



International  
Labour  
Organization

## ► Pacific labour market review 2020

Pre-COVID-19 baseline labour market information  
for post-disaster recovery

Funded by



ILO/Japan Fund for  
Building Social Safety Nets  
in Asia and the Pacific



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Pre-COVID-19 baseline labour market information  
for post-disaster recovery

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First published 2020

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ISBN: 978-92-2-032605-3 (print)  
978-92-2-032604-6 (web pdf)

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# Preface

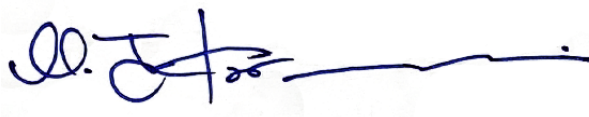
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This report presents a baseline assessment of the labour market situation in the Pacific Island countries that was completed prior to the COVID-19 pandemic, within the framework of the International Labour Organization's Strengthening Labour Market Information Systems and Methodologies for Post-Disaster Needs Assessments in the Pacific Island Countries project, covering primarily three of the more disaster-affected countries – Cook Islands, Tonga and Vanuatu. The project's objective is to provide support to existing strategies for improving national labour market information systems and thus contribute to effective and sustainable recovery plans on employment, livelihoods and social protection, which is an important component of any Post-Disaster Needs Assessment (PDNA).

This report contributes to the first outputs of the project – labour market information systems integrated into national data collection systems in Cook Islands, Tonga and Vanuatu and the generation of updated labour market data, including relevant data on youth, gender and persons with disabilities. The report does not include any updated reference to the COVID-19 pandemic or even after. Although the report focuses on the PDNAs conducted due to climate-related disasters impact on labour markets, the conclusions on the labour data side are equally relevant for any disaster, including COVID-19.

As the world and the Pacific region, particularly its island countries, continue to face the consequences of both the COVID-19 pandemic and continued climate disasters, it is our hope that this report, as a baseline study, will contribute not only to improving the PDNAs but also ongoing assessments of the impact of the pandemic on ILO Member States' labour markets.

A keen finding in this latest review of the Pacific Islands labour markets, is the continued lack of updated labour market information, particularly on areas of the Decent Work Agenda, where decent work deficits and working conditions may be the most appealing, such as in vulnerable employment, in informal sector and informal employment, and in the incidence of subsistence activities. We therefore use this opportunity to call on our Pacific Member States to increase their commitment to regular and reliable labour market information systems. It is an important tool for informed decision-making to realize the economic, social and environmental transitions towards the future of work in the Pacific.



**Matin Karimli**

Director

ILO Office for Pacific Island Countries

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# Acknowledgements

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The *Pacific Labour Market Review 2020: Pre COVID-19 Baseline Labour Market Information for Post-Disaster Recovery* is a result of a collaborative effort of many colleagues from the ILO Asia and the Pacific region. The review was prepared by the ILO Regional Economic and Social Analysis Unit in Bangkok, under the overall guidance of Martin Karimli, the Director for the ILO Country Office for Pacific Island Countries.

The main authors of the review are Fernanda Barcia de Mattos and Tite Habiyakare. The following ILO colleagues provided major contributions and inputs to the analyses and tables presented in this review: Sara Elder, Christian Viegelahn and Felix Weidenkaff. The ILO Country Office for Pacific Island Countries acknowledges the comments and suggestions provided by other ILO colleagues, such as Edward Bernard, Raj Bimlej, and Surkafa Katafono.

Karen Emmons edited the report, and Nattawarath Hengviriyapanich designed the cover and layout of the report in line with ILO recommended standard publications. From the ILO, Chanitda Wiwatchanon assisted with the publication, while Monrudee Sucharitakul provided administrative support throughout the production process.

# Summary of main findings

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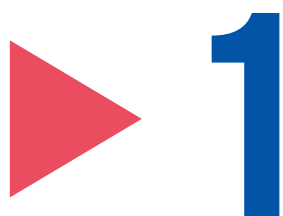
The current baseline assessment of labour markets in the Pacific Island countries covers 11 ILO Member States, with a population of some 11.4 million. Despite various heterogeneity in population size, land and gross domestic product (GDP) levels, the island countries share a series of characteristics, such as their young populations (up to 40 per cent of the overall population is younger than 15), their relative small size on a global scale, remoteness and distance from other markets, narrow economic bases and exposure to natural disasters.

*The region is characterized by a high intensity of climate-related disasters.* Over the past five years, there were five large disasters in the Pacific, averaging one major disaster per year. Recent estimates suggest that the average economic costs of natural disasters in the Pacific are equivalent to as much as 6.6 per cent of GDP annually but can be even worse for some countries: Tropical Cyclone Pam cost the equivalent of more than 60 per cent of GDP in Vanuatu in 2015, and the 2018 Tropical Cyclone Gita caused damages and losses equal to nearly 40 per cent of GDP in Tonga. As a whole, the 11 Pacific ILO Member States had a GDP in 2019 of US\$34 billion and are characterized by low GDP growth rates: With the exception of Papua New Guinea and Solomon Islands, all the other islands have a lower growth rate than the world average rate of 3.8 per cent and are quite below the usual high growth rates of emerging and developing economies (at more than 5 per cent on average).

*The low economic growth, combined with frequent natural disasters exacerbates the island countries' labour market challenges and hinder prospects for increased opportunities for decent work across the Pacific.* A crucial vulnerability in the Pacific labour market resides in the low labour force participation rates, which are below 50 per cent in many of the countries. Moreover, vulnerable employment, although relatively low at the regional level, is pervasive in many countries. Research suggests that there are vulnerabilities associated with the high incidence of subsistence activities and informality, and often a combination of both. Unfortunately, these are important areas of decent work deficits in the Pacific for which data are crucially missing. The few available data sets show huge variation: Data from the latest Labour Force Survey in Tonga indicate that 83 per cent of the working-age population engages in some subsistence production, while in the Cook Islands it is only 13 per cent of persons aged 15 years or older.

*Crucially needed pre- and post-disaster data on the labour market are missing for many Pacific Island countries.* The Pacific Island countries developed the Post-Disaster Needs Assessment (PDNA) approach, with support from the United Nations Development Group, the World Bank Group and the European Commission, including guidelines to assess the full extent of a disaster's impact on a country and to produce an actionable and sustainable recovery strategy. The labour market impacts of disasters include the immediate worsening of vulnerability in terms of losses of jobs, losses of days of work and losses in personal income. These losses can be due to the destruction of productive assets, such as factories, market stalls and crop fields, particularly for vulnerable groups of informal workers and subsistence workers, for which data are often missing. Gathering the right information for both a pre- and post-disaster labour market situation analysis is vital for responding quickly to the most affected workers' needs and decent work prospects. Many of the reviewed PDNAs for Pacific Island countries featured in this report did not include a stand-alone section on the disaster impacts on the labour market due to the lack of updated labour market information for both the pre- and post-disaster periods and because the existing information was not gathered properly and timely for use during the PDNA exercises.

*The identification of the most vulnerable groups and the various labour market issues in post-disaster scenarios as well as the design of targeted policies for post-disaster relief and medium- and long-term social and economic development hinge on the availability of labour market data.* It is therefore essential to strengthen the labour market information systems in the Pacific Island countries, covering both data from surveys as well as from administrative records, including information gathered from and related to employers' and workers' organizations. Most of the Pacific Island countries, such as Cook Islands, Tonga and Vanuatu, are committed to collecting labour statistics and improving their labour market information system, as evidenced by regional and national statistics development plans. However, the implementation of these systems is lagging behind the commitments, often due to the lack of equal commitment in terms of needed resources.



# Introduction

## The Pacific countries are heterogeneous but share many challenges.

The 11 International Labour Organization (ILO) Member States of the Pacific region (excluding the developed economies of Australia and New Zealand) comprise numerous islands scattered across an exclusive economic zone of more than 15 million square kilometres.<sup>1</sup> A total population of about 11.4 million people lives on more than 520,000 square kilometres of total land area, unevenly distributed in those countries. The region's largest country, Papua New Guinea, consists of approximately 88 per cent of the land area and nearly 80 per cent of the regional population, or 8.9 million people. All of the other countries have populations smaller than 1 million people. The Cook Islands, Palau and Tuvalu have between 12,000 and 18,000 residents. Tuvalu has the region's smallest land area, at 26 square kilometres.

Despite these differences, the island states share characteristics that add complexity to their economic and social situation, including their relatively small size on a global scale, remoteness and distance from other markets, narrow economic bases and exposure to natural disasters.

► **Table 1. General characteristics of Pacific countries, 2019 or latest year available**

	Population (thousands) (a)	Land area (km <sup>2</sup> )	GDP, current US\$ (millions) (b)	GDP per capita, constant prices (US\$ PPP) (b)
Cook Islands	15	237	363	...
Fiji	896	18 333	5 708	10 605
Kiribati	119	811	184	1 866
Marshall Islands	59	181	220	3 377
Palau	18	444	291	14 173
Papua New Guinea	8 947	462 840	23 587	3 477
Samoa	198	2 934	905	5 371
Solomon Islands	687	28 230	1 440	2 010
Tonga	106	749	488	5 662
Tuvalu	12	26	42	3 734
Vanuatu	307	12 281	951	2 581

**Note:** (a) Population data refer to estimates for 2020, except for the Cook Islands, which refer to 2019; (b) Estimates for 2019.  
**Source:** Cook Islands, 2019; IMF, 2019; Pacific Community, 2018; UNDESA, 2019; UNCTAD, n.d.

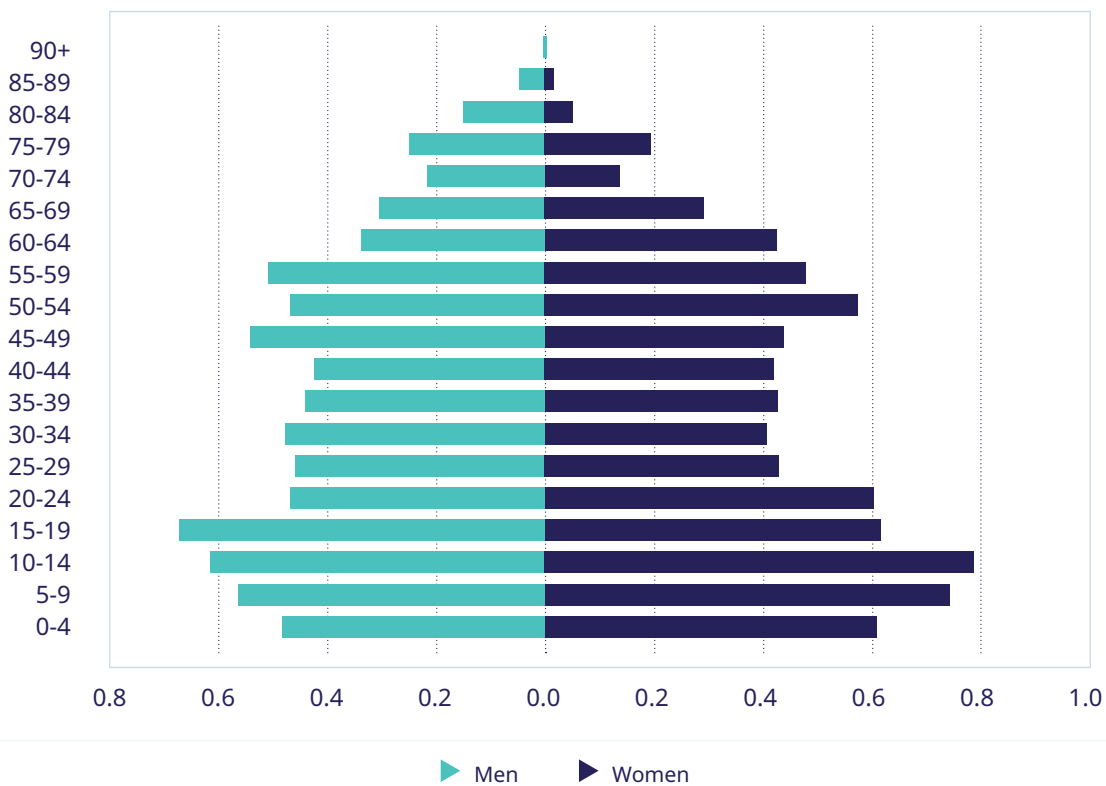
<sup>1</sup> In this report, the Pacific region refers only to ILO Member States, namely Cook Islands, Fiji, Kiribati, Republic of the Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Economic zone data from World Bank (2017) and Pacific Community (n.d.).

Overall, the Pacific countries are relatively young, with up to 40 per cent of the population younger than 15, and between 40 per cent and 57 per cent of the population younger than 25.<sup>2</sup> If the young population is extended to persons younger than 35, they account for 52–70 per cent of the population. In contrast, the share of persons aged 65 or older is still relatively small across the region, ranging from about 3.5 per cent in Papua New Guinea, the Solomon Islands and Vanuatu to 11.2 per cent in the Cook Islands. The proportion of the working-age population, defined as those aged 15 years and older, is increasing in most countries, suggesting a window of opportunity for accelerated growth and increases in per capita income. This is the case among the main countries on which this study focuses: the Cook Islands, Tonga and Vanuatu (figure 1).

The number and share of persons aged 15 and older in the Cook Islands shifted from 65.9 per cent in 2001 to 73 per cent in 2016 and 75 per cent in 2019.<sup>3</sup> In Tonga, the working-age population expanded from 61.5 per cent in 2000 to 65.2 per cent in 2020 and is projected to reach 68.4 per cent by 2030. In Vanuatu, the share of persons aged 15 and older rose from 58.5 per cent in 2000 to 61.5 per cent in 2020 and is expected to continue expanding to 65.3 per cent by 2030. Although an expanding working-age population presents opportunities for growth and development, it also presents challenges related to job creation.

► **Figure 1. Population, by age and sex in the Cook Islands, Tonga and Vanuatu, latest year available (thousands)**

Panel A. Cook Islands

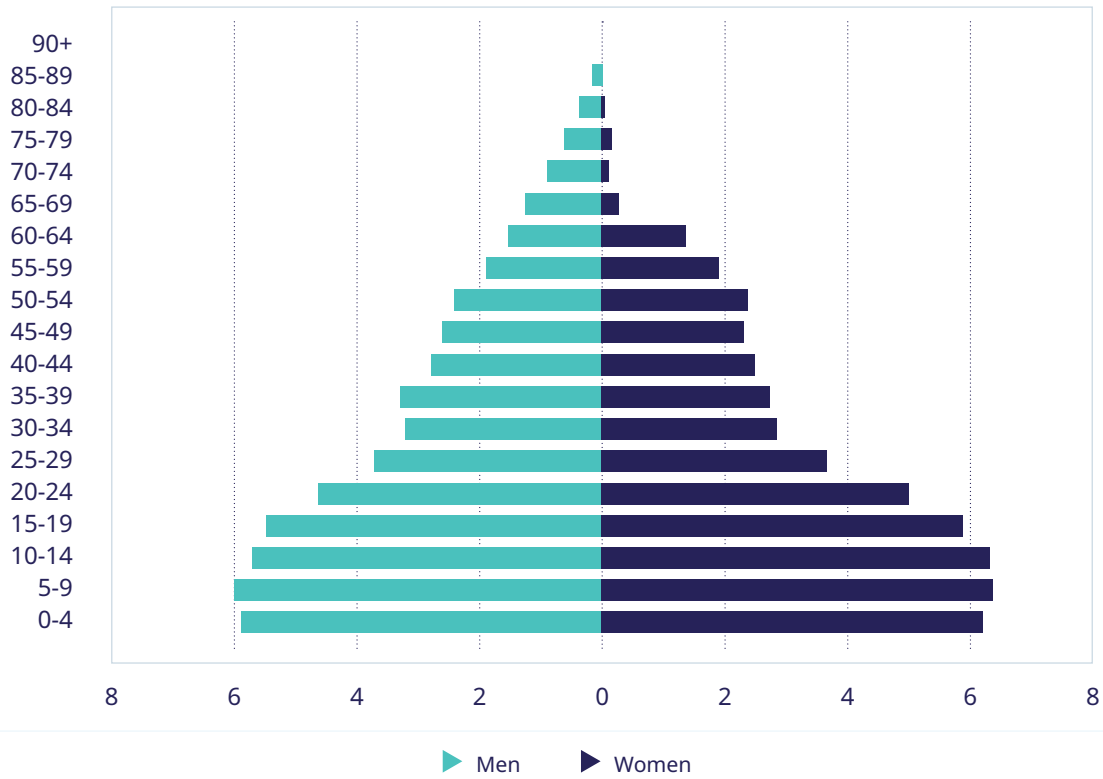


2 Age distribution refers to estimates for 2020 in UNDESA (2019). UNDESA population data are largely aligned with that reported in the latest national population census. UNDESA data by age group are not available for the Cook Islands, Marshall Islands, Palau and Tuvalu. Data for the Cook Islands relate to estimates from Cook Islands 2019.

