

THAILAND

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

Thailand¹ is located in South-East Asia. The country shares boundaries with Lao People's Democratic Republic to the north and northeast, Cambodia to the east, Malaysia to the south, and Myanmar to the north and the west. (Fig. 1). Its population is mostly rural and growing, with a fertility rate of 1.5 children and life expectancy of 75.7 years. Around 71 per cent of the population is of legal working age (15–64 years) (Fig. 2).

Figure 1. Map of Thailand

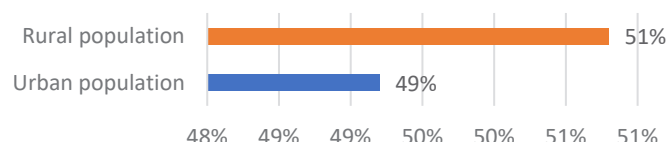


Figure 2. Thailand population statistics

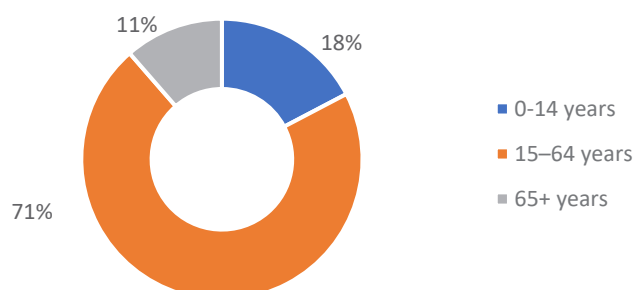
Population:² 69.04 million



Population growth rate	Fertility rate	Life expectancy at birth
0.3%	1.5 children	75.7 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 Thailand became a member of the International Labour Organization in 1919.

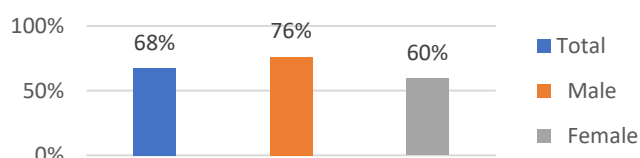
² Population data based on 2017 data.

LABOUR FORCE

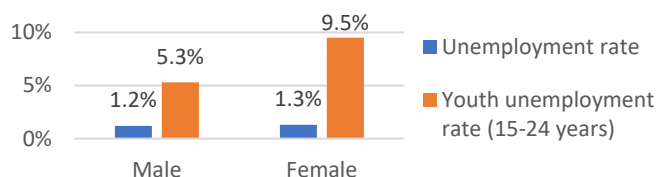
In 2018, the labour force participation rate was 68.4 per cent and the employment-to-population ratio was 67.5 per cent. Both these rates are more than 16 percentage points higher for men than for women. The total unemployment rate in 2018 was 1.3 per cent, and the youth unemployment rate was 7 per cent, with the female youth unemployment rate 4.2 percentage points higher than the male rate. The proportion of youths aged 15-24 years not in education, employment or training was 15 per cent in 2016.³ Employment is heavily reliant on services and agriculture, and on medium-skilled occupations (Fig. 3).

Figure 3. Basic employment statistics for Thailand, 2018

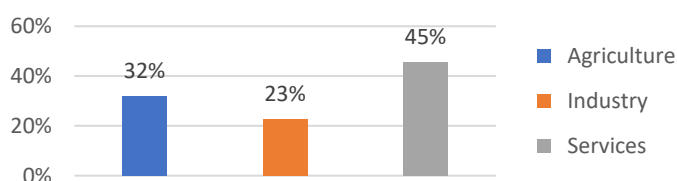
Employment-to-population, 2018 (15+ years)



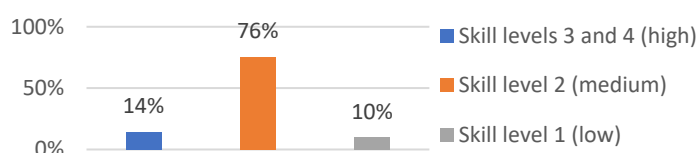
Unemployment, 2018



Employment by sector, 2018 (15+ years)



