

INDONESIA

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 Indonesia



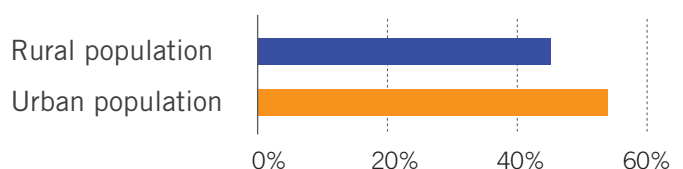
Indonesia² is located in South-East Asia and is the world's largest country comprised solely of islands – 13,466 of them, of which 922 are inhabited³ (Fig. 1). Its population is majority urban and growing, with a fertility rate of 2.4 children and life expectancy at 69.1 years. Around 67 per cent of the population is of legal working age (15–64 years) (Fig. 2).

Figure 2. Demographics for Indonesia

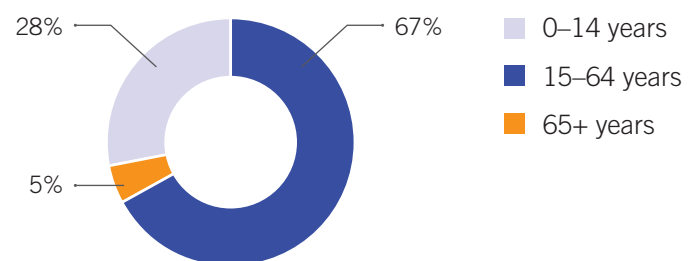
Population: 261.1 million



Population growth rate	Fertility rate	Life expectancy at birth
1.1%	2.4 children	69.1 years



Population age categories



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

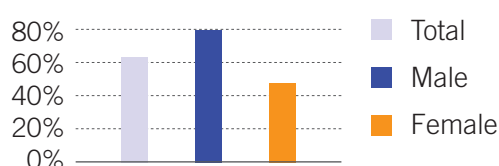
Source: ILO compilation using World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org> (accessed 30 July 2017).

1. The fact sheet is based on available data only.
2. Indonesia became a member of the International Labour Organization in 1950.
3. Central Intelligence Agency: *The world factbook* (Washington, DC, 2017), <https://www.cia.gov/library/publications/the-world-factbook/index.html> (accessed 13 November 2017).

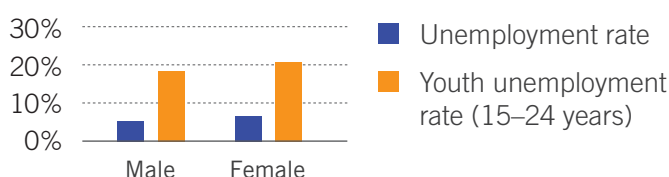
As of 2017, the labour force participation rate is 67.3 per cent and the employment-to-population ratio is 63.4 per cent. Both of those rates are more than 30 percentage points higher for men than for women. The total unemployment rate is 5.8 per cent, and the youth unemployment rate is 19.2 per cent, with the female youth rate 2.4 percentage points higher than the male rate. Formal employment is heavily reliant on services (at 46.2 per cent), followed by agriculture (at 31.4 per cent) and industry (at 22.4 per cent)⁴ and on medium-skilled occupations (Fig. 3).

Figure 3. Basic employment statistics for Indonesia, 2017

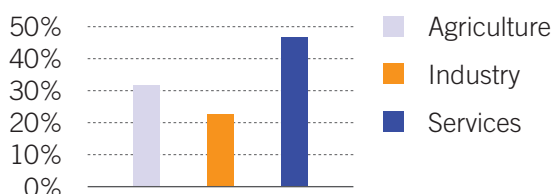
Employment-to-population ratio (15+ years)