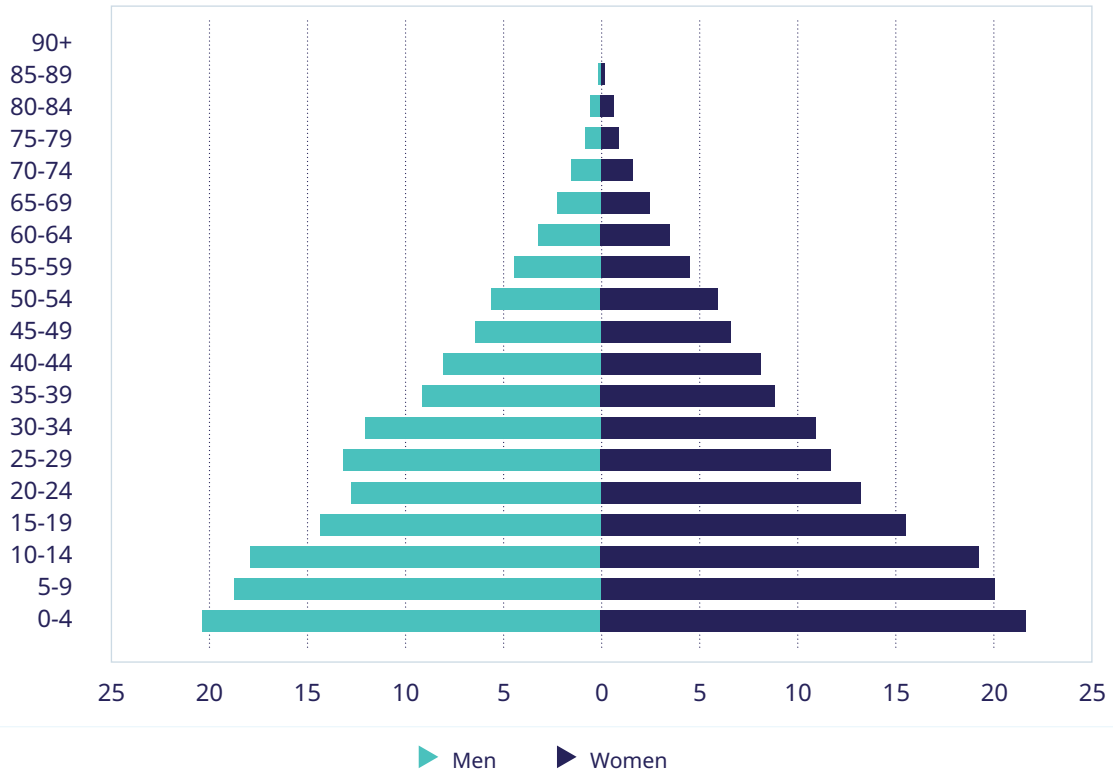
3 Data from Cook Islands (2003, 2018, 2019).

► Figure 1. (cont.)

Panel B. Tonga



Panel C. Vanuatu



**Note:** Data for Tonga and Vanuatu refer to 2020 estimates; data for the Cook Islands refer to 2019.

**Source:** Cook Islands, 2019; UNDESA, 2019.

In line with the 2030 Agenda for Sustainable Development, the Pacific countries have the shared goal of promoting sustainable, sustained economic growth and social development, improving the well-being of its 11 million inhabitants. But opportunities for decent work remain limited, many people engage in subsistence activities, informality is widespread and poverty is persistent. Vulnerabilities are aggravated by exposure to natural disasters, which frequently disrupt livelihoods across the region. Cook Islands, Tonga and Vanuatu, for instance, are among the countries with the highest disaster risk globally, according to the World Risk Index 2019 (Bündnis Entwicklung Hilft and Ruhr University Bochum IFHV 2019). In the past five years, there were five large disasters in the Pacific, averaging one per year.<sup>4</sup> Recent estimates suggest that the economic costs of natural disasters in the Pacific are equivalent to, on average, between 0.5 per cent and 6.6 per cent of gross domestic product (GDP) annually, and climate change is likely to exacerbate vulnerabilities (WTO 2019). Large disasters in recent years have cost much more. Tropical Cyclone Pam, for instance, cost the equivalent of more than 60 per cent of GDP in Vanuatu in 2015, and Tropical Cyclone Gita, in 2018, caused damages and losses equal to nearly 40 per cent of GDP in Tonga.<sup>5</sup>

Improving labour market outcomes in the Pacific is necessary for national development and the achievement of the Sustainable Development Goals. Whether the Pacific countries can realize their development ambitions will depend on their ability to generate decent employment and increase resilience and response capabilities to natural disasters. The capacity of ILO Member States to formulate and effectively implement national employment policies, including for youth, as well as policies for a just transition towards environmentally sustainable economies and societies will be critical to realize the economic, social and environmental transitions for full, productive and freely chosen employment and decent work for all. Access to regular and reliable labour market information is the basis for informed decision-making and strategic policy responses to address the future of work challenges in the Pacific.

## 1.1. Economic and social context

### Economic growth has been slow, but there are opportunities for growth.

As a whole, the 11 Pacific ILO Member States had a GDP of \$34 billion in 2019 (table 1). Papua New Guinea, the region's largest economy, had a GDP of \$23.6 billion in 2019, followed by Fiji, with a GDP of \$5.7 billion. Other countries have much smaller economies, ranging from \$184 million GDP in Kiribati to \$1.44 billion GDP in the Solomon Islands. Over the past decade, the economic performance of the Pacific countries was lacklustre. Since 2010, average annual growth rates lagged global growth in most countries, with the exception of the region's largest economies (figure 2). Output in Papua New Guinea and the Solomon Islands expanded at an average annual rate of 5.3 per cent and 4.6 per cent, relative to 3.8 per cent average annual global growth. In Fiji, the average annual rate of growth was near par with the global rate, at 3.6 per cent per year. Growth was somewhat slower in the smaller countries. In Tonga, average annual GDP growth between 2010 and 2019 was 2.2 per cent, while Vanuatu's economy expanded 2.4 per cent per year, on average, in the same period.

The Pacific countries tend to depend on external sources of income for growth, such as international aid, migration and remittances, and natural-resource exports, including tourism, fisheries and forestry (Abbott and Pollard 2019). Throughout the region, services account for the largest share of GDP. The services value-added share of GDP ranges from 54 per cent in Fiji to 78 per cent in Palau.<sup>6</sup> This is partially connected to tourism, with increasing numbers of tourist arrivals throughout the region, an increase that was only stopped by the COVID-19 pandemic. While annual global growth of tourist arrivals averaged 3.9 per cent between 2005 and 2014, it expanded 4.5 per cent annually in the Pacific ILO Member States and the Federated States of Micronesia. Manufacturing remains small, accounting for 2 per cent or less of GDP in the Republic of the Marshall Islands, Palau and Papua New Guinea and up to 11 per cent in Fiji.<sup>7</sup> Industry's share of GDP ranges from 8 per cent in Palau to 35 per cent in Papua New Guinea. Agriculture accounts for between 3 per cent of GDP in Palau to 31 per cent of GDP in Kiribati.

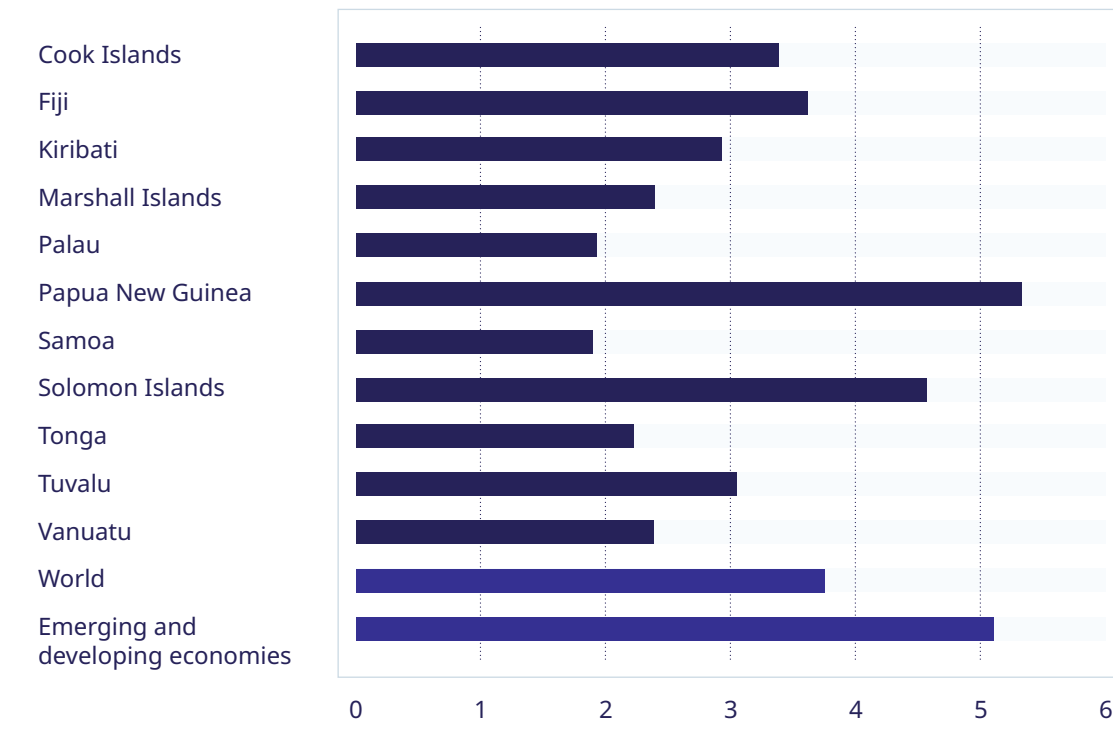
4 Namely Tropical Cyclones Pam in 2015 and Winston in 2016, drought in the Marshall Islands in 2016, the earthquake in Papua New Guinea in 2018 and Tropical Cyclone Gita in Tonga in 2018. These are just some of the largest events, and many more natural disaster-affected the region in the period, as explored in section 2.

5 Refers to damages and losses, reported in Government of Tonga (2018) and Government of Vanuatu (2015).

6 Data on services share of GDP available for Fiji, Kiribati, Marshall Islands and Palau (World Bank n.d.).

7 Data on agriculture, industry and manufacturing shares of GDP available for Fiji, Kiribati, Marshall Islands, Palau, Papua New Guinea, Samoa and Tonga (World Bank n.d.).

► **Figure 2. Average annual GDP growth in Pacific countries, 2010–19 (%)**



**Note:** Cook Islands refers to 2010–18.

**Source:** IMF, 2019; UNCTAD, n.d.

Economic growth and development in the Pacific countries has several challenges (WTO 2019; ILO and ADB 2017; World Bank 2017). Generally, these countries have small domestic markets and narrow economic bases and depend on imports. Their remoteness is associated with the high cost of production and trade of goods and services, with negative implications for competitiveness. These challenges are exacerbated by the frequent natural disasters. The recurrent reconstructive efforts due to the disaster damages reduce the resources available for productive investment (WTO 2019).

Nonetheless, research by the World Bank (2017) found several opportunities to spur growth and support employment creation in the future. Despite the impact of COVID-19, recovery and prosperity in China could contribute to greater inflows of tourists. Technological progress, particularly with information and communications technologies (ICT), is expected to open opportunities for services exports. Ageing in the high-income Asian–Pacific countries could increase demand for migrant labour. At the same time, climate change is recognized as the greatest risk to economic and social prosperity in the Pacific region, potentially increasing the intensity and frequency of natural disasters and bringing new threats, such as sea-level rise.

### Income per capita and the incidence of poverty vary, but inequality is common throughout the region.

The socio-economic situation varies widely across the region. All of the Pacific ILO Member States are classified, at the least, as middle-income countries, but income per capita gaps are significant. In 2018, gross national income per capita ranged from \$2,020 in the Solomon Islands to \$20,704 in the Cook Islands.<sup>8</sup> Fiji, Marshall Islands, Samoa, Tonga and Tuvalu are upper-middle income countries, while Papua New Guinea, Solomon Islands and Vanuatu are classified as lower-middle income. The Cook Islands and Palau rank as high-income countries.

The incidence of poverty also differs significantly in the region (table 2). The latest available data indicate that approximately six in ten persons in Papua New Guinea and the Solomon Islands and more than one third of

<sup>8</sup> GNI per capita (current US\$) refers to 2018 and derives from World Bank n.d., with the exception of data for the Cook Islands, which are found in UNCTAD (n.d.). Thus, they are not strictly comparable. World Bank income classification is from June 2019.

the populations of Kiribati and Vanuatu live in poverty (with income at less than \$3.20 a day, 2011 PPP). In these countries, poverty is much more prevalent than the worldwide rate (at 26.5 per cent). In other parts of the Pacific, the incidence of poverty is much lower. In Fiji, 14.1 per cent of the population is poor, while the share is 9.6 per cent in Samoa and 7.5 per cent in Tonga. Subsistence activities and traditional kin-based wealth redistribution have led to much lower rates of extreme poverty, defined as persons living on income of less than \$1.90 per day (ILO 2010). For instance, roughly 1 per cent of the populations of Fiji, Samoa and Tonga and 3 per cent in Tuvalu live in extreme poverty. Still, large shares of the population in some Pacific countries live just above the poverty line, indicating that economic shocks and instability may lead to increases in the incidence of poverty. The headcount ratio of persons living on income of up to \$5.50 per day (2011 PPP) is estimated at 27.5 per cent of the population in Tonga, but it is much higher in Vanuatu, accounting for more than 70 per cent of the population, and in Papua New Guinea, at almost 85 per cent.

► **Table 2. Poverty and inequality in the Pacific Island countries, latest available year**

	Poverty headcount ratio at \$3.20 per day (2011 PPP) (% of population)	GINI coefficient
Cook Islands	...	...
Fiji (2013)	14.1	36.7
Kiribati (2006)	34.6	37
Marshall Islands	...	...
Palau	...	...
Papua New Guinea (2009)	65.6	41.9
Samoa (2013)	9.6	38.7
Solomon Islands (2013)	58.8	37.1
Tonga (2015)	7.5	37.6
Tuvalu (2010)	17.6	39.1
Vanuatu (2010)	39.2	37.6

**Source:** World Bank, n.d.

Inequality levels are significant and relatively even across the region. Measuring the extent to which income distribution deviates from perfect equality – with 0 meaning perfect equality and 100 perfect inequality, the Gini coefficient for the Pacific countries ranges between 37 and 42 in seven of the eight countries for which data are available (it is highest in Papua New Guinea). Few countries have multiple data points, but those that do suggest that albeit high, inequality measured as the Gini coefficient has been on the decline – in the cases of Fiji, Samoa and the Solomon Islands – or stable, as in Tonga. Another indicator of wealth distribution is the quintile ratio, or the share of income held by the top 20 per cent of the population to that of the bottom 20 per cent. This ranges from 6 in Fiji and the Solomon Islands to 9 in Papua New Guinea.<sup>9</sup> The quintile ratio in both Tonga and Vanuatu is approximately 6.7.

Differences in multiple dimensions of development are captured by the Human Development Index (HDI), which encapsulates countries' human development in terms of health, education and standard of living (UNDP 2019).<sup>10</sup> The 2018 ranking of 189 countries revealed significant differences across the nine Pacific countries for which data were available. The only Pacific country in the very high human development group was Palau, although Fiji, Tonga and Samoa were among those with high human development. Kiribati, Marshall Islands, Solomon Islands and Vanuatu were in the medium human development group. Papua New Guinea ranked among those in the low development group. Still, the index for all countries had improved since 2000.

<sup>9</sup> Authors' estimates based on World Bank n.d. No data are available for the Cook Islands, Marshall Islands and Palau.

<sup>10</sup> Does not include Cook Islands and Tuvalu.