Employment by occupation, 2018

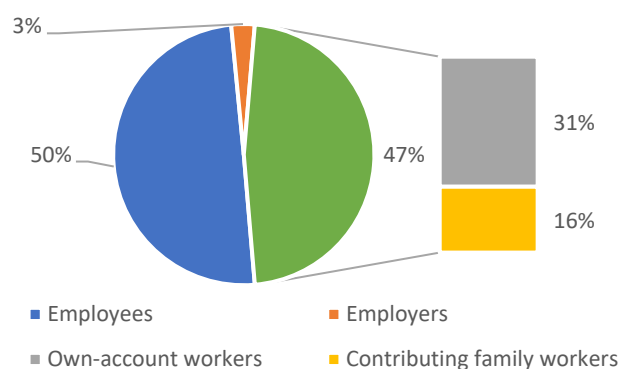


Note: ILO estimates. Labour force participation rate and unemployment: aged 15 years and older. Youth unemployment: aged 15-24 years. Employment by occupation: skill level 1 (low) for elementary occupations; skill level 2 (medium) for clerical, service and sales workers, skilled agricultural and trade 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 Thailand as of 2018 accounted for 47 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

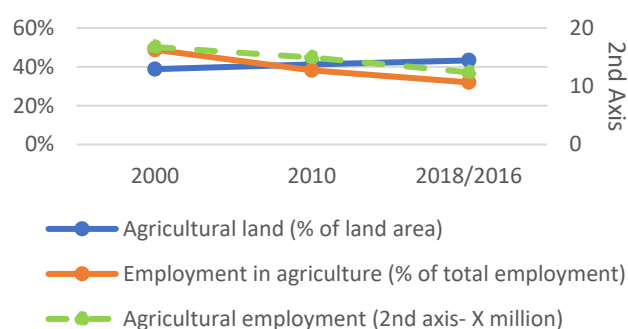


Note: ILO estimates. Vulnerable employment includes own-account workers and contributing family workers from ILO status of employment data.

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

Rural population growth was negative 1.2 per cent in 2017. The share of agricultural land in total land area increased by 4 percentage points between 2000 and 2016, while agricultural employment decreased from 16.7 million to 12.4 million people. The share of agricultural employment within total employment fell by approximately 17 percentage points due to much 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.

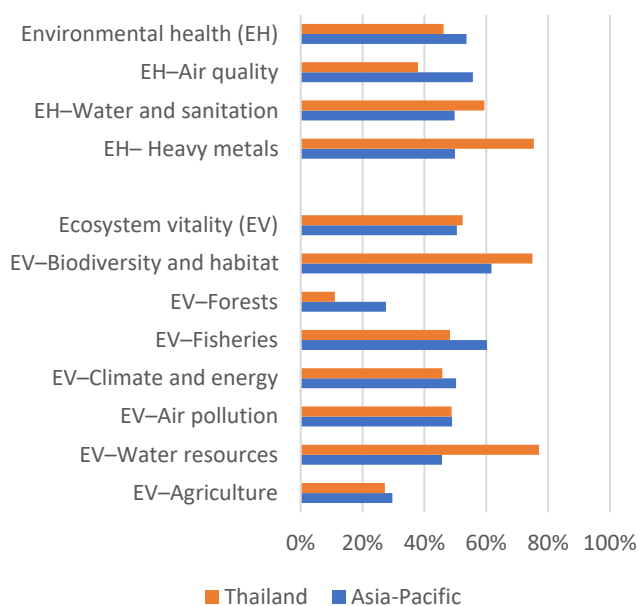
Source: ILO compilation using World development indicators, last updated: 28/06/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 20 July 2018).

³ World development indicators; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 7 August 2018).

ENVIRONMENTAL ISSUES

Thailand ranks at number 121 of 180 countries in the Environmental Performance Index (EPI),⁴ with a score of 49.88 (with 0 being furthest from the high-performance benchmark target of 100). Thailand outperforms the average score for Asia and the Pacific (Fig. 6) in some of the EPI categories, including water and sanitation, heavy metals, water resources, biodiversity and habitat, and water resources. However, there is room for improvement, especially in environmental health (in air quality) and ecosystem vitality (in forests, fisheries, 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 Thailand.