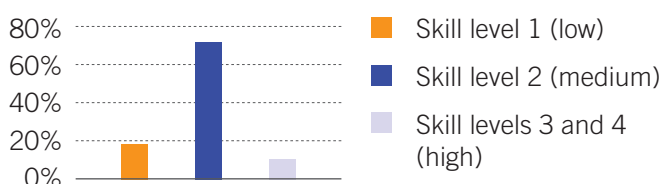
Unemployment



Employment by sector (15+ years)



Employment by occupation

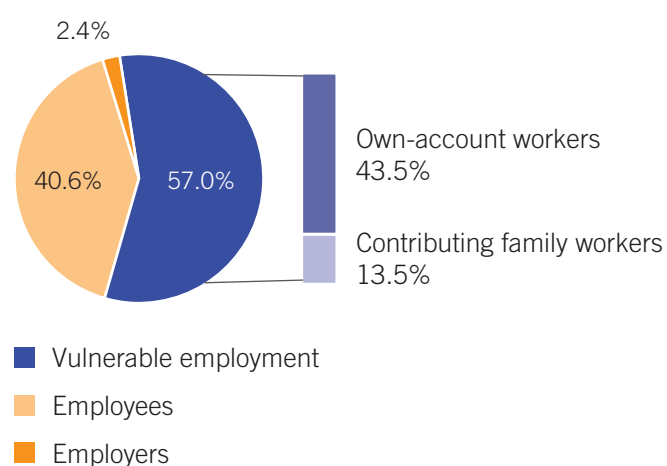


Note: ILO estimates. Labour force participation rate and unemployment: aged 15 years and older. Youth unemployment: aged 15–24 years. Employment by occupation: skill level 1 (low) for elementary occupations; skill level 2 (medium) for clerical, service and sales workers, skilled agricultural and trade 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 Indonesia accounts for 57 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*,⁵ Indonesia has a high World Risk Index score. It ranks 36 (out of 171 countries) due to its very high exposure to natural hazards and limited adaptive capacity to respond. Part of the country's vulnerability is due to the 7.4 per cent of the total population who lived in the 2.7 per cent of total land area below 5 meters above sea level as of 2010.⁶ According to the Emergency Events Database,⁷ there was a substantial increase in natural disasters between the 1960s and the 2010s⁸ and associated damage costs fluctuated (Fig. 5). The natural disasters in that time were mostly tropical cyclones, storms, floods, landslides, droughts and forest fires which resulted in more than 20,000 deaths. Developing preventive measures to limit infrastructure and property damage and increase institutional capacity, particularly for small businesses to respond to climate events, can be a source of decent job creation while building resilience.

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

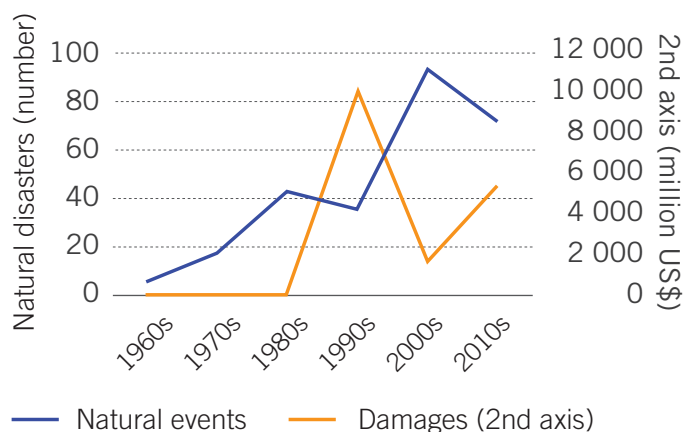
5. Bündnis Entwicklung Hilft and United Nations University: *World risk report 2016* (Berlin, 2016), <http://weltrisikobericht.de/english/>.