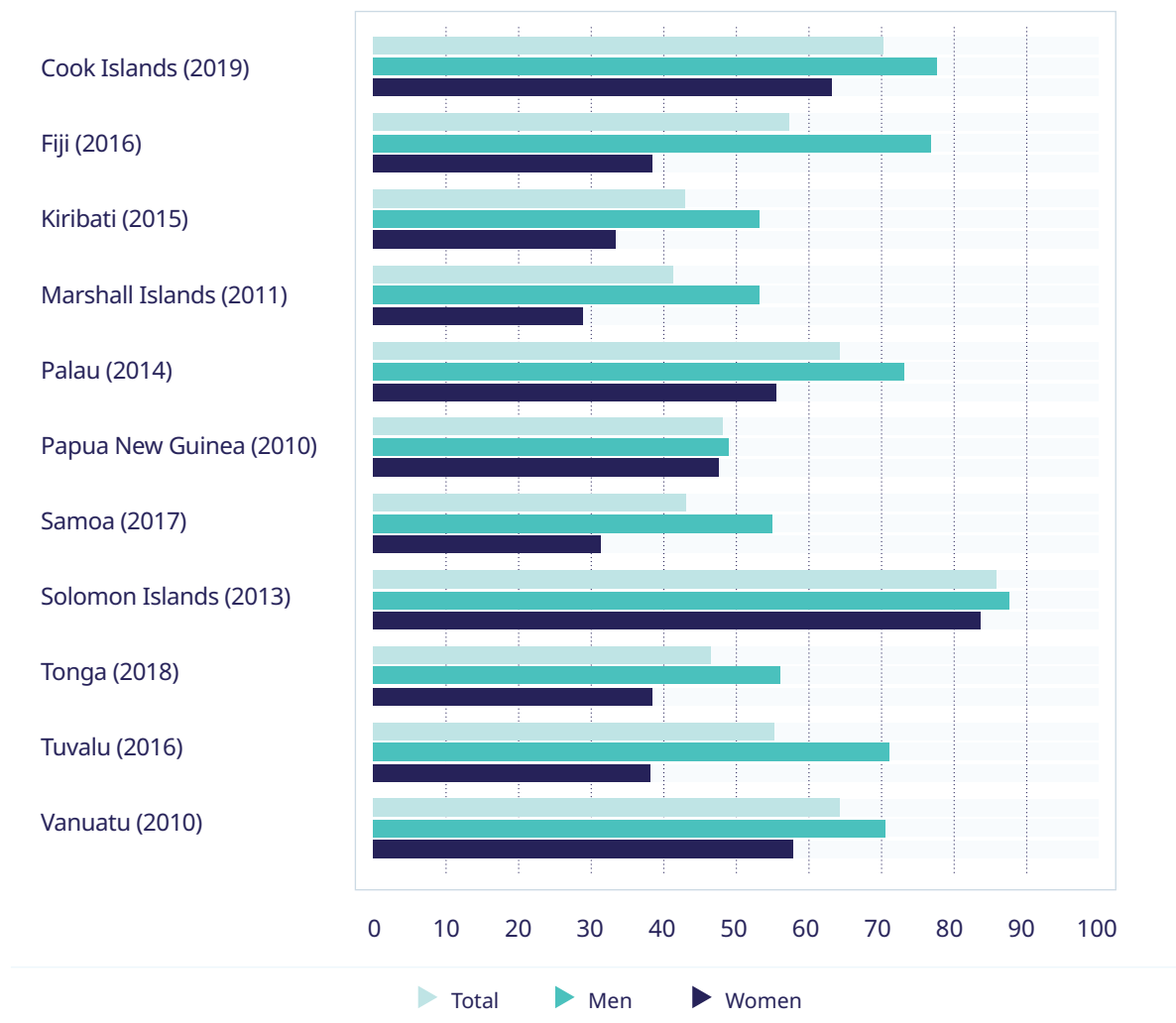


## 1.2. The labour market

### Labour force participation is generally low.

Labour force participation rates are generally low in the Pacific (figure 3).<sup>11</sup> Whereas the global and the Pacific regional rates are estimated at 60.5 per cent and 62.7 per cent for 2020, respectively, the rate is lower for all but four countries in the region: the Cook Islands (at 70.4 per cent), Palau (at 64.4 per cent), the Solomon Islands (at 86 per cent) and Vanuatu (at 64.4 per cent).<sup>12</sup> In Tonga, 46.7 per cent of the working-age population engages in the labour market. The rate of economic participation is also less than 50 per cent in Kiribati, Marshall Islands, Papua New Guinea and Samoa.

► **Figure 3. Labour force participation rate, by sex, latest available year (%)**



**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

<sup>11</sup> Labour market information for Pacific Island countries is limited and often dated. Few countries conduct Labour Force Surveys (LFS), and fewer still do so regularly. This analysis thus relies not only on LFS data but other household survey findings, including the population census and the Household Income and Expenditure Survey (HIES), processed by the ILO Statistics Department. The data analysed refer to the latest available year (unless stated otherwise), which ranges from 2009 for Vanuatu to 2019 for Cook Islands. The latest surveys available for the main countries on which this report focuses are Cook Islands 2019 LFS, Tonga's 2018 LFS and Vanuatu's 2010 HIES. That much of the data hail from surveys conducted several years ago, coupled with differences in data year, render cross-country comparisons difficult – a caveat that should be kept in mind when interpreting the labour market analysis that follows. Further limitations arise from methodological revisions and changes in international definitions and standards.

<sup>12</sup> Aggregate Pacific and global rates refer to ILO modelled estimates. Aggregate regional rate for the Pacific, according to the official ILO country groupings, includes American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States), Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Fortuna Islands.

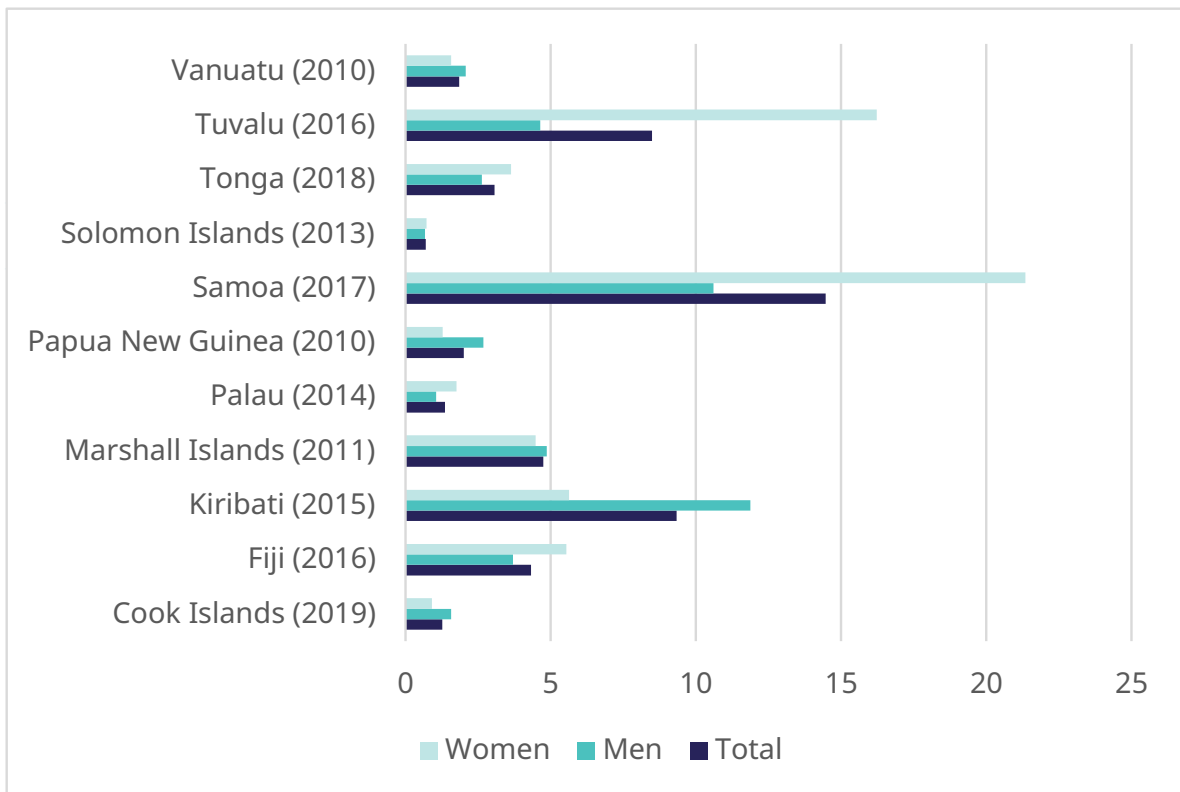
Participation is even lower for women. Women's labour force participation rate is highest in those countries with greater overall participation: the Solomon Islands (at 83.9 per cent), followed by the Cook Islands (at 63.4 per cent) and Vanuatu (at 58.1 per cent). Only 38.4 per cent of working-age women engage in the labour market in Tonga. Women's participation rate is one third or less in the Marshall Islands, Samoa and Kiribati.

Gender disparities in labour force participation rates exceed 30 percentage points in Fiji and Tuvalu and are greater than 20 points in the Marshall Islands and Samoa. In the three countries that are the focus of this study, the gaps between women's and men's participation rates are sizeable, at 14.4 points in the Cook Islands, 17.8 points in Tonga and 12.6 points in Vanuatu. The gender gap is most narrow in Papua New Guinea and the Solomon Islands, at 4 percentage points or less.

### The incidence of unemployment varies across the region.

Unemployment is relatively prominent in Samoa, Kiribati and Tuvalu, where it ranges between 8.5 and 14.5 per cent (figure 4), compared with an estimated 5.4 per cent globally in 2020, and to 4.7 per cent in the Pacific regional grouping. It is, conversely, lower than the global rate in the rest of the region. In the Cook Islands, 1.3 per cent of workers are unemployed, a slightly lower rate than 1.8 per cent in Vanuatu. In Tonga, the unemployment rate is 3.1 per cent. The Solomon Islands has the lowest incidence of unemployment in the region, at 0.7 per cent. Low unemployment rates in Pacific countries are likely related to a relatively small formal economy and widespread informality.

► **Figure 4. Unemployment rate, by sex, latest available year (%)**

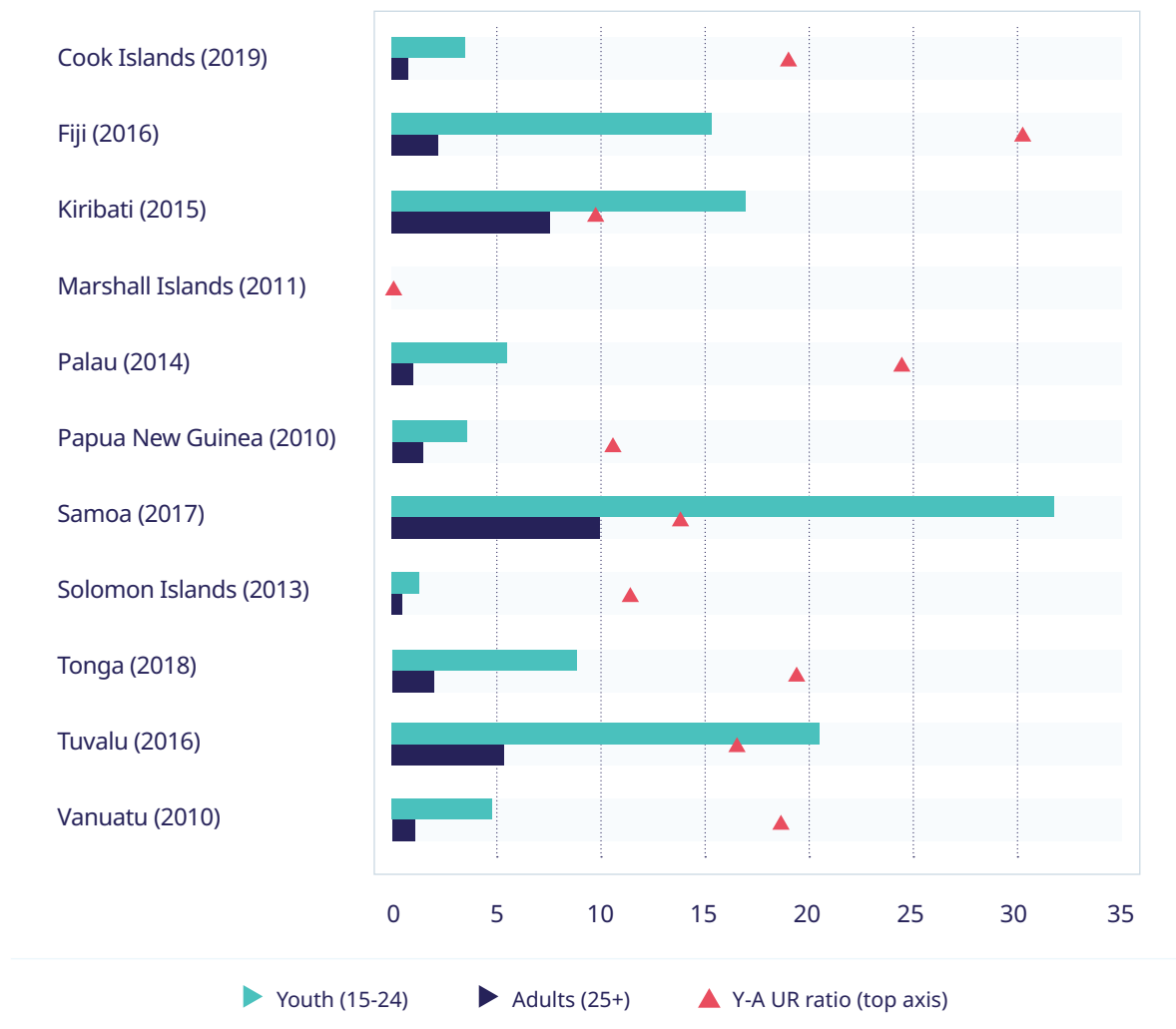


**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

In a majority of Pacific countries, unemployment is more prevalent among women than men. The women's rate of unemployment is almost four times that of the men's rate in Tuvalu. In Samoa, women are twice as likely as men to be unemployed. In contrast, in the Cook Islands, Kiribati, Marshall Islands, Papua New Guinea and Vanuatu, unemployment is more common among men. In the Cook Islands, 1.6 per cent of male workers are unemployed, relative to 0.9 per cent of working women. In Tonga, the unemployment rate among men is 2.6 per cent, while it is 3.6 per cent among women. In Vanuatu, the incidence of unemployment for men is 2.1 per cent, compared with 1.6 per cent for women.

Young workers are also at a disadvantage in finding employment and their unemployment rates are between two and seven times the prevalent rate among adults (defined as those aged 25 and older) (figure 5). In the Cook Islands, the youth-to-adult unemployment rate ratio is 4.4, in Tonga, it is 4.5 and in Vanuatu, 4.8. Disparities in the region are generally greater than globally, with an estimated 3.3 youth-to-adult unemployment rate ratio worldwide in 2020. However, given the relatively low rates of unemployment in the focus countries, youth unemployment is low relative to the world. Whereas 13.7 per cent of young workers are unemployed worldwide, the rate is 3.5 per cent in the Cook Islands, 8.9 per cent in Tonga and 4.8 per cent in Vanuatu.

► **Figure 5. Unemployment rate, by age and youth-to-adult unemployment rate ratio, latest available year (%)**



**Note:** Y-A UR=youth-to-adult unemployment rate.

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

As the youth population expands, ensuring decent work opportunities for young workers becomes an increasingly prominent challenge. A broad measure of untapped youth potential is the rate of young people not in employment, education or training (NEET). NEET data reveal that large shares of youth are not in employment for reasons other than education (table 3). In Tonga, 30.3 per cent of youth is NEET, while the share is 31 per cent in Vanuatu. The rate is lower in the Cook Islands, at 12.6 per cent. Across the region, the rate is highest in Kiribati, where 46.9 per cent of young people are NEET, while the lowest rate is in the Solomon Islands, where 7 per cent of youth are NEET. In all of the Pacific countries but the Cook Islands, Fiji, Palau and the Solomon Islands, the prominence of young people who are NEET surpasses the global level, estimated at 22 per cent in 2020.

Young women are particularly at high risk of being NEET in the Cook Islands, Fiji and Vanuatu. In the Cook Islands and Fiji, young women are twice and nearly three times as likely as young men to be NEET, respectively. The gender gap in the NEET rate is also sizeable in Vanuatu, where young women are more than 50 per cent more often NEET than young men.

There are many reasons youth become NEET: Many do not believe there are jobs available or do not know how or where to search for employment. Others are unable to work or study due to family and household responsibilities. Young NEETs are not gaining skills and experience valued in the labour market, compromising their future prospects. Nor are they contributing to national economic and social development (ILO 2017a).