Figure 6. Environmental performance index for Thailand, 2018



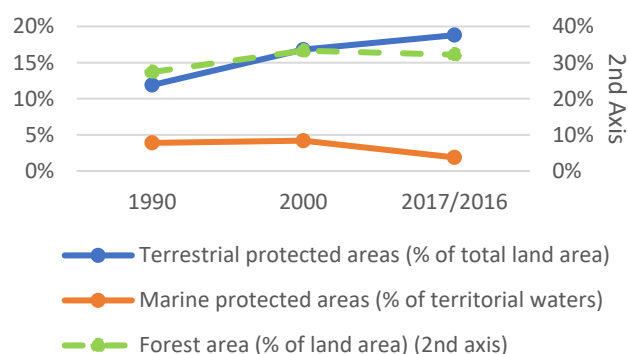
Note: Score 0 (worst) –100 (best). Asia-Pacific: data is for ILO member states in the region, excluding Cook Islands, Marshall Islands, Palau and Tuvalu.

Source: ILO compilation using “2018 EPI Scores – Current”. EPI Yale.

Forest area increased between 1990 and 2016, to approximately 32 per cent of total land area. From 1990 to 2017, the share of terrestrial protected area gradually increased, reaching 18.8 per cent of total land area, while the proportion of marine protected area decreased by 2 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.⁵

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

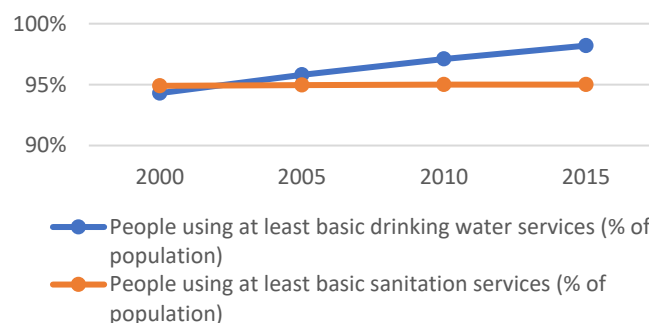


Note: The latest data for forest area is from 2016 and other data is from 2017.

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 gradual increase in access to basic drinking water, to an average of 98.2 per cent in 2015, and access to basic sanitation remained steady, at an average of 95 per cent from 2005 to 2015 (Fig. 8). Both are still below the ideal threshold of 100 per cent. Only 0.3 per cent of the labour force was employed in water supply, sewerage, waste management and remediation activities in 2016 (Fig. 13). 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



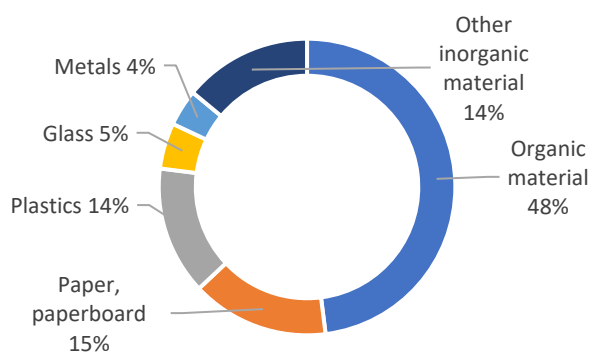
Source: ILO compilation using World development indicators, last updated: 21/05/2018; <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 25-06-2018).

⁴ Yale Center for Environmental Law and 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>

⁵ 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>.

Growth of the urban population in Thailand has meant an increase in solid waste. Waste collection varies between the inner cities and the country's outer urban areas. According to the World Bank, municipal solid waste generation in Thailand in 2004 was 1.8 kilograms per capita per day and is expected to increase to 2 kilograms per capita per day by 2025.⁶ The majority of the waste in 2000 was organic (48 per cent), followed by paper and paperboard (15 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, 2000



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

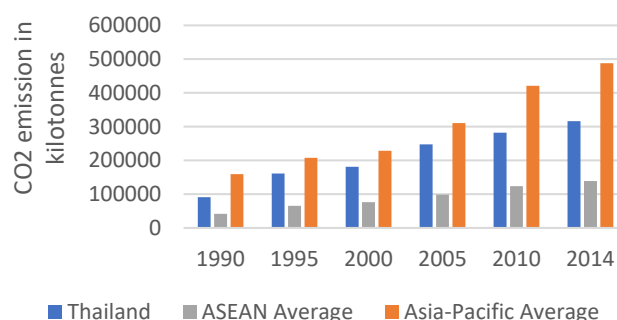
AIR QUALITY

The carbon dioxide (CO₂) emission levels for Thailand have increased gradually by an average of 5 per cent from 1990 to 2014 in 24 years (Fig. 10).⁷ The increase was due to the following major sources: the energy sector (electricity generation and transportation) was the largest contributor at 70%, followed by crops and livestock at 23%. The remaining sources were industry, forest (net sink) and waste handling.⁸ The level of emissions is significantly lower than the Asia-Pacific average but higher than the ASEAN average.