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

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

8. Climatological, hydrological and meteorological disasters.

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

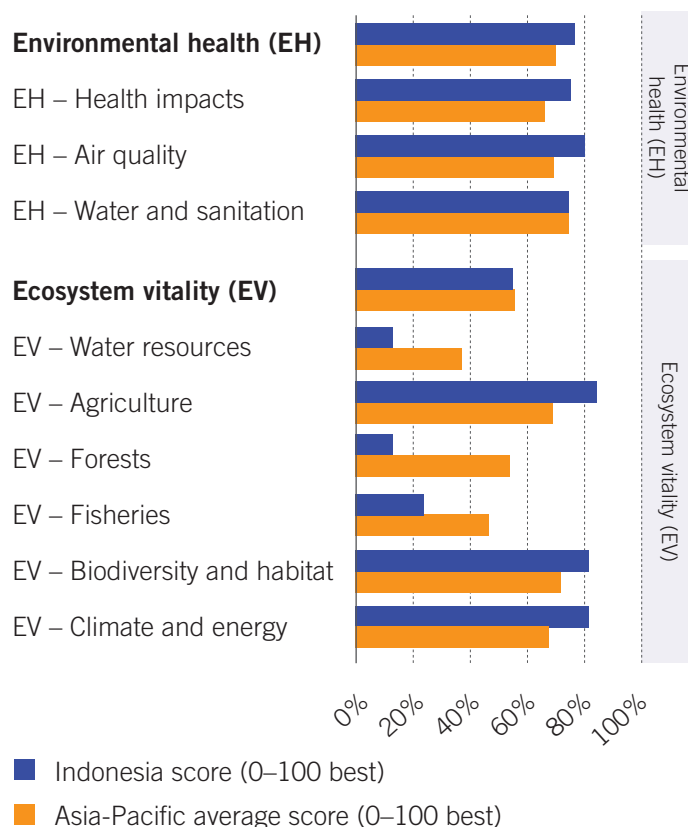


Note: Natural events include climatological, hydrological and meteorological disasters. 2010s data are only for the first half of the decade.

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

Indonesia ranks 107 out of 180 countries in the Environmental Performance Index (EPI), with a score of 65.85 (with 0 furthest from the high-performance benchmark target of 100). Indonesia outperforms the average score for Asia and the Pacific (Fig. 6) in most of the environmental categories, especially agriculture, biodiversity and habitat, and climate and energy. Still, there is significant room for improvement in most of the environmental areas, especially in ecosystem vitality (in water resources, forests and fisheries). Action to improve environmental health, ecosystem vitality, climate change and resilience to weather disasters all have the potential to provide job creation, green economy growth and innovation.

Figure 6. Environmental Performance Index 2016 for Indonesia

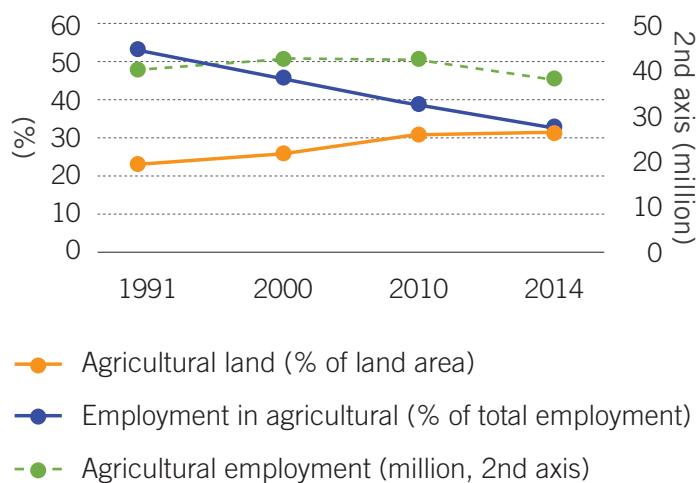


Note: Score 0–100 best. Asia-Pacific: Each score is an average of all data for ILO member States in the region, excluding four countries with no data (Cook Islands, Marshall Islands, Palau and Tuvalu).

