since 2009. Developing preventative measures to limit infrastructure and property damage and increase institutional capacity to respond to climate events, particularly for small businesses, can be a source of decent job creation while building resilience.

Figure 12. Natural disaster occurrence and damage costs in Tonga



Note: Natural events include climatological, hydrological and meteorological disasters.

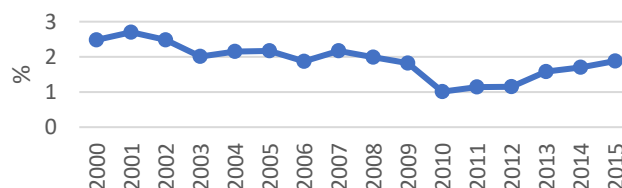
Source: EM-DAT: The emergency events database - Universite catholique de Louvain (UCL) - CRED, D. Guha-Sapir - www.emdat.be, Brussels, Belgium. Data accessed on: 20 July 2018.

GREEN JOBS POTENTIAL

In 2017, approximately 59.7 per cent of the population relied primarily on clean fuel and technology, in the sense that these do not create pollution within the home.¹² The share of renewable energy in total energy consumption has not kept pace with overall

consumption. In 2000, it was 2.48 per cent but fell to 1.01 per cent in 2010 and, after some fluctuation, reached 1.88 per cent in 2015 (Fig. 13). However, renewable energy electricity generation has increased over the last 11 years, with solar power being the main renewable energy source in 2016 (Fig. 14). With the push for increasing reliance on renewable energy, there is the potential for decent job opportunities in the future.

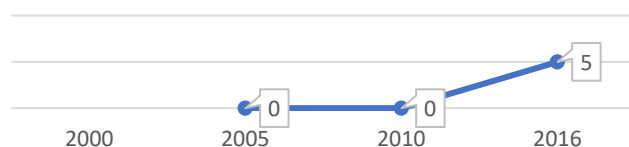
Figure 13. Renewable energy share in total energy consumption, 2000-15



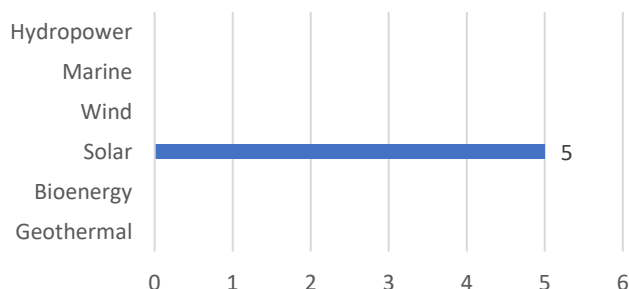
Source: ILO compilation using United Nations statistics division. SDG indicators: Global database. Available at: <https://unstats.un.org/sdgs/indicators/database/> (accessed on 19 July 2018).

Figure 14. Renewable energy electricity generation, 2012-2016

Total renewable energy electricity generation (gigawatt hours - GWh)



Renewable energy electricity generation (GWh) in 2016, by technology



Note: No data was available for 2000 for renewable energy electricity generation.

Source: ILO compilation using source: IRENA (2018); Renewable electricity capacity and generation statistics, June 2018. Available at: <http://resourceirena.irena.org>

⁸ Bündnis Entwicklung Hilft and United Nations University - EHS (2017) World Risk Report 2017, available at: <http://weltrisikobericht.de/english/>

⁹ World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 7 August 2018).

¹⁰ EM-DAT: The emergency events database - Universite catholique de Louvain (UCL) - CRED, D. Guha-Sapir - www.emdat.be, Brussels, Belgium. Data accessed on: 20 July 2018.

¹¹ Climatological, hydrological and meteorological disasters.

¹² The proportion of the 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 the 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 very valuable for policy-makers in Asia-Pacific countries. In particular, better data on green and decent jobs is 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 ensure a just transition to environmental sustainability and to monitor progress going forward.



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