► **Table 3. NEET rate, by sex, latest available year (%)**

	Total	Male	Female
Cook Islands (2019)	12.6	8.6	16.9
Fiji (2016)	20.1	10.8	29.6
Kiribati (2015)	46.9	46.2	47.6
Marshall Islands	...	...	...
Palau (2014)	12.9	11.1	14.4
Papua New Guinea (2010)	27.7	26.4	29.0
Samoa (2017)	37.9	34.6	41.5
Solomon Islands (2013)	7.0	5.1	8.9
Tonga (2018)	30.3	29.0	31.5
Tuvalu (2016)	29.0	21.7	37.4
Vanuatu (2010)	31.0	26.3	35.2

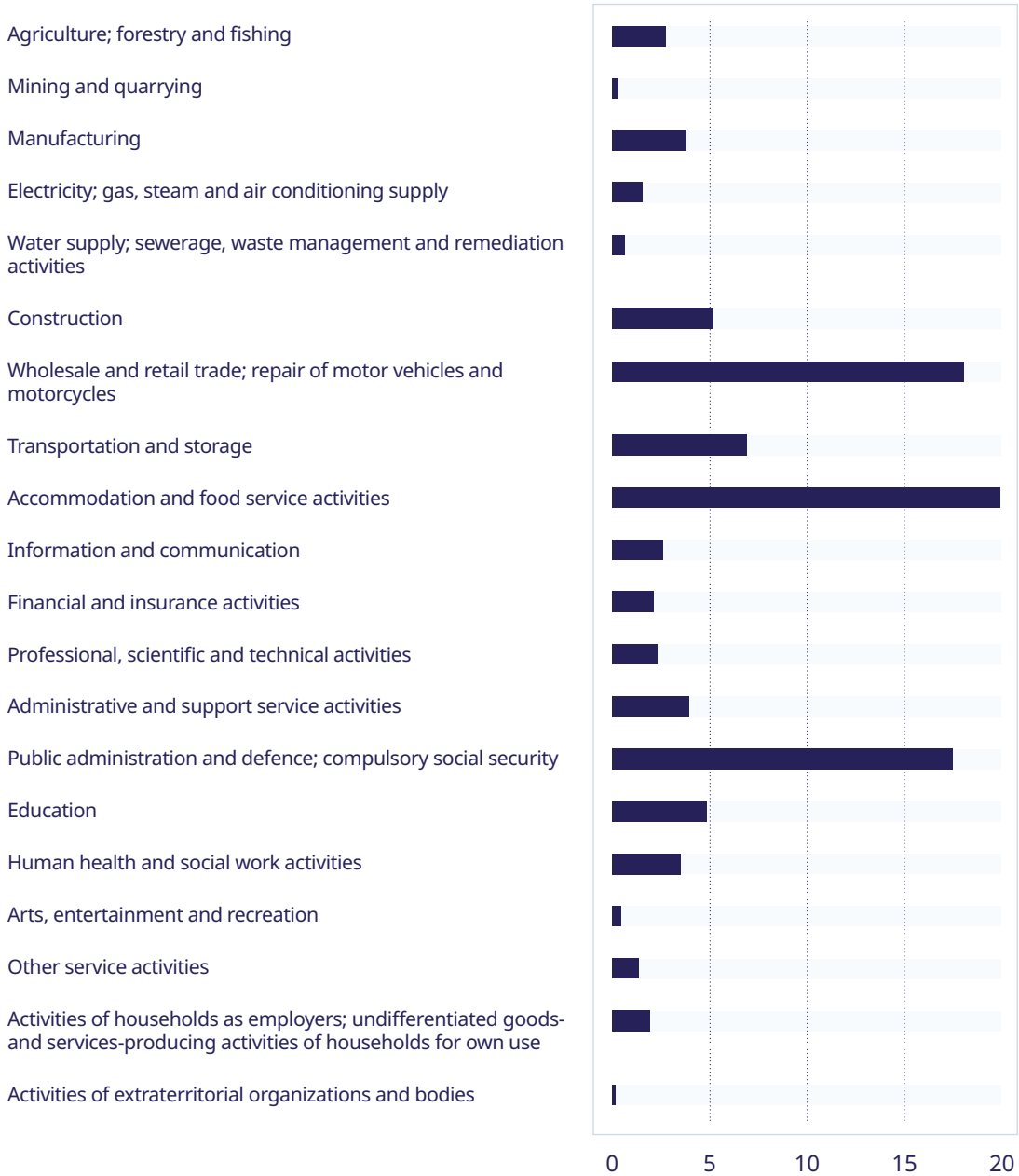
**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

## Employment concentrates in the services sector and medium-skill occupations.

Throughout the Pacific, employment tends to concentrate in the services sector (figure 6), in line with the distribution of GDP, briefly outlined previously. Market and non-market services are the largest sectors of employment in the Cook Islands, Marshall Islands and Palau. Between 30 per cent of employment in the Marshall Islands and 56 per cent in the Cook Islands engages in tradable services, including trade, transportation, accommodation and food, and business and administrative services. Non-market services, including public administration, community, social and other services and activities, employ between 30 per cent of workers in the Cook Islands and 50 per cent in the Marshall Islands. Agriculture employs 7 per cent or less of these countries' workforce. In other countries, agriculture ranks among the main employers, in addition to the services sector. The agriculture sector employs 19 per cent of workers in Fiji, Papua New Guinea and Tonga. In Kiribati, Samoa and Tuvalu, between 22 per cent and 27 per cent of workers are in the sector. Agriculture's share of employment is largest in Vanuatu, at 63.6 per cent, followed by the Solomon Islands, at 37 per cent. Throughout the Pacific, manufacturing is a relatively small sector in terms of employment. Its importance is greatest in Tonga and Kiribati, where manufacturing accounts for 20 per cent and 14 per cent of jobs, respectively. In all other countries, less than 7 per cent of workers are employed in the sector.

► **Figure 6. Employment distribution, by sector, latest available year (%)**

**Panel A. Cook Islands, 2019**



► **Figure 6. (cont.)**

**Panel B. Tonga, 2018**

Agriculture; forestry and fishing

Mining and quarrying

Manufacturing

Electricity; gas, steam and air conditioning supply

Water supply; sewerage, waste management and remediation activities

Construction

Wholesale and retail trade; repair of motor vehicles and motorcycles

Transportation and storage

Accommodation and food service activities

Information and communication

Financial and insurance activities

Professional, scientific and technical activities

Administrative and support service activities

Public administration and defence; compulsory social security

Education

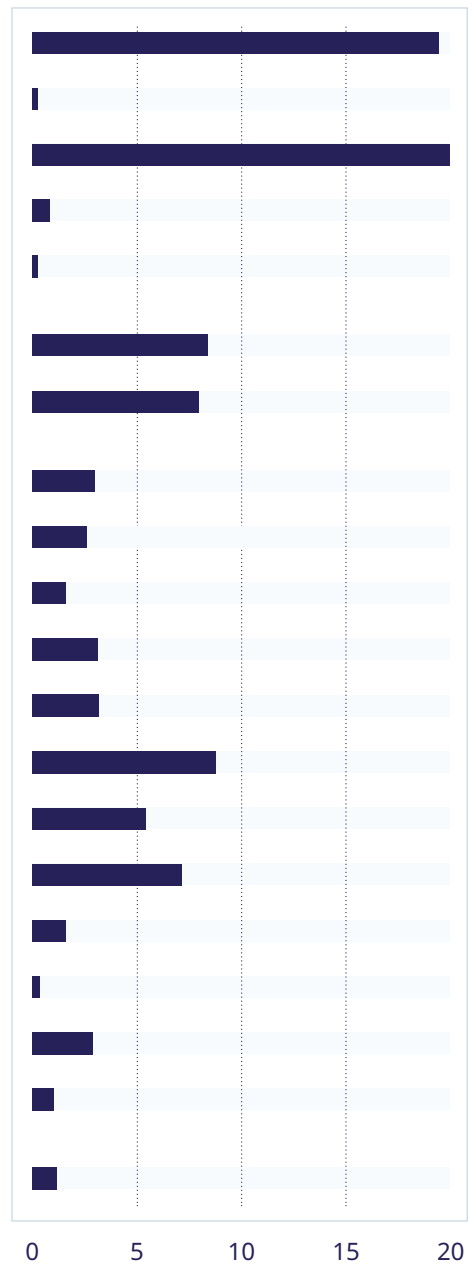
Human health and social work activities

Arts, entertainment and recreation

Other service activities

Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use

Not elsewhere classified



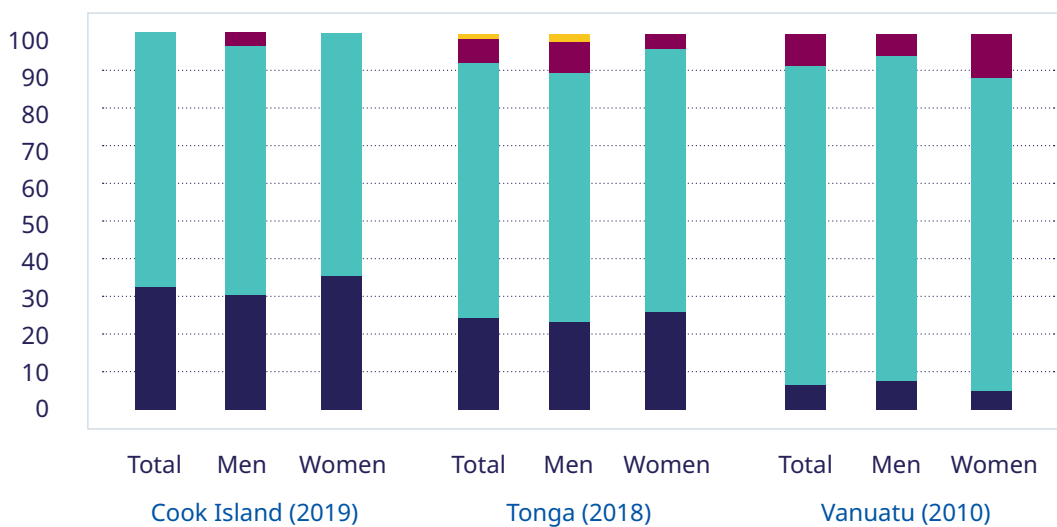
► **Figure 6. (cont.)****Panel C. Vanuatu, 2010**

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

Generally, women are more dependent than men on public administration, community and social services. The share of public administration in women’s employment is 10 percentage points higher than the men’s share in Fiji, Kiribati, Palau, Samoa, Solomon Islands and Tuvalu. In the Cook Islands, Fiji, Papua New Guinea and Samoa, there are also large gender gaps in wholesale and retail trade, more predominant among women. In some countries, including Fiji, Kiribati, Samoa, Tonga and Tuvalu, agriculture accounts for significantly larger shares of men’s employment than it does for women, with gaps between 15 and 31 percentage points. Construction and manufacturing account for relatively small shares of total employment, but have strong gender profiles – the first is dominated by men while the latter is more important for women’s employment. For instance, in Tonga, manufacturing accounts for 20 per cent of total employment. About 40 per cent of women are employed in the sector, in contrast to 4 per cent of men. Only 15 per cent of men and less than 0.5 per cent of women are employed in construction.

The majority of workers in the Cook Islands, Fiji, Kiribati, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu are in medium-skill occupations, such as skilled agricultural workers, craft and related trades workers, services and sales workers, and clerical workers. The share of women in high-skill occupations in the Cook Islands and Tonga is larger than that of men (figure 7). Conversely, low-skill employment is less prominent among women than men in these countries. In Vanuatu, on the other hand, the incidence of low-skill employment among women is nearly twice that among men.

► **Figure 7. Employment distribution, by skill level and sex, latest available year (%)**



- High-skill occupations
- Medium-skill occupations
- Low-skill occupations
- Not elsewhere classified

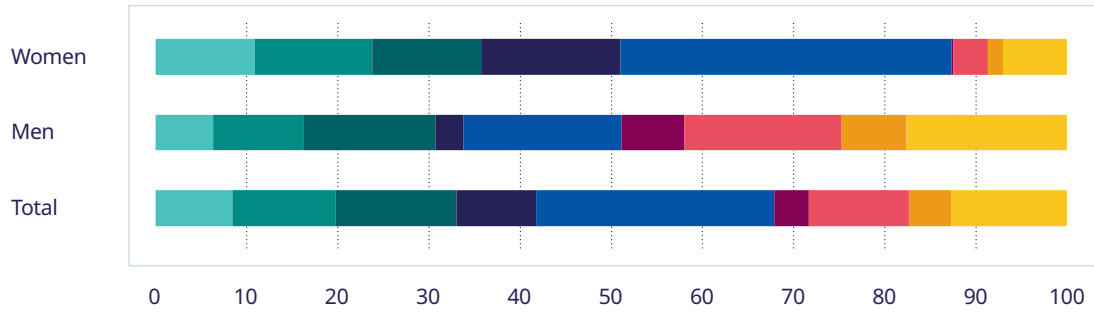
**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

Occupational segregation is evidenced by the distribution of employment by occupation (figure 8). In the Cook Islands, the shares of women in clerical support occupations and sales are, respectively, five and two times those of the men, while men are four times as likely as women to be crafts workers and machine operators. Clerical support work is also much more predominant among women than men in Tonga. Employment in skilled agricultural occupations is largely male; machine operators are also much more common among working men than women. In Vanuatu, gender divisions appear to be weaker, and the distribution of employment across occupations is largely similar for both sexes.

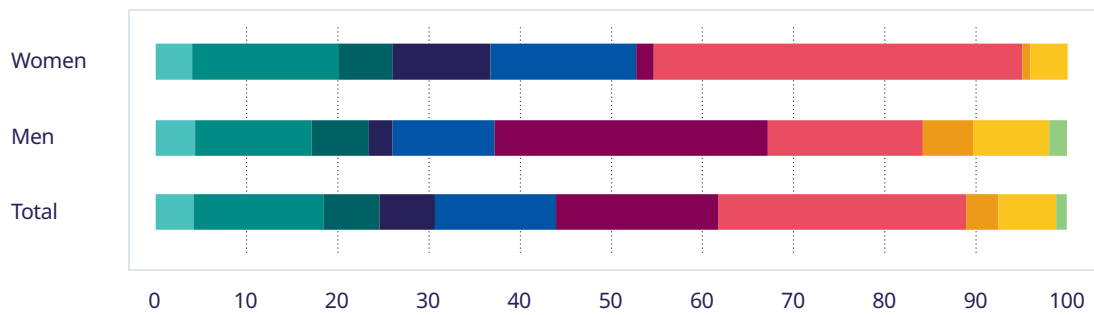


► **Figure 8. Employment distribution, by sex, latest available year (%)**

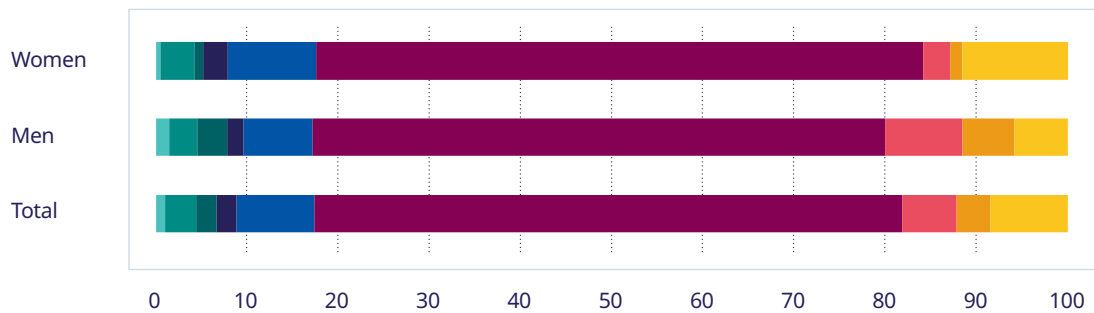
**Panel A. Cook Islands, 2019**



**Panel B. Tonga, 2018**



**Panel C. Vanuatu, 2010**



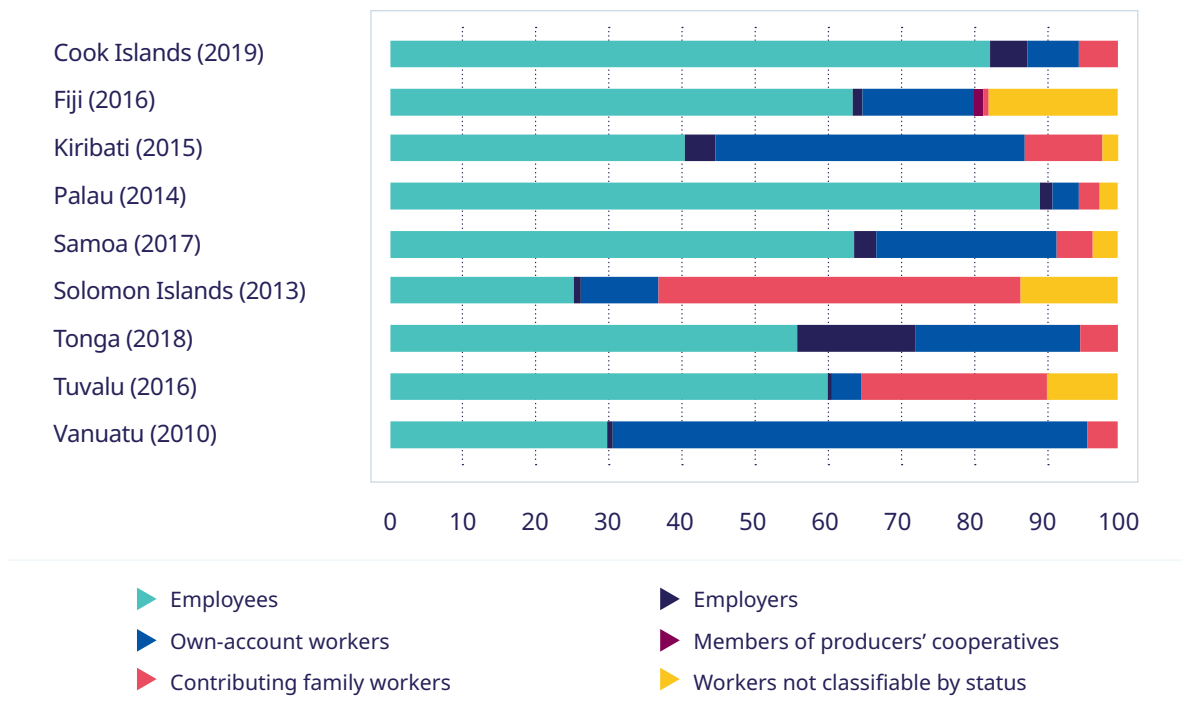
- ▶ Managers
- ▶ Professionals
- ▶ Technicians and associate professionals
- ▶ Clerical support workers
- ▶ Service and sales workers
- ▶ Skilled agricultural, forestry and fishery workers
- ▶ Craft and related trades workers
- ▶ Plant and machine operators, and assemblers
- ▶ Elementary occupations
- ▶ Armed forces occupations