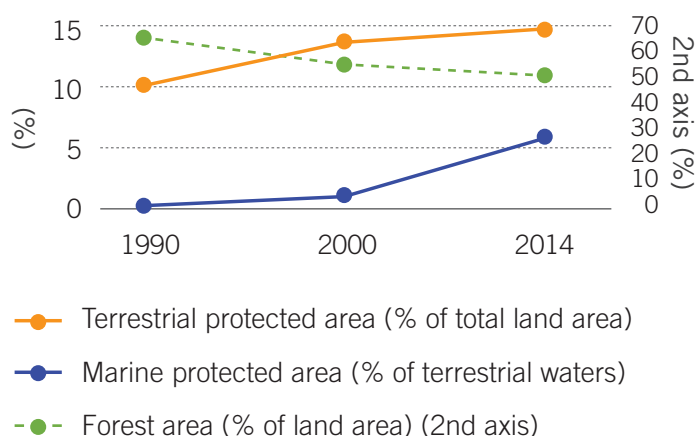
Source: ILO compilation using, A. Hsu et al.: 2016 *Environmental Performance Index* (New Haven, CT, Yale University, 2016), www.epi.yale.edu.

Rural population growth was a negative 0.4 per cent in 2015. The share of agricultural land area increased slightly between 1991 and 2014, reaching 31.5 per cent of total land area. But the share of agricultural employment declined by 20.7 percentage points in that same time due to a loss of 2.3 million jobs and faster job creation in other sectors (Fig. 7). The share of forest area declined by approximately 15 percentage points between 1990 and 2014, to 50.6 per cent of total land area. During the same period, the share of terrestrial protected area increased slightly, to 14.7 per cent. In 2014, the proportion of marine protected area amounted to 5.8 per cent of total territorial waters (Fig. 8). In 2015, 33 per cent of total employment was in the agriculture, forestry and fishing sector (Fig. 9). Although reliance on agriculture is large, there are opportunities for job creation for sustainable production and organic farming. There will be greater prospects for employment opportunities if there is commitment to transition to a low-carbon and resource-efficient economy, such as jobs in resource management and environmental services.⁹

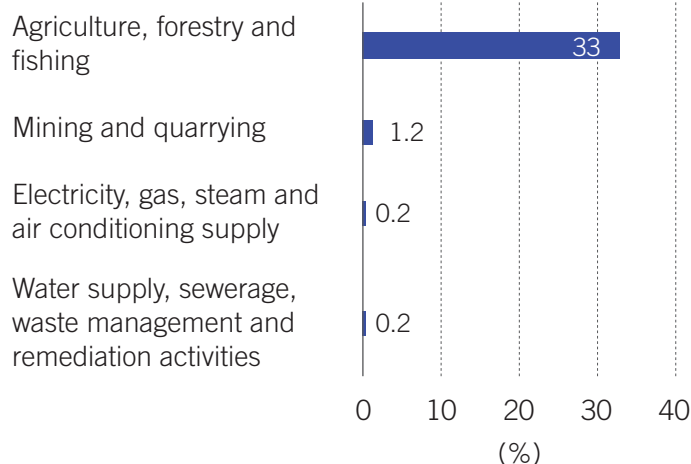
9. Organisation for Economic Co-operation and Development: The jobs potential of a shift towards a low-carbon economy, *OECD Green Growth Papers*, No. 2012/01 (Paris, 2012), <http://dx.doi.org/10.1787/5k9h3630320v-en>.

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

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 land and marine protected areas, 1990-2014

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).

Since 1990, the percentage of the population with access to improved water supply increased 17.9 percentage points, to 87.4 per cent in 2015. There was a 25.6-percentage point increase in access to improved sanitation between 1990 and 2015, reaching 60.8 per cent (Fig. 10). Both, however, are still below the ideal threshold of 100 per cent. According to the World Bank,¹⁰ municipal solid waste generation was 0.52 kg per capita per day in 2008 and is expected to increase to 0.85 kg per capita per day by 2025.¹¹ According to Cekindo,¹² Indonesia is characterized as having little treatment of incoming waste, irregular soil cover applications, inadequate leachate treatment, landfill gas emissions and many waste pickers. The country had an estimated 1.2 million waste pickers in 2008.¹³ Most of the waste in 2000 was organic (at 63 per cent), followed by plastics (at 10 per cent), then paper, glass, metal (a combined share of 23 per cent) and other¹⁴ (at 4 per cent) (Fig. 11).¹⁵ Only 0.2 per cent of the country's workforce was employed in water supply, sewerage, waste management and remediation activities in 2015 (Fig. 9). Improvements in safe water supply and sanitation access and the much-needed implementation of a municipal waste management system for collection, safe and sustainable disposal, recycling and composting practices will provide decent job opportunities in the future.