The PM_{2.5} (atmospheric particulate matter with a diameter of less than 2.5 micrometres) emission for Thailand was the highest in 2005 (Fig. 11). Overall PM_{2.5} emission levels exceeded the World Health

Organization's Air Quality Guideline threshold level, thus indicating high emissions. Thailand also shows higher levels of emission than the ASEAN average up until 2005, after which it was lower, and overall lower levels than the Asia-Pacific average. Traffic (diesel vehicles) and biomass open burning are the major sources of PM_{2.5} emission in Thailand. Other sources are residential combustion, fuel stations and livestock.⁹

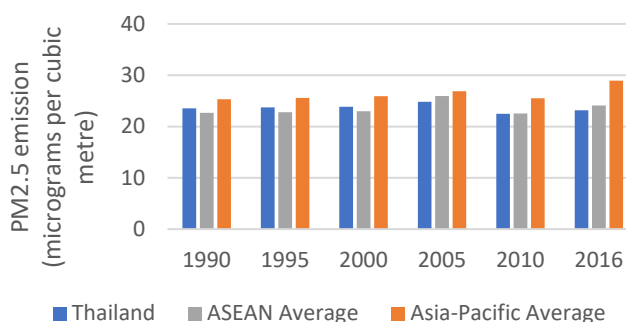
Figure 10. CO₂ emissions for Thailand, 1990-2014



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 Thailand, 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

⁶ World Bank: What a waste: A global review of solid waste management (Washington, DC, 2012).

⁷ The value is calculated on the basis of CAGR (compound annual growth rate)

⁸ Thailand's Second National Communication under United Nations Framework Convention on Climate Change https://unfccc.int/files/national_reports/non_annex_i_natcom/submitted_natcom/application/pdf/snc_thailand.pdf

⁹ Research project on "A Study in Urban Air Pollution Improvement in Asia" Prof. Nguyen Thi Kim Oanh Asian Institute of Technology (AIT) October 2017 https://www.jica.go.jp/jica-ri/ja/publication/booksandreports/175nbg00000kjtww-att/Final_report.pdf

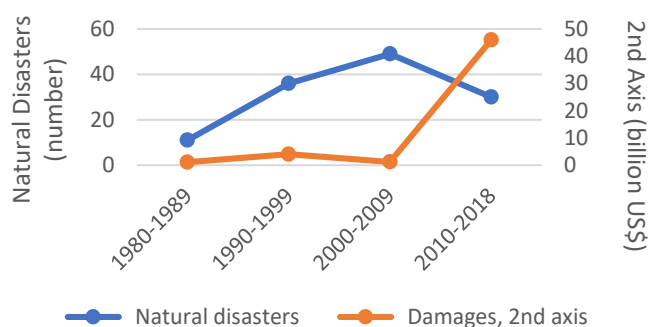
in high emitting sectors such as transportation and fuel-intensive industries. Reducing emissions is a significant challenge, which can be achieved not only by mitigation methods but also by adapting to, and coping with, the new changes required by the transition to a low-carbon economy.

CLIMATE CHANGE IMPACTS

According to the *World Risk Report*,¹⁰ Thailand has a medium World Risk Index score. It ranks number 91 of 171 countries because of its medium exposure to natural hazards and partial institutional capacity to cope and adapt. Part of the country's vulnerability relates to the 10.3 per cent of the total population who, in 2010, lived in the 3 per cent of the total land area below 5 metres above sea level.¹¹

According to the *Emergency Events Database*,¹² there was a substantial increase in natural disasters¹³ and associated damage costs between the 1980s and 2018 (Fig. 12). The natural disasters in that time were mostly floods, storms, droughts, landslides and extreme temperatures. Damage costs have increased significantly since 2010. 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 Thailand



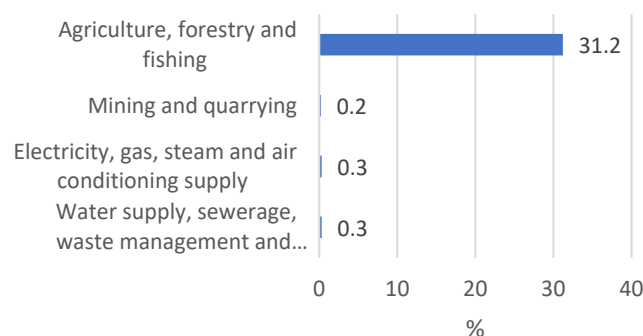
Note: Natural events include climatological, hydrological and meteorological disasters.