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

## The quality of jobs is often a concern.

Often, the quality of jobs is a concern for people with employment. One of the characteristics traditionally associated with employment quality is status in employment (figure 9). Globally, an estimated 44.6 per cent of workers engage in vulnerable work in 2020, defined as own-account and contributing family work, and associated with limited legal and social protection and income security. These characteristics suggest that these workers are particularly vulnerable to disruptions in economic activity, including those brought about by natural disasters. Vulnerable employment is less prevalent in the Pacific, at 22.2 per cent, but varies across countries. The lowest incidence of vulnerable employment is found in Palau and the Cook Islands, at 6.4 per cent and 12.5 per cent of employment, respectively. It is most common in Vanuatu, at 69.5 per cent of workers. It is also prevalent in Kiribati and the Solomon Islands, where more than half of workers are in vulnerable jobs. In Tonga, 27.9 per cent of workers engage in vulnerable employment. Throughout the region, vulnerable employment is more frequently associated with own-account than unpaid family work, with the exceptions of the Solomon Islands and Tuvalu.

► **Figure 9. Employment distribution, by status in employment, latest available year (%)**



**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

Wage employment, traditionally linked to better employment quality and with greater job security and working conditions, is estimated at 52.8 per cent of global employment in 2020 – with the share larger in the Pacific, at 72.9 per cent. In six of the nine Pacific countries with available data, the share of wage workers in total employment is above the global rate. In Tonga, wage work accounts for 56 per cent of employment and 82.4 per cent in the Cook Islands. The share of wage work in total employment is as high as 89.3 per cent in Palau. In some cases, this might be closely related to the size of the public sector. It has been noted that the public sector of most Pacific countries is large relative to the size of the economy (World Bank 2017). The public sector employs 30 per cent or more of workers in the Cook Islands and Tonga, for instance. It also employs fewer than one in ten workers in some countries, including Papua New Guinea, the Solomon Islands and Vanuatu. In the latter, wage work accounts for fewer than one in three workers.

Previous research suggests that many Pacific islanders engage in informal employment and subsistence activities, often a combination of both, which are also connected to employment quality (World Bank 2014a). Subsistence work is the production of goods and services for own use, such as growing vegetables or raising fish for own household. Data from the latest Labour Force Survey (LFS) in Tonga indicate that 83.1 per cent of the working-age population engages in some own-production work and 26.1 per cent in subsistence food production, more specifically. In Samoa, nearly 95 per cent of the working-age population reported to be engaged in some subsistence activity. Subsistence activities are, however, not as common in other parts of the region. In the Cook Islands, 13 per cent of persons aged 15 years or older engaged in some own-use production of foodstuff in 2019.

Another indication of issues related to job quality is the prevalence of informal employment and the informal sector. Although there are limited data on informality in the Pacific, previous research acknowledged that the formal sector represents a small share of the economy (ADB 2019a; ILO and ADB 2017; World Bank 2014a; Duncan and Voigt-Graf 2008). In Fiji, 37 per cent of workers are in the informal sector. In Samoa, the informal sector accounts for 33 per cent of employment, and 37 per cent of employment is informal in both the informal and formal sectors. Informality is even more prevalent in the Cook Islands (at more than 60 per cent) and Tonga, at nearly one in two workers. In the Cook Islands and Tonga, informal jobs account for 71 per cent and 78 per cent of employment, respectively. Informal workers frequently have unstable and lower incomes, lack legal and social protection and have no workers' representation.<sup>13</sup>

### Many Pacific islanders search for employment abroad.

Seasonal and permanent migration have long been a reality of Pacific islanders, notably to Australia and New Zealand.<sup>14</sup> The same size and remoteness issues that constrain competitiveness, productivity and limit employment opportunities in the Pacific countries result in efforts to gain access to bigger markets for employment and entrepreneurship opportunities (World Bank 2017). Since 2000, UNDESA estimated (2019), more than 165,000 people migrated from Fiji, more than 50,000 from Papua New Guinea and Samoa, more than 33,000 from Tonga and 3,000 from Vanuatu. In 2017, more than 60,000 migrants from Tonga were living abroad, while the Cook Islands had more than 22,000 migrants overseas and Vanuatu had more than 8,700 (table 4) (ILO 2019). In the future, climate change might become an increasingly important driver of migration in the region (ILO and ESCAP 2014).

For source countries, migration might lead to "brain drain", to the detriment of the economy. But return migration can also be a source of new skills and knowledge. The diaspora has been an important source of income in the Pacific, helping alleviate distress caused by natural disasters, contributing to small business liquidity in post-disaster situations and supporting consumption (WTO 2019). In 2018, personal remittances were equivalent to approximately 40 per cent of GDP in Tonga (World Bank n.d.). In Vanuatu, by contrast, remittances were equivalent to approximately 4 per cent of GDP, reflecting much smaller migration numbers.

<sup>13</sup> Informal sector and informal employment are related but different concepts. According to the seventeenth International Conference of Labour Statisticians, informal employment relates to remunerative work (whether self-employment or wage employment), which is not registered, regulated or protected by legal and regulatory frameworks, and non-remunerative work in an income-producing enterprise. The informal sector relates to the nature of the economic unit and is defined by the fifteenth International Conference of Labour Statisticians as a group of production units with a series of characteristics, such as lack of registration (ICLS 2003). Together, the informal sector and informal employment outside the informal sector constitute the informal economy.

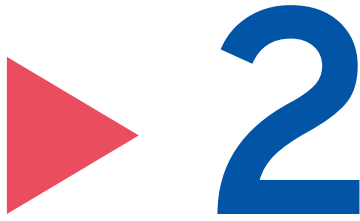
<sup>14</sup> Emigration from the Cook Islands, Tonga and Vanuatu is facilitated by schemes that grant permanent and temporary access to other countries. Cook Islanders are New Zealand citizens and have the right to reside there. Annual quotas and seasonal migration opportunities have benefited Pacific islanders from Tonga and Vanuatu wanting to move to Australia and New Zealand (ILO 2019; Thomas and Benjamin 2018).

► Table 4. Migration and remittances in Pacific Island countries, latest available year

	Migrants abroad, 2017	Remittances, 2018 (US\$ million)	Remittances % of GDP, 2018
Cook Islands	22 249	...	...
Fiji	215 120	284.7	5.1
Kiribati	4 903	18.0	9.5
Marshall Islands	7 504	31.5	14.2
Palau	2 598	2.2	0.8
Papua New Guinea	4 400	2.9	0.0
Samoa	117 511	147.4	18.0
Solomon Islands	3 913	19.3	1.4
Tonga	60 258	183.3	40.7
Tuvalu	3 546	4.0	9.5
Vanuatu	8 785	35.2	3.9

Sources: ILO, 2019; World Bank, n.d.

Greater frequency and intensity of natural disasters may exacerbate labour market challenges and aggravate inequalities, compromising social and economic development of the Pacific countries and achievement of the Sustainable Development Goals in the region. Accurately assessing disaster impacts, identifying recovery needs and devising recovery strategies, including those related to employment and livelihoods, is therefore critical.



# Living with disaster risk

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## 2.1. The region has high risk exposure and is frequently affected by natural disasters

The Pacific Islands are some of the most exposed countries to natural disasters. Due to their location in the South Pacific tropical cyclone basin and along or near the Ring of Fire, they are susceptible to a variety of hydrometeorological and geological disasters, including tropical cyclones, floods, droughts, earthquakes, tsunamis and landslides (PCRAFI n.d.). A person in a small island developing country in the Pacific is three to five times more vulnerable to climate-related hazards than a person in South-Eastern and Southern Asia (UNESCAP 2019). More specifically, Tonga, Vanuatu, Fiji, Papua New Guinea and the Solomon Islands rank among the countries with highest disaster risk, according to the *World Risk Report 2019* (Bündnis Entwicklung Hilft and Ruhr University Bochum IFHV 2019). Full productive employment and decent work are crucial to preventing crisis situations arising from disasters, enabling recovery and building resilience, as outlined in the Employment and Decent Work for Peace and Resilience Recommendation, 2017 (No. 205). In this context, understanding labour market characteristics and disasters' labour market repercussions is necessary to promote self-sufficiency and people's abilities to consistently meet their basic needs.

The Emergency Events Database (EM-DAT) references 146 natural disasters in the 11 Pacific Island countries between 2000 and 2019, most often tropical cyclones with strong winds, rain and storm surges.<sup>15</sup> Disaster incidence varied by country. The database reports that while the Cook Islands has experienced four natural disasters since the onset of the century, Tonga has been affected by ten disasters and Vanuatu by 20 calamities in the same period. These numbers, however, underestimate the incidence of natural disasters across the region due to criteria for database inclusion and resource constraints (ADB 2018; Noy and Edmonds 2016).<sup>16</sup> This is reflected in the records of the Pacific Damage and Loss Information System (DesInventar), which references 489 events in the region since 2000, including high-frequency, low-impact events (UNDRR n.d.). According to DesInventar, between 2000 and 2019, there were 20 events in the Cook Islands, 60 in Tonga and 72 in Vanuatu.<sup>17</sup>

Exposure is illustrated by the impact of natural disasters in the Pacific region. Using a combination of mortality, persons affected and economic value of disasters between 1980 and 2012, researchers from the University of Wellington concluded that the Cook Islands and Tuvalu had faced the highest disaster losses, followed by Tonga, Vanuatu, Fiji and Samoa (Noy and Edmonds 2016). Although it is hard to determine the extent of damages, various reports demonstrate impacts that have been sizeable. Despite limited data, the EM-DAT database suggests that between 2000 and 2019, natural disasters affected more than 5 million people in the Pacific, while the DesInventar database indicates more than 4.3 million Pacific islanders were directly or indirectly affected by disasters in the same period. According to recent research by the Asian Development Bank (2019b),

<sup>15</sup> Data as of 19 December 2019. The region includes Cook Islands, Fiji, Kiribati, the Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. EM-DAT defines disasters as events meeting at least one of the following criteria: ten or more people are reported dead; 100 or more people are reported affected; a state of emergency is declared; or there is a request for international assistance (Guha-Sapir 2019).

<sup>16</sup> Disasters in the Pacific may be under-reported in the EM-DAT database due to the disaster inclusion criteria, coupled with limited information on Pacific disasters available to the staff responsible for aggregating and entering data into the database.

<sup>17</sup> Noy and Edmonds (2016) noted that discrepancies in impact data across countries suggest inconsistencies in data collection and reporting.

disaster damage in Asia and the Pacific amounted to \$644 billion between 2000 and 2018. National reports indicate significant economic costs and impacts on a large share of the population (box 1). These examples not only highlight the extent of disaster impacts on the economies and lives of Pacific countries to date but also serve as a cautionary tale. According to a 2018 report by the Intergovernmental Panel on Climate Change (IPCC 2018), changing weather patterns are expected to amplify exposure of small island countries. Indeed, in the 2018 Boe Declaration on Regional Security, governments from the Pacific recognized that climate change is the single greatest threat to livelihoods and well-being in the region (Pacific Islands Forum Secretariat 2018).

► **Box 1. Disasters have had important consequences throughout the region**

When Tropical Cyclone Gita struck Tonga in February 2018, it affected approximately 80 per cent of the population and caused \$164 million in damages and losses, destroying schools and public buildings, damaging houses, bringing down powerlines and devastating crop fields and fruit trees (Government of Tonga 2018). As a result, GDP growth in Tonga for 2018 was reduced from a predicted 3.4 per cent to 0.8 per cent (WTO 2019). This was only four years after Tropical Cyclone Ian, which had affected more than 5,000 people and imposed an economic cost equivalent to more than \$50 million (World Bank 2014b).

Successive catastrophic events have also hit Fiji. In February 2016, Tropical Cyclone Winston resulted in severe damage, impacting more than 60 per cent of the population, compromising their livelihoods and leaving an estimated \$900 million in damages and losses (Government of Fiji 2016). Three years prior, in December 2012, Cyclone Evan made landfall in Samoa and Fiji, causing widespread devastation. In Fiji, Cyclone Evan affected about 60 per cent of the population and cost an estimated \$180.4 million (Government of Fiji 2013). In Samoa, the tropical cyclone inflicted damages and losses equivalent to 29 per cent of the 2011 GDP, with impacts to be felt for the following four years (Government of Samoa 2013).

In 2015, Tropical Cyclone Pam affected 65,000 people in Vanuatu, compromising the livelihoods of more than 80 per cent of the rural population. The disaster's economic value was estimated at approximately \$450 million, equivalent to more than 64 per cent of the 2013 GDP and arguably delayed Vanuatu's expected graduation from its least developed status (WTO 2019; Government of Vanuatu 2015). Socio-economic development in the country continues to face challenges associated with natural hazards. In 2018, increased volcanic activity left more than 1,400 people displaced in Vanuatu (European Commission 2019). In the same year, a 7.5-magnitude earthquake in Papua New Guinea caused landslides and destruction that affected more than half a million people (European Commission 2019).

But rapid-onset disasters are not the only threat to the region. Severe drought in 2015 and 2016 led the Government of the Marshall Islands to declare a state of disaster. The droughts affected more than 53,000 people, and losses were estimated at \$4.9 million (Government of the Marshall Islands 2017).

Exposure to natural disasters, combined with geographic isolation, small economies with little diversification and limited coping and adaptation capacities contribute to the Pacific countries' vulnerability. Vulnerability is further exacerbated by expanding populations, the prevalence of poverty, reliance on subsistence activity and the economic role of tourism, as outlined in the previous chapter. Employment and livelihoods are generally affected through job loss and life disruptions that hinder economic participation (APEC Human Resources Development Working Group 2013). The labour market impacts of disasters encompass immediate and direct effects, including (permanent or temporary) job loss, underemployment and lower earnings related to the destruction of productive assets, such as factories, market stalls and crop fields. But it also includes secondary impacts, brought on by a reduction of economic flows (including labour and non-labour income), which may impact workers whose activities might not have been directly affected (UNDG, WBG and European Commission 2017). For example, the demand for barbers may decline in the aftermath of a disaster as disposable income decreases. Disaster impacts on livelihoods may be further aggravated by an increase in the supply of labour by households attempting to make up for lost income, potentially pushing remuneration down. Previous disasters have resulted in significant losses in work days and personal income. The estimated loss in work

days was greater than 14 million in Fiji as a result of Cyclone Winston, for example, and more than 504,000 in Vanuatu as a consequence of Cyclone Pam.