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

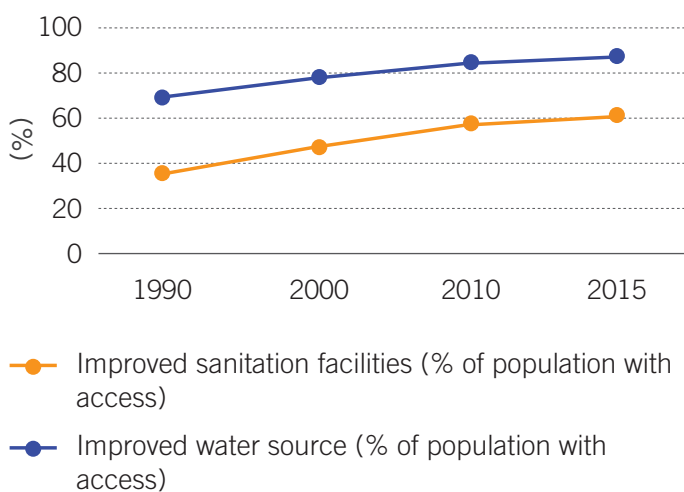
11. *ibid.*

12. See <http://www.cekindo.com/sectors/waste-management/>.

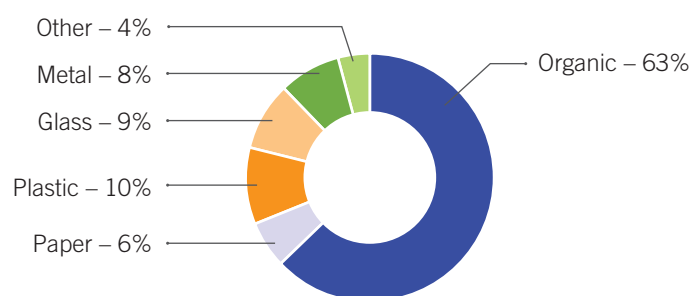
13. *ibid.*

14. Other: textiles, leather, rubber, multi-laminates, e-waste, appliances, ash and other inert materials (World Bank: *What a waste: A global review of solid waste management* (Washington, DC, 2012)).

15. Waste Atlas: Country data: Indonesia (2012), <http://www.atlas.d-waste.com/> (accessed 6 November 2017).

Figure 10. Improved sanitation and water supply access, 1990–2015

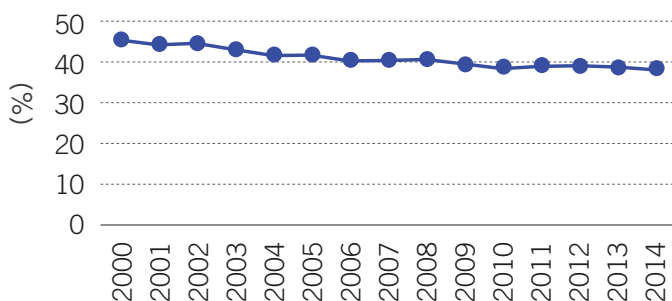
Source: ILO compilation using World Bank: World development indicators, last updated 20 July 2017, <http://databank.worldbank.org/> (accessed 30 July 2017).