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

GREEN JOBS POTENTIAL

In 2016, 31.2 per cent of total employment was in the agriculture, forestry and fishing sector (Fig. 13). Although reliance on agriculture is significant, there are opportunities for job creation in sustainable production and organic farming.

Figure 13. Employment in sectors with strong green jobs potential in 2017



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

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

In 2016, approximately 75 per cent of the population relied primarily on clean fuel and technology, in the sense that these do not create pollution within the home.¹⁴ The share of renewable energy in total energy consumption has not kept pace with overall consumption. In 2000, it was 22 per cent but increased to 23 per cent in 2010 and, after some fluctuation, reached 22.86 per cent in 2015 (Fig. 14). However, renewable energy electricity generation increased over the last 16 years, with bioenergy being the main renewable energy source in 2016 (Fig. 15).

In 2018, almost 108.9 thousand people were employed in the renewable energy sector, with 94 per cent employed in liquid biofuels (Fig. 16). The country's employment rate in electricity, gas, steam and air conditioning was only 0.2 per cent in 2016 (Fig. 13). With the push for increasing reliance on renewable energy, there is the potential for decent job opportunities in the future.

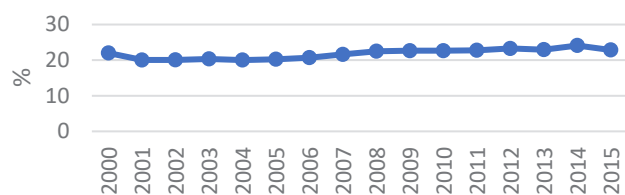
¹⁰ Bündnis Entwicklung Hilft and United Nations University - EHS (2017) *World Risk Report 2017*, available at: <http://weltrisikobericht.de/english/>

¹¹ World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators#> (accessed on 7 August 2018).

¹² EM-DAT: The emergency events database - Université catholique de Louvain (UCL) - CRED, D. Guha-Sapir - www.emdat.be, Brussels, Belgium. Data accessed on: 20 July 2018.

¹³ Climatological, hydrological and meteorological disasters.

¹⁴ 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>.

Figure 14. Renewable energy share in total energy consumption, 2000-15

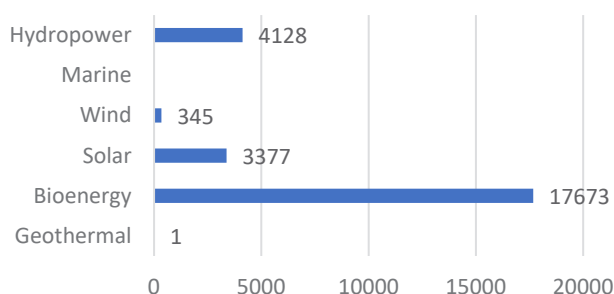
Source: ILO compilation using United Nations statistics division. SDG indicators: Global database. Available at: <https://unstats.un.org/sdgs/indicators/database/> (accessed on 19 July 2018).

Figure 15. Renewable energy electricity generation, 2012-2016

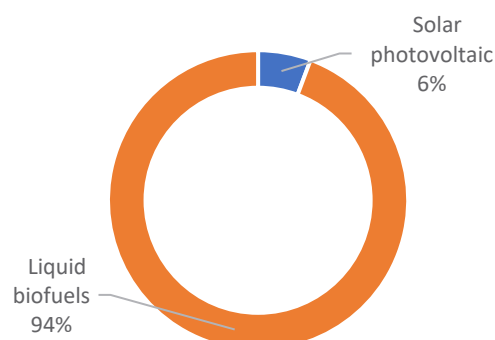
Total renewable energy electricity generation (gigawatt hours - GWh)



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



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

Figure 16. Renewable energy employment, by energy source, 2018

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 source: IRENA (2018); Available at: <http://resourceirena.irena.org>

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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Decent
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