Moreover, disaster impacts are uneven. Vulnerable groups such as women, youth and displaced persons are often disproportionately impacted and risk being trapped in aggravated poverty and vulnerability (ILO 2016). For instance, the destruction of social infrastructure, such as schools, might increase women's care burden and decrease their availability for paid work or subsistence activities. Imbalances in the distribution of employment across sectors and occupations by sex, age or ethnic group can also lead to uneven disaster impacts. And disasters do not impact entire countries to the same extent, with greater devastation in certain locations. Disasters thus can reverse social and economic development and aggravate inequalities, compromising the social and economic development of Pacific countries and the achievement of the Sustainable Development Goals in the region. In this context, labour market information is instrumental to determine risks, impacts and identify recovery strategies.

## 2.2. Resuming development processes in post-disaster scenarios requires post-disaster needs assessments

Resuming sustainable development processes in post-disaster scenarios requires an evaluation of the disaster damages and losses for the development of appropriate recovery plans. To this end, governments in affected countries often initiate post-disaster needs assessments with the support of relevant stakeholders. To guide this process and strengthen coordination and coherence in complex post-disaster scenarios, the United Nations Development Group, the World Bank Group and the European Commission developed the Post-Disaster Needs Assessment (PDNA) approach, which was formalized in a series of PDNA Guidelines for Employment, Livelihood and Social Protection. These guidelines aim to facilitate planning and provide technical guidance for sector-specific evaluations, ensuring comparability to allow for a comprehensive assessment of the post-disaster situation.<sup>18</sup> The overarching goal of conducting a PDNA is to “assist governments to assess the full extent of a disaster’s impact on the country and, on the basis of these findings, to produce an actionable and sustainable Recovery Strategy” (UNDG, WBG and European Commission 2013, 12). Guiding principles include supporting and strengthening national and local capacities to lead and manage recovery and reconstruction, focusing on the most vulnerable populations, among others.

The assessments comprise a review of baseline information, disaster effects and impacts and the recovery needs and strategy. Baseline data provide a picture of the pre-disaster situation. In turn, the assessment of disaster effects quantifies the damages and losses. This includes damages to infrastructure and physical assets and losses related to the disruption of production and limitations in access to goods and services. The quantitative information is critical for the estimation of the economic cost of disasters, which helps determine the resources required to revive economic activity, restore employment and resume growth and development processes.

The evaluation of quantitative effects informs the assessment of disaster impacts, defined as the consequences of the disaster effects on economic and social development. Disaster impacts encompass the likely effects on economic performance, employment and personal and household income, including medium- and long-term projections. The assessments of effects and impacts form the basis for determining the recovery needs and strategy, which, under the PDNA methodology, anchors on the concept of building back better.

In the PDNA framework, assessments are first made at the sector level. The data are then aggregated to arrive at estimates for total economic and social impacts for a complete picture of the post-disaster situation and recovery needs and strategy. The PDNA process separately evaluates the consequences of the disaster on physical infrastructure and assets, productive sectors of the economy as well as on the social sector (housing and education) and cross-cutting sectors, such as employment and livelihoods (figure 10).<sup>19</sup> As a cross-cutting sector, the employment and livelihoods analysis relies on sector-based estimates of effects and impacts, combined with labour market information, to evaluate the disaster outcomes and address employment and livelihood interruptions.

<sup>18</sup> The PDNA guidelines build on various assessment techniques, such as Damage and Loss Assessment and the Human Recovery Needs Assessment (UNDG, WBG and European Commission 2013).

<sup>19</sup> There are 18 sector-specific guidelines.

► **Figure 10. PDNA sectors**

Social Sector	Infrastructure Sector	Productive Sector	Cross-cutting sectors and themes
<ul style="list-style-type: none"> <li>▶ Housing</li> <li>▶ Education</li> <li>▶ Health</li> <li>▶ Nutrition</li> <li>▶ Culture</li> </ul>	<ul style="list-style-type: none"> <li>▶ Water and sanitation</li> <li>▶ Community infrastructure</li> <li>▶ Energy and electricity</li> <li>▶ Transport and telecommunications</li> </ul>	<ul style="list-style-type: none"> <li>▶ Agriculture, livestock and fisheries</li> <li>▶ Industry</li> <li>▶ Commerce and trade</li> <li>▶ Tourism</li> </ul>	<ul style="list-style-type: none"> <li>▶ Governance</li> <li>▶ Employment and livelihoods</li> <li>▶ Gender</li> <li>▶ Environment</li> <li>▶ Disaster risk reduction</li> </ul>

Source: UNDG, WBG and European Commission, 2013.

## Employment and livelihood impacts are important in post-disaster needs assessments

As noted in the PDNA guidelines (Vol. A), a disaster's impact on human development persists long after physical reconstruction is complete. For workers and their families, accurate impact assessment is critical to mitigate impacts and ensure that vulnerable workers, including women, youth and those who are often "invisible" and hard to count – persons relying on subsistence activities and informal employment or the informal sector – can recover and maintain their means of survival.

The standard outline for the employment and livelihoods assessment comprises: (i) pre-disaster situation, (ii) disaster effects, (iii) disaster impacts and (iv) recovery needs and strategy (box 2). Solid labour market information allows governments to assess where, how many and what kinds of workers are affected by the disaster and how the impact differs across worker groups. This information supports post-disaster recovery action, with a prioritization framework that includes such criteria as potential to generate sustainable livelihoods and inclusive pro-poor and pro-vulnerable strategies. It can also shed light on deeply rooted labour market issues.

### ► **Box 2. Employment and livelihoods post-disaster assessment, steps and structure**

1. Baseline analysis: review of the pre-disaster labour market situation.
2. Estimation of disaster effects: quantifying the disaster effects on workers.
3. Examination of disaster impacts: qualifying the disaster effects according to the characteristics of the labour market.
4. Identification of recovery needs and determining the recovery strategy.

Source: ILO, 2015.

First, indicators traditionally included in labour market analysis are used for an overview of the pre-disaster situation. This includes data on the working-age population, labour force participation, unemployment, employment and employment characteristics, such as status in employment and employment by sector, average earnings, work days and informality rate. It also encompasses information on other sources of livelihood and work activities, including the production of goods for own use, given the importance of subsistence activities throughout the Pacific. This information should be disaggregated by sex, age and geographical area to identify groups who may have been disproportionately vulnerable.

These statistics are critical as a quantitative basis for the evaluation of disaster effects as well as a framework for disaster impact analysis (ILO 2015). The data are primarily collected through the LFS, income and expenditure surveys and other household surveys and administrative records, the first of which provides the most complete picture of the labour market.

A second step requires gathering information on the post-disaster situation for estimating the disaster effects. Given the time constraints of the PDNA processes – coupled with weak labour market information systems



and the fact that many Pacific countries do not conduct regular household surveys, this typically relates to a combination of secondary survey data and proxies constructed on the basis of changes in the flow of sectoral outputs and physical damage to workplaces or dwellings. Pre- and post-disaster data included in the analysis of productive sectors are used to estimate the disaster effects on employment and livelihoods.

Indicators of disaster effects on employment and livelihoods include the number of work days lost per productive sector and geography, and personal income lost per productive sector and geography. These combine post-disaster information with pre-disaster figures on employment by sector, average earnings and days of work. The indicators can be calculated using different methods, depending on the information available. Box 3 presents two methods to estimate the disaster effects on the employment and livelihoods sector.

### ► Box 3. Estimating the disaster effects on employment and livelihoods

The assessment of lost days of work can be calculated from changes in sectoral GDP, reported in other PDNA sectoral analyses. Changes in sectoral output usually refer to changes in the year of the disaster, thus not distinguishing between jobs temporarily and permanently lost or shifts in job income.

*Estimated No. work days lost in sector S = baseline No. workers in sector S \* estimated baseline days of work per year \* estimated % decrease in sector S output (from PDNA sectoral assessment)*

Data on workplace and productive asset destruction can also be the basis for estimates of lost work days. Depending on data availability, information on the damage and destruction of housing can serve as a proxy for workplace destruction.

*No. jobs lost = baseline jobs \* % workplaces or dwellings destroyed*

**Source:** ILO, 2015.

The next step in the employment and livelihoods post-disaster assessment is an examination of post-disaster scenarios. The quantitative estimates of disaster effects are contextualized by qualitative analysis to arrive at the disaster impacts. The analysis of the disaster impacts examines disaster consequences in the local socio-economic context, taking into account that disaster impacts are uneven across social groups and geographies and that there may be linkages across sectors. Disaster impacts should include short-, medium- and long-term analysis, considering the expected duration of recovery (ILO 2015). Finally, disaster effects and impact evaluations inform the identification of recovery needs and strategy.

Throughout the PDNA process, official statistics collected by the government can be complemented by quantitative and qualitative information on the pre- and post-disaster situation from the private sector and various populations and worker groups. In this context, consultations and collaboration between the government, employers' and workers' organizations and civil society are essential for a complete and detailed employment and livelihoods assessment and for appropriate employment, economic and social policies.

## 2.3. The assessment of disaster consequences on employment has been uneven in previous PDNAs in the Pacific

Between 2013 and 2018 (table), seven PDNAs were conducted in the Pacific countries, the majority of which were triggered by tropical cyclones. Table 5 lists the country, year and disaster. The total economic value of disasters that triggered the PDNA process varies widely, ranging from \$4.9 million in the Marshall Islands for 2015–16, to \$900 million in Fiji in 2015. In terms of relative size, the damages and losses amounted to between approximately 3 per cent of the GDP in Fiji in 2012 and the Marshall Islands in 2015–16 to 64 per cent of GDP in Vanuatu in 2015. Disaster damages concentrated in the infrastructure sector, followed by the productive sector and the social sector. The pattern of losses suggests they are highest in the productive sector: Changes in economic flows in productive sectors are persistent, lasting beyond the immediate disaster aftermath, with proportional shifts in sectoral employment also likely to last for months and years.

In terms of employment and livelihoods, the PDNAs that were conducted differ in relation to the depth and extent of the assessment. In some cases, the analysis was comprehensive, relying on detailed up-to-date pre-disaster labour market information. In other cases, scarce labour market data prevented in-depth analysis and the estimation of the disaster effects. The following sections summarize the employment and livelihood assessments in past (seven) Pacific PDNAs.

► **Table 5. Post-disaster needs assessments, by country**

Country	Disaster	PDNA report year and ILO involvement
Fiji	Tropical Cyclone Evan, Dec. 2012	2013
Samoa	Tropical Cyclone Evan, Dec. 2012	2013
Solomon Islands	Flash floods, Apr. 2014	2014
Vanuatu	Tropical Cyclone Pam, Mar. 2015	2015 – ILO's 1st PDNA in the Pacific
Fiji	Tropical Cyclone Winston, Feb. 2016	2016 – ILO's 2nd PDNA in the Pacific
Marshall Islands	Drought, 2015–16	2017 – ILO's 3rd PDNA in the Pacific
Tonga	Tropical Cyclone Gita, Feb. 2018	2018 – ILO's 4th PDNA in the Pacific

**Note:** Solomon Islands and Tonga refer to rapid assessments.

**Source:** Authors' compilation.

The older PDNAs from the Pacific countries did not include a stand-alone section on disaster impacts on the labour market. Fiji's Cyclone Evan PDNA included a short section on the affected population and labour force within the chapter on macroeconomic impacts, while other sources of livelihood, including subsistence activities, were examined in a separate segment on social impacts. Employment was also discussed within the economic chapter as well as sectoral assessments in Samoa's post-Evan PDNA. Labour market implications were not included in the Solomon Islands 2014 rapid assessment of flash floods.<sup>20</sup> A word search revealed that the word "job" did not appear in the text and that there were few mentions of employment.<sup>21</sup>

Since 2015, when the ILO was first involved in a Pacific PDNA process, post-disaster assessments have included a dedicated section on employment, livelihoods and social protection. This is the case in the post-disaster assessment reports of Vanuatu, Fiji (2016), Marshall Islands and Tonga. These assessments encompass baseline information, disaster effects, impacts and recovery needs and strategy.

The baseline information presented in the analyses of the Pacific PDNAs differs greatly. This might be related to the lack of regular household surveys in the region, particularly the LFS, but it is also connected to the varying attention devoted to disaster consequences on the world of work. Fiji's 2013 PDNA summary of the pre-disaster situation included labour force participation, the unemployment rate and employment by sector and sex. The country's 2016 PDNA baseline scenario encompassed figures not only on labour force participation, employment and unemployment rates but also informality and subsistence activities as well as some information on persons with disabilities, youth not in employment, education or training and child labour; it also mentions gender disparities. The Marshall Islands PDNA's depiction of the pre-disaster labour market situation contained figures for the working-age and economically active populations, unemployment, employment by institutional and economic sector and status in employment. It also highlighted disparities across sex, age and geographic area and emphasized the importance of subsistence activities.

Vanuatu's PDNA started by outlining the pre-disaster situation, with data on the share of the population that was economically active and in paid employment. It also highlighted that many people engaged in a combination of activities in the formal and informal sectors and subsistence work. In addition, it described the

<sup>20</sup> The methodology for this assessment was guided by ECLAC (2014) and World Bank (2010).

<sup>21</sup> The report noted that a mine closure would have impacts on employment and that livelihoods would be affected due to the destruction of food gardens. Some discussion on disaster implications on work was included under the social impact analysis within sectors; for example, the report highlighted that women's earnings ability may be disproportionately impacted by disruptions in agriculture because the majority of economically active women engage in the sector.

sectoral distribution of employment, acknowledging gender gaps – these figures, however, were more than a decade old, referring to 2000 data from the Vanuatu National Statistics Office. The analysis underlined at that time the importance of recovering productive activities and increasing livelihood resilience to future disasters in the reconstruction and recovery process.

The Post-Cyclone Gita rapid assessment in Tonga included a short section dedicated to employment and livelihoods. Data from the 2016 population census provided a general outline of the pre-disaster situation, with discussions on how labour market challenges could be intensified by the disaster. The data included the number of persons in the labour force, labour force status and status in employment, institutional sector and geographical composition of employment as well as the share of the labour force in the rural or informal sector. It also addressed challenges of more vulnerable groups, such as youth, women and persons with disabilities. This picture of the labour market was accompanied by a description of pre-disaster average household and per capita incomes as well as the share of workers in paid employment and the share of household income generated by wages, business profits and subsistence, based on the 2015–16 Household Income and Expenditure Survey (HIES).

Most of the PDNAs contained some estimate of the disaster effects on employment and personal income lost. In the 2013 Fiji PDNA, wage and salary workers were assumed to not have their remuneration interrupted and, therefore, the estimated disaster effect was limited to the one day during which the cyclone struck Fiji. The analysis of other sources of livelihood, including subsistence, relied on qualitative information and did not contain quantitative estimates of the disaster effects. The Samoa PDNA included estimates for employment effects in terms of equivalent jobs lost for salaried and own-account workers, disaggregated by sex. Personal income loss estimates were also provided by sector and sex. The discussion on disaster impacts in Samoa's PDNA included references to informality, self-employment, subsistence and sex and noted that the disaster may have aggravated pre-disaster vulnerabilities.

Labour market statistics allowed for an extensive analysis of the disaster effects in the Fiji post-Winston PDNA for 2016, including the number of workers who were laid off or whose income-generating activities were interrupted. The report also provided estimates for the number of work days lost and lost income (by region and sector) for the projected five years required for the recovery of the production of goods and services. This analysis was followed by examination of the disaster impacts, which indicated that the disaster impacts may be felt for up to a decade; the analysis used pre-disaster labour market information and assessments of productive sectors to highlight some of the main expected challenges for workers.

Similarly rich analysis was included in the Marshall Islands PDNA. The employment assessment estimated the number of work days and income lost as a result of drought-induced changes in production by sector and region, and outlined the main expected impacts, such as increases in hardship and poverty and lower female labour force participation. Pre-disaster data was instrumental in identifying particularly vulnerable groups for targeted recovery policies.