Figure 11. Waste composition, 2000

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

In 2014, only 56.6 per cent of the population relied primarily on clean fuel and technology, in the sense that they do not create indoor pollution within the home.¹⁶ The share of renewable energy in total energy consumption, however, has not kept pace with overall

consumption. In 2000, it was 45.6 per cent but fell below 40 per cent in 2009 and continued to decline to 38.1 per cent in 2014 (Fig. 12). Renewable energy generation increased between 2011 and 2013 but has since been in a downward trajectory, with hydropower, geothermal and bioenergy as the main sources of renewable energy in 2015 (Fig. 13). According to the ASEAN Centre for Energy,¹⁷ the Government of Indonesia aims to promote the use of coal in the electricity sector because it is domestically available and relatively cheap when compared with other energy sources. Yet, Indonesia has large geothermal potential, which could provide opportunities for future exploitation. Mini-hydropower is considered an important resource for rural electrification.¹⁸ In 2016, more than 205,000 people were employed in the renewable energy sector, with 75 per cent of them in liquid biofuels and 22 per cent in large hydropower facilities (Fig. 14). The country's share of employment in electricity, gas and water supply was only 0.2 per cent in 2015 (Fig. 9). A push for increasing reliance on renewable energy would create greater potential for decent job opportunities in the future.

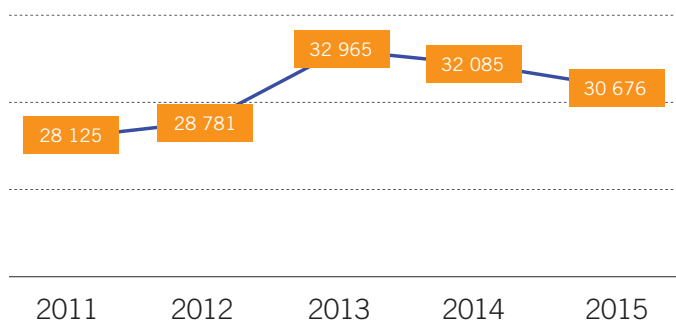
Figure 12. Renewable energy share in total final energy consumption, 2000–14

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

16. 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>.

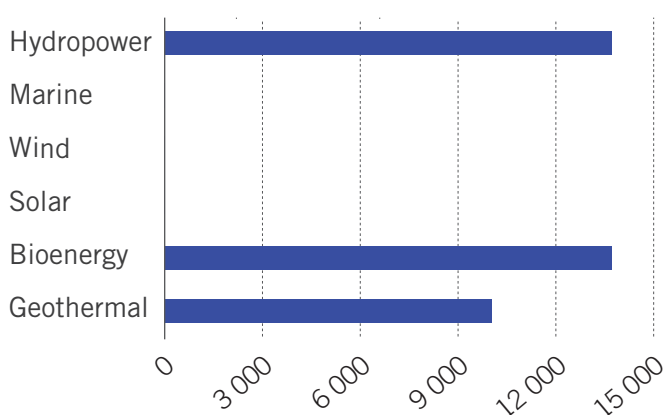
17. ASEAN Centre for Energy: ASEAN renewable energy portal, Indonesia: Country profile, <http://aseanrenewables.info/country-profile/indonesia/> (accessed 6 November 2017).

18. *ibid.*

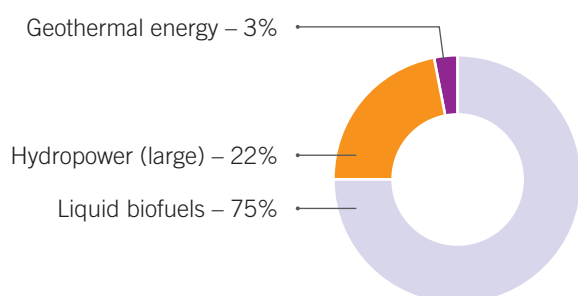
Figure 13. Renewable energy generation, 2011-15**Total renewable energy electricity generation (GWh)**

Better data collection relating to the green economy and the environmental sector would be valuable for policy-makers in Indonesia 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.

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 14. 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).

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