Vanuatu's PDNA report stated that a lack of reliable and comprehensive labour market information had hampered an adequate evaluation of the disaster impacts on livelihoods. The assessment, therefore, relied on several extrapolation methods to build the baseline and to estimate the effects of the cyclone. The data sources included 2000 labour market data from the National Statistical Office, the 2007 census of agriculture, the 2009 population census and the 2009–12 Decent Work Country Programme. These were combined with data from the PDNAs' productive sectors' assessments to quantitatively estimate the effects of the cyclone on employment and livelihoods. This included such data as the loss of agricultural outputs (from the agriculture sector), the share of damaged and destroyed housing (housing sector), the estimated duration of business interruption (from the tourism sector) and the number of recorded layoffs (from the manufacturing sector). This information was complemented by qualitative data gathered through interviews and site visits as well as by a rapid survey of the tourism sector. The PDNA estimated more than 504,000 work days lost and personal income loss at more than \$1 billion Vanuatuan vatu at the national level (the data were also provided for province and sector). The assessment also estimated the total number of persons and households affected by Cyclone Pam and indicated the share of agricultural households that lost part or the entirety of their crops.

The report noted that analysing disaster impacts in Vanuatu was daunting due to the prevalence of the informal sector, unpaid family work and subsistence activities. Therefore, it argued, the impact analysis should be interpreted as indicative rather than exact. In this context, the availability of LFS data with a module on past employment experience could have benefited the analysis of the effects and impacts in post-Cyclone Pam Vanuatu. The employment and livelihoods impact analysis highlighted short-term risks associated with temporary increases in the labour supply and secondary impacts on the earnings of workers who may not

have been directly impacted by the disaster, such as domestic workers and hawkers. Another issue relates to the potential aggravation of impacts on those who depend, directly or indirectly, on tourism. The analysis also included likely medium-term impacts for some of the most vulnerable groups, such as young workers, who are often among those most affected by downturns, and persons operating in the informal sector. Potential long-term consequences of remedial action, related to the withdrawal of funds from the national provident fund, were also considered.

In contrast, Tonga's PNDA employment and livelihoods assessment was restricted to brief analysis in a single section that presented the pre-disaster situation and qualified it with potential disaster impacts. For instance, the employment analysis argued that, given that the majority of persons in paid employment resided in Tongatapu, the island most affected by the disaster, there was significant risk that workers would slip into informality. The assessment did not, however, attempt to quantify the disaster effects nor examine the disaster impacts at different time frames, including in the medium and long terms.

In some cases, not all available information appeared to be included in the analysis of the disaster effects on the world of work. For instance, in the 2013 Fiji PDNA, references to disaster implications for workers were included in the analysis of several productive sectors in a later chapter but were not further exploited or directly referred to in the dedicated employment section. The tourism sector assessment indicated that one third of hotels were damaged, many requiring several months for repairs, yet no information was provided on likely employment effects and impacts beyond suggesting that any job loss would likely be temporary. A different example related to a rapid assessment survey of market vendors in the commerce sector, which was not mentioned in the employment assessment. Overall, even though the employment assessment included information on work days and earnings lost, it could have presented a more complete picture of the post-disaster situation with the addition of information spread across other PDNA sectors.

Similarly, the rapid assessment conducted in Tonga did not capitalize on all information available for the labour market assessment. The PDNA report contained sectoral shares of GDP and estimates for the economic value of Tropical Cyclone Gita's effects. These included, for instance, the value of effects on crops, livestock, fisheries and forestry and the value of damages and losses in the commerce and industry sectors. Estimates such as these can be combined with employment data to calculate labour market effects, such as the number of work days lost and lost personal income. However, lack of baseline labour market data prevented any calculation of these key indicators. Had more detailed labour force data been available, the PDNA report could have highlighted groups who may have been disproportionately affected, supporting more detailed needs assessment and priority identification in the context of limited resources for reconstruction and recovery. In fact, baseline information did not include sectoral employment figures, although the data were collected in the 2016 population census and the 2015–16 HIES. Instead, baseline information provided only a general idea of the importance of various productive sectors in employment, included in the background section of the sectoral chapters. The agriculture sector analysis, for example, noted the share of households that were agriculturally active, while the commerce sector assessment cited the share of workers in the private sector as a proxy for sectoral employment, in addition to the percentage of households producing handicrafts and home-processed foods.

Although not necessarily employment numbers, information from other chapters could have contributed to a stronger labour market assessment. For instance, the assessment of the education sector indicated that many schools, including early childhood education centres, were affected by the cyclone, leading to temporary closure. This could have informed the analysis of labour market impacts, given that school closures were likely to lead to increases in women's care responsibilities, with repercussions to their availability for economic participation. Similarly, information on the damage of the housing stock and number of affected households might have served as an indication of potential negative impacts on own-account workers. Other information that could have been capitalized on in the employment impact analysis include a rapid assessment survey of handcraft and taxi workers conducted by the Ministry of Commerce, Consumer, Trade, Innovation and Labour for the commerce and industry assessment and interviews that revealed expectations in terms of how long it would take to reach pre-disaster performance. This survey, conducted with technical assistance from the ILO, provided rare insight on the disaster impacts on own-account workers, suggesting taxi drivers lost three days of work and had their income significantly reduced due to lower consumer demand.

All the PDNA assessments were complex processes that involved multiple stakeholders. In several PDNA reports, the contributor list was detailed, such as those for Fiji, Tonga and Vanuatu. The contributors included various government agencies, international organizations, private consultancies, and workers', employers' and civil society groups and representatives.

## 2.4. Labour market information is critical for PDNA preparedness

The analysis of the employment and livelihood sections of these previous PDNAs revealed that scarce labour force data hinder the evaluation of disaster effects and impacts on workers and that reliable and up-to-date information is crucial. Ensuring access to opportunities for employment and income generation is requisite for restoring economic flows and resuming socio-economic development processes in post-disaster situations. This section first examines the data availability for the Cook Islands, Tonga and Vanuatu. It then builds on the previous section and outlines some recommendations for better labour market information systems for PDNA preparedness in the Pacific.

### The Cook Islands, Tonga and Vanuatu have most of the data needed for future PDNAs, but not all other island countries have similar data.

A quick look at the existing labour market data sources indicate that many island countries have collected some data on the labour force or have at least one data source that can provide them with core labour force indicators. However, only four of the 11 ILO Member States have ever implemented a stand-alone LFS (table 6), and the available data for some other island countries are at least four years old or even older, such as in Palau (latest year is 2015), Papua New Guinea (2011), Solomon Islands (2009) and Vanuatu (2016).

► **Table 6. Current data sources of labour market information in the Pacific Island countries and latest year for which data are available**

	Labour Force Survey	Household Income and Expenditure Survey	Population census	Other sources
Cook Islands	2019	2015–16	2016	
Fiji	2015–16	2019–20*	2017	
Kiribati		2019–20*	2015	
Marshall Islands		2019–20*	2011	
Palau		2014–15	2015	
Papua New Guinea		2009–10	2011	
Samoa	2017	2018–19	2016	
Solomon Islands		2012–13	2019	
Tonga	2018	2015–16	2016	
Tuvalu		2015–16	2017	
Vanuatu		2019–20	2016	

**Note:** \* = Data not available yet or not publicly released yet. Other sources include the Multi-indicators Cluster Survey, the Demographic and Health Survey, agriculture survey and a disability survey, but it is not sure yet if any of these can provide core labour force data.

**Source:** Updated by ILO and SPC, June 2020.

A review of the PDNA Guidelines for Employment, Livelihood and Social Protection and the recent PDNAs in the Pacific region points to labour market indicators required for the post-disaster needs assessments. Labour market data, however, are limited in many of the Pacific countries. Table 7 lists the main labour market indicators featured in the PDNAs, along with an indication of data availability based on the latest published population census, HIES and LFS reports for the Cook Islands, Tonga and Vanuatu. It provides an indication of the preparedness of these countries for future PDNAs, should a disaster strike.

► **Table 7. Labour force indicators and data availability in the Cook Islands, Tonga and Vanuatu**

Indicator	Cook Islands	Tonga	Vanuatu
Working-age population	✓	✓	✓
Labour force and participation rates	✓	✓	✓
Employment and employment-to-population ratio	✓	✓	✓
Unemployment and unemployment rate	✓	✓	✓
Informal employment (% of employment)	✓	✓	✗
Subsistence (% of working-age population)	✓	✓	✓
Status in employment	✓	✓	✓
Employment by occupation	✓	✓	✓
Employment by type of employer	✓	✓	✓
Persons with disability by labour force status	✓	✓	✓
Working poverty, moderate and extreme (% of employment)	✓	✓	✓
Households or population in poverty (%)	✓	✓	✓
Household income composition	✓	✓	✓
<b>Baseline indicators needed to estimate disaster effects</b>			
Employment by industry or sector	✓	✓	✓
Average actual work days by industry or sector	✓	✓	✓
Average earnings by industry or sector	✓	✓	✓

**Source:** Authors' assessment based on published survey reports.

Information on the working-age population is available for all three countries.<sup>22</sup> This information can be extracted from the 2019 LFS of the Cook Islands, Tonga's 2018 LFS and Vanuatu's 2009 population census and 2010 HIES. These surveys collected information on economic activity, allowing for the calculation of key indicators, such as the labour force size and participation rate, employment, unemployment and unemployment rate.

Several other characteristics of the labour market can provide insights on differences across social groups and support the formulation of targeted recovery policies. These include information on status in employment, the occupational and industry profiles of employment, informality, disability status, poverty and subsistence activities. It is important to discuss informality in the impact analysis, given that such characteristics as unstable income and limited social protection render these workers particularly vulnerable to fluctuations in economic flows. Similarly, workers' status in employment provides information on specific vulnerabilities. Employment by sector and occupation often provided evidence on labour market segmentation across gender lines. Occupation data can also serve as an indication of the skill level of employed workers in a country, which may reveal specific issues experienced by groups of workers. The sectoral distribution of employment is a crucial indicator not only to provide a picture of the pre-disaster labour market situation but also to estimate the effect and impact of disasters on jobs. The other key indicators for the estimation of disaster effects on employment are the number of work days and work earnings by sector of employment.

<sup>22</sup> It is important to emphasize that some of these surveys do not use the standard reference period of the previous seven days but refer to the previous 30 days instead. Definitions of employment and other indicators, particularly in older surveys, may also vary and not match international standards. Moreover, some of the reports did not include a copy of the questionnaire for reference.

Additional information that may be useful to identify vulnerable groups include figures on persons with a disability and persons living in poverty.

Most of the data are available and recent for all three countries. The Cook Islands 2019 and Tonga's 2018 LFS collected data following the latest international standards, allowing for the calculation of all key labour market indicators. However, not all data are available for Vanuatu, which has never undertaken an LFS and relies on other sources, such as the population census and the HIES, for labour market information. But Vanuatu's 2009 population census and 2010 HIES do not include data on several key indicators, such as informality. Critically, employment earnings and hours are not available from Vanuatu's 2009 census, but average wage data are by industry are available from Vanuatu's 2010 HIES, even if there are caveats in terms of response rates and other issues. Information on hours of work was also collected in the 2010 HIES, but this refers to average rather than actual hours worked. In addition, the reference period used in the HIES is 30 days, deviating from international norm in labour statistics, which refers to the previous seven days.

Employment indicators should be disaggregated by sex and age whenever possible and should be reported at the most disaggregated geography available because disasters do not usually strike the entire country equally. Disaggregated data by sex, age and usual residence are available for the Cook Islands and Tonga's newest LFS datasets as well as from Vanuatu's 2009 census and 2010 HIES. Although disaster effects have been largely estimated at the sector level, estimates using other labour market indicators, such as status in employment and informality and occupations, would allow for a more complete and nuanced picture of the post-disaster situation.

## **A stronger labour market information system is crucial for the PDNA.**

A primary concern in post-disaster situations is addressing the disruptions in employment and livelihoods that are having negative consequences on income and standards of living. Disaster effects are often disproportionately felt by the most vulnerable groups, who may be trapped in a circle of increased vulnerability and aggravated poverty. The identification of the most vulnerable groups and the various labour market issues in post-disaster scenarios, as well as the design of targeted policies for post-disaster relief and medium- and long-term social and economic development, hinge on the availability of data. In this context, it is crucial to strengthen labour market information systems in the Pacific countries.

The Cook Islands, Tonga and Vanuatu are committed to collecting labour statistics and improving their labour market information system, as evidenced by the regional and national statistics development plans. In 2010, the Pacific Community launched the Ten-Year Pacific Statistics Strategy in recognition of the need to improve data collection and use in the region. Labour was recognized as a sector in which statistics are critical for public policy and programmes (Cook and Paunga 2010). More specifically, the Cook Islands Strategy for the Development of Statistics 2015–2025 cites labour market statistics as vital for sustainable economic, human and social development. Recognizing that there is no systematic reporting of labour market data, the Vanuatu National Strategy for the Development of Statistics (2015) aims at improving labour force and employment statistics, among others. The need for more and better labour market information is also reflected in the Tonga Strategy for the Development of Statistics 2019–2023, which includes a plan to conduct a new LFS in 2023 and reduce the time gap between surveys.

The most important sources of labour market statistics are household surveys and the population and establishment censuses, which can be complemented by administrative data (ILO 2017b). Of all of these, the LFS is specifically designed to gather in-depth information on the labour force and thus provide the most complete source of statistics on employment, unemployment and persons of working age who are outside the labour force. This also means that the LFS covers workers who are often invisible in official statistics and rank among those most vulnerable to natural disasters. This includes, for instance, workers in the informal sector or in informal employment, which account for large shares of workers in the Pacific countries, such as the Cook Islands and Tonga. The regular conducting of the LFS allows a country to draw national, regional and local labour statistics when needed and follow trends, supporting evidence-based policy design and monitoring. Yet, the LFS is not regularly conducted in many of the Pacific countries. In 2019, the Cook Islands conducted its first LFS. In 2018, Tonga carried out the first LFS since 2003. An LFS has never been conducted in Vanuatu.

An alternative source of labour statistics often used in the region is the HIES, which can provide basic information on employment and unemployment. For instance, Tonga's 2015–16 HIES was the main data source for the post-Gita PDNA. However, the HIES does not include information needed for the quantification of disaster effects on employment, such as data on working times or informality. The ILO and the Pacific Community are currently collaborating on the design of a comprehensive labour statistics module that can be added to the future HIES for better labour statistics in the region.

A successful pilot in the Marshall Islands in 2018 suggests the module is ripe for greater adoption throughout the region (Benes, Habiyakare and Sharp 2019). Likewise, in October 2019, a revised population census module on economic characteristics, which would include core labour statistics, was proposed at the fourth Pacific Statistics Methods Board (PSMB) Meeting. Adding such labour market modules to surveys that are already regularly collected could be a less resource-demanding alternative in contexts in which institutional and financial resources are limited. Establishment census and administrative data, however, often do not convey encompassing information for contexts of widespread informality and subsistence activities. The data can, nevertheless, complement those collected through the household surveys.

It is crucial that data are reliable and timely and thus that surveys are regularly conducted to update the data. Unreliable and outdated information prevent the accurate identification of population and worker vulnerabilities and an accurate assessment of disaster employment effects and impacts. The short analysis of previous Pacific PDNA reports suggests that countries that regularly collect labour market information, such as Fiji, are better able to assess disaster effects and impacts on the world of work. In contrast, countries that have not or do not regularly conduct an LFS (such as the Solomon Islands and Tonga) are limited in their post-disaster assessments. Vanuatu's PDNA explicitly stated that limited labour statistics hampered the evaluation of Cyclone Pam's effects and impacts in the country.

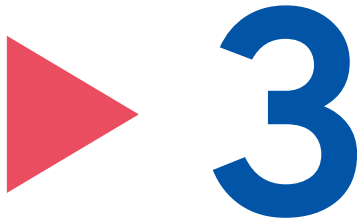
Improving labour market information systems in the Pacific would help governments to better develop the capacity to adequately respond to disasters and more rapidly recover well-being. Furthermore, given the geographic spread of the population of the Pacific countries and constrained public finances, a thorough understanding of disaster impacts would allow for more efficient allocation of resources while ensuring that the persons most affected receive support.

It is also vital to ensure that the full set of available information is used in post-disaster employment and livelihood assessments. As outlined here, not all available data were utilized in some cases. For instance, the employment analysis in Tonga's PDNA did not include data on employment by sector, even though they were available from the 2015–16 HIES. In other cases, data from productive sector assessments, including data on sectoral changes in GDP and surveys with groups of workers, such as market vendors in Fiji 2013 and the taxi drivers and handicraft workers in Tonga, could have enriched the employment and livelihoods assessments.

Institutional capacity may be one of the challenges hindering the collection and use of labour statistics in these countries. There are ongoing efforts to build up the capacity to compile and analyse information. In 2017, the ILO and the Pacific Community signed a memorandum of understanding to improve labour market information systems and labour statistics in the region, with a capacity-development pillar. The Pacific countries can request, and have requested, the support of organizations, such as the ILO, for the development, implementation and analysis of LFS data.

The role of employers' and business organizations in preparing, planning and responding to disasters has been underutilized (ILO 2017c). Employers' and workers' organizations understand the local context and may support the identification of social issues and needs in post-disaster contexts (see the Employment and Decent Work for Peace and Resilience Recommendation, 2017 (No. 205)). A recent World Bank (2018) evaluation of PDNAs from around the world indicated that these can be improved by greater stakeholder engagement. This includes line ministries, national statistical offices, local authorities, employers' and workers' organizations and civil society. Participation is vital to ensure a thorough understanding of populations' and workers' risk profiles, provide accountability around how the needs of those affected are being addressed and increase stakeholders' ownership of, and trust in, post-disaster reconstruction and recovery processes.





## Conclusion and way forward

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There is widespread consensus that the Pacific countries are among those most exposed and vulnerable to natural disasters. Risks associated with their geography are compounded by their economic and social make-up. Natural disasters repeatedly strike the Pacific countries, causing extensive destruction of assets and shifts in economic flows, with implications for employment and livelihoods. Greater frequency and intensity of natural disasters triggered by climate change may exacerbate the labour market challenges, such as limited opportunities for decent work and widespread informality, subsistence activities and poverty. Moreover, disaster impacts are not evenly distributed, necessitating a detailed assessment of the pre- and post-disaster labour market situation to prevent aggravating inequalities and reversing socio-economic developments.

As noted in a recent review of PDNAs from around the world, a post-disaster assessment's efficacy in resuming development depends on whether the data outputs allow for the formulation of appropriate recovery and reconstruction strategies and activities (World Bank 2018). This necessitates the foresight to maintain reliable and timely data available before disaster strikes. Yet, the Cook Islands, Tonga and Vanuatu do not regularly collect a wealth of labour statistics. A review of the main indicators included in the PDNA employment and livelihood analysis revealed data gaps that have prevented the quantification of disasters' employment effects in the past – including information on working times and earnings – as well as an examination of complex issues that define vulnerabilities, such as informality.

The LFS can be designed to cover the entire population and gather information on all categories of workers, while other surveys, such as the population census and the HIES, differ in scope and coverage (Sparreboom 2012). Most frequently, the LFS is conducted annually to track trends in the world of work and inform policy and programme design and evaluation. However, developing countries often face limitations related to the resources needed for data collection and the capacity and skills required to analyse this information, which may constrain the implementation of the LFS (Sparreboom 2012). In this context, alternatives include a less frequently conducted LFS and the inclusion of labour force modules in other regular surveys, as proposed by the ILO and the Pacific Community in 2019, to provide more comprehensive information for labour market analysis. The regular implementation of the LFS and labour force modules in other household surveys would support the formulation of general and post-disaster economic, employment and social policies and the monitoring of progress towards national decent work targets, including as part of the 2030 Agenda for Sustainable Development (Benes, Habiyakare and Sharp 2019).

Improving strategies for disaster risk management and responses necessitates an understanding of disaster effects on various social sectors, populations and worker groups. As such, strengthening labour market information systems should be seen as integral to disaster preparedness and resilience. As noted in Samoa's PDNA (Government of Samoa 2013), "[R]isk assessments could be further improved by including socioeconomic elements that adequately define the state of vulnerability." Labour market data are a requisite. In addition, the development of labour market indicators for the PDNA is one way in which the PDNA interests relate to national development plans and the 2030 Agenda. Indeed, the Sustainable Development Goals include two targets specifically on the development of statistics and capacity-building in developing countries (targets 17.8 and 17.9). In addition, labour market information systems are essential for policy-relevant employment diagnostics and the formulation of gender-responsive national employment policies, including for youth.

While building statistical capacity, it is paramount to establish institutional arrangements and encourage partnerships between various stakeholders, including national statistics offices, actors involved in policy design and implementation, workers' and employers' organizations and civil society. Their inclusion would ensure that efforts in strengthening national labour market information systems result in more and better data as well as greater dissemination and use.

In 2020, the decade of action in the context of the 2030 Agenda deadline begins, and achieving the Sustainable Development Goals in the Pacific region requires urgent policy action. Strengthening labour market information systems and increasing capabilities for comprehensive post-disaster assessments are central to fulfilling the 2030 Agenda in the region and to advance economic, social and environmental transitions for full, productive and freely chosen employment and decent work for all.

## ► Recommendations

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- *Implement a regular data collection system of core labour market indicators for PDNA and other crises responses and recovery, including a post-disaster quick labour force and household-based survey to ensure that the most recent data possible are available for disaster impact assessments.* A two-fold strategy should be put in place by Member States: (i) to implement a comprehensive LFS every five years for detailed baseline data on the labour market, either through a stand-alone survey or a detailed module in another related household survey (such as the module endorsed by the Pacific Statistics Methods Board, to be usually included in the existing HIES); and (ii) annual surveys or at least at every occasion after a major disaster, for a core set of labour market data, preferably using any planned household survey to include a short module for core labour force data. Most of the island countries have a national strategy for the development of statistics that already include a five-year LFS programme, albeit without resources for it to be actually implemented as planned.

Increasing the capacity of data production through surveys should go hand in hand with building the labour market information (LMI) systems because much data needed for a PDNA could be provided quickly by a good LMI system. In countries in which the formal sector is large and with a low subsistence economy, data from the highly formalized sectors can be obtained from registration systems, such as pension funds or job registration. However, in countries with high informality, high subsistence or an agriculture-based economy, it is recommended to implement an immediate post-disaster small LFS, focusing on sectors that are likely to be more informal, such as agriculture. The post-disaster LFS should include an employment history module that can help in assessing the pre-disaster labour market situation as well. This element of the recommendation should be part of any future PDNA strategy and work plan.

- *Design and implement a national LMI system as soon as possible, particularly for countries heavily affected by cyclones and related disasters.* Start with (i) an institutional design through, for example, a LMI unit with at least one focal point within the ministry or department responsible for labour issues should be able to gather all relevant labour market data from administrative records in one place and on a regular basis; then (ii) identify all key LMI from administrative records that the LMI unit would collect (employment services, such as job seeker registrations, social protection data, such as pension schemes employees, enterprises payroll or staff list, vacancies, migrant workers from entry and exit forms or from overseas employment registration and work permits, etc.); (iii) legal provisions or agreement with national institutions to provide such basic information to the LMI unit; and (iv) an annual short LMI bulletin to provide information to the public on such existing information. The LMI system design and implementation should be done in consultation with stakeholders, particularly with employers' and workers' organizations, but also with all institutions likely to produce and provide labour market data to the LMI unit.
- *Develop strategies and the technology to reduce the cost of household surveys.* The cost of national household surveys in the Pacific countries can be quite high, often due to the geographic challenges (the remoteness of some islands and difficulties to reach them, often by boats because flights are basically quasi impossible). The Pacific countries, with the assistance of the United Nations and international partners, may need to put in place strategies that can reduce these costs. This can be through special sampling design or by using technology to overcome field data collection costs (the biggest component in surveys). COVID-19 has also posed a challenge to the classic face-to-face interviews, and countries

worldwide are developing strategies to develop alternative data collection methods and techniques with high technology, such as web-based (CAWI) or telephone-based interviewing (CATI). While the use of such technology is far behind in the Pacific, where the internet and telephone service may not be widely available to all, it is timely to start piloting the use of these in selected Pacific countries where survey costs are considered very high.

- ▶ *Involve and support the policy-related department such as ministries of labour.* In many Pacific Island countries, the ministry or department of labour is less or often not at all involved in the efforts for data collection of labour statistics. This is also the case for employers' and workers' organizations, either because they don't see the need or because national statistical offices don't understand the importance of involving them. Departments of labour, along with employers' and workers' organizations, constitute the core policy institutions in countries and should be involved in LFS design and implementation. But they may also need to advocate and push for better data on employment. After all, the United Nations Sustainable Development Goals' slogan, "Better Data Better Lives", concerns these three institutions. Better training for these constituents is also strongly recommended to ensure they take the lead in advocating for better labour market data. Another policy push for labour market data could be the increased ratification of ILO Labour Statistics Convention, 1985 (No. 160) and its Recommendation No. 170. Such ratification should also be supported by national statistics offices because it may help them to push for more resources for the collection of labour market data.
- ▶ *PDNA baseline information needs to include sectoral employment figures, covering the so-called productive sectors in the PDNA.* This is not just for a general idea of the importance of various productive sectors in employment but also for the importance of keeping employment for these sectors to continue operating or to recover quickly after a disaster. This is so critical, particularly for the productive sectors of the economy that are most affected by disasters and cyclones (called productive sectors in the PDNA), such as: agriculture, livestock and fisheries; industry (including home-based food processing); commerce and trade (including retail trade); and the tourism sectors. However, employment is equally important for a quick recovery of other social sectors affected by disasters, such as the education sector (where many schools and training centres are also heavily affected by cyclones, leading to temporary closure of many of them); as well as infrastructure sectors, such as water and electricity supply. This should include analysis of the impact of various other sectors' closure on employment: School closures, for example, are likely to lead to increases in women's care responsibilities with repercussions in their availability for economic participation.
- ▶ *Migration and remittances are key contributors to the GDP and to the livelihood of households in many Pacific countries and should be systematically included in the PDNA.* The particular contribution of migration and remittances should be included in the LMI system, including studies on the impact of climate related and other disasters on migration and remittances data. Studies on efficient policies that support such migration and remittances need to be resourced and undertaken on a regular basis. There seems to be opportunities not only in the seasonal work programmes with Australia and New Zealand but also between the island countries, such as Fijians in Solomon Islands, Papua New Guinea, Samoa or Cook Islands, or workers from Kiribati in Papua New Guinea. Such opportunities should be studied more, and the level of their contribution to household livelihood and particularly to recovery from crises, identified and promoted.
- ▶ *The LMI system and the PDNA should feed data into informed and timely policy responses.* Regular and reliable LMI systems as well as the PDNA provide the basis for informed decision-making to realize the economic, social and environmental transitions towards the future of work in the Pacific. Promoting full, productive and freely chosen employment and decent work for all will require national policies and strategies anchored in social dialogue that address the country-specific future of work challenges, from demographic shifts, environmental and climate changes to migration and that take into account the national context, including measures to tackle fragility drivers and integrated strategies towards formalization in line with ILO Recommendation No. 204. The capacity of governments and workers' and employers' organizations is critical to shape and effectively implement appropriate and well-coordinated policy measures, including through gender-responsive national employment policies as well as policies for a just transition towards environmentally sustainable economies and societies. National employment policies, such as the Fiji National Employment Policy, provide a vision and a concerted and coherent framework linking all the employment interventions and stakeholders, considering both demand- and

supply-side policy dimensions. The formulation and implementation of national employment policies need to be based on reliable LMI systems and provide ILO Member States in the Pacific, including Cook Islands, Tonga and Vanuatu, an opportunity to strengthen resilience to natural disasters and shape the future of work towards full, productive and freely chosen employment and decent work for all.

- ▶ *ILO constituents support is highly needed to implement these recommendations.* ILO constituents in the Pacific Island countries need to identify existing and future possible partnerships and resources to support the immediate implementation of these recommendations and to ensure that the recommendations are particularly included in the respective national development and Decent Work Agenda and employment policies. Such support is urgently needed to ensure that the right data or better data are available before the next disasters strike.

# References

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- Abbott, David, and Steve Pollard. 2019. "Mired in MIRAB: Thirty Years On, Is MIRAB Still Relevant as a Model for Economic Development. Was It Ever?", paper presented at the 2019 *Pacific Update Conference, University of the South Pacific, 3–5 July*.
- ADB (Asia Development Bank). 2018. *Economic and Fiscal Impacts of Disasters in the Pacific*.
- . 2019a. *Pacific Economic Monitor: Special 10th Anniversary Issue*.
- . 2019b. *Asian Development Outlook 2019: Strengthening Disaster Resilience*.
- APEC Human Resources Development Working Group. 2013. *Building Natural Disaster Response Capacity: Sound Workforce Strategies for Recovery and Reconstruction*.
- Benes, Elisa, Tite Habiyakare, and Michael Sharp. 2019. "ILO Evaluation of Labour Force Module Included in the SPC HIES Experiment", document prepared for the *3rd Pacific Statistics Methods Board Meeting, Auckland, 23–24 May*.
- Bündnis Entwicklung Hilft and Ruhr University Bochum IFHV (Institute for International Law of Peace and Armed Conflict). 2019. *World Risk Report 2019*.
- Centre for Research on the Epidemiology of Disasters. Available at [www.emdat.be](http://www.emdat.be). Accessed 19 December 2019.
- Cook, Len, and Masasso Paunga. 2010. "A Pacific Island Region Plan for the Implementation of Initiatives for Strengthening Statistical Services Through Regional Approaches, 2010–2020", *Secretariat of the Pacific Community, Regional Meeting of Heads of Planning and Heads of Statistics, Noumea, 12–16 July*.
- Cook Islands, Statistics Office. 2003. *2001 Census of Population and Dwellings: Main Report*.
- . 2015. *Cook Islands Strategy for the Development of Statistics 2015–2025*.
- . 2018. *2016 Cook Islands Population Census Report*.
- . 2019. *2019 Labour Force Survey*.
- Duncan, Ron, and Carmen Voigt-Graf. 2008. *Labour Market Scenarios for the Asian Decent Work Decade in the Pacific Island Countries*. ILO.
- ECLAC (Economic Commission for Latin America and the Caribbean). 2014. *Handbook for Disaster Assessment*.
- European Commission. 2019. *European Civil Protection and Humanitarian Aid Operations: Pacific Region*.
- Government of Fiji. 2013. *Post-disaster Needs Assessment: Tropical Cyclone Evan 2012*.
- . 2016. *Fiji Post-Disaster Needs Assessment: Tropical Cyclone Winston, February 20, 2016*.
- Government of Samoa. 2013. *Post-disaster Needs Assessment: Tropical Cyclone Evan, 17 December 2012*.
- Government of Tonga. 2018. *Post-disaster Rapid Assessment: Tropical Cyclone Gita, 12 February 2018*.
- Government of Vanuatu. 2015. *Post-Disaster Needs Assessment: Tropical Cyclone Pam, March 2015*.
- Guha-Sapir, Debarati. 2019. EM-DAT: The Emergency Events Database. Université Catholique de Louvain.
- IPCC (Intergovernmental Panel on Climate Change). 2018. *Global Warming of 1.5°C, Summary for Policy Makers*.
- ICLS (International Conference of Labour Statisticians). 2003. *17th International Conference of Labour Statisticians: Report of the conference*.
- ILO (International Labour Organization). 2010. *Kiribati Decent Work Country Programme: 2009–2012*.
- . 2015. "Employment, Livelihoods and Social Protection Sector (ELSP)", presentation prepared for the *Post-Disaster Needs Assessment for Resilient Recovery Workshop, Bangkok, 28–31 July*.

- . 2016. *Employment and Decent Work in Situations of Fragility, Conflict and Disaster*.
- . 2017a. *Global Employment Trends for Youth 2017: Paths to a Better Working Future*.
- . 2017b. *Quick Guide on Sources and Uses of Labour Statistics*.
- . 2017c. *ILO Pacific Newsletter December 2017*.
- . 2018. *Recommendation No. 205 on Employment and Decent Work for Peace and Resilience: What Role for Trade Unions?*
- . 2019. *Labour Mobility in Pacific Island Countries*.
- , and ADB (Asian Development Bank). 2017. *Improving Labour Market Outcomes in the Pacific: Policy Challenges and Priorities*.
- , and UNESCAP (United National Economic and Social Commission for Asia and the Pacific). 2014. *Climate Change and Migration Issues in the Pacific*.
- IMF (International Monetary Fund). 2019. World Economic Outlook Database, October 2019. Available at: [www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx](http://www.imf.org/external/pubs/ft/weo/2019/02/weodata/index.aspx). Accessed 12 December 2019.
- Noy, Ila, and Christopher Edmonds. 2016. "The Economic and Fiscal Burdens of Disasters in the Pacific", SEF Working Paper 25/2016. University of Wellington.
- PCRAFI (Pacific Catastrophe Risk Assessment and Financing Initiative). n.d. "Pacific Risk Information System". Available at: <http://pcrafi.spc.int>. Accessed 23 January 2020.
- Pacific Community. 2018. *Pocket Statistical Summary 2018*.
- . n.d. *Cook Islands*. Available at: [www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/01/3-cook.pdf](http://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/01/3-cook.pdf). Accessed 21 January 2020.
- Pacific Islands Forum Secretariat. 2018. *49th Pacific Islands Forum Communiqué*. Available at: [www.un.org/humansecurity/wp-content/uploads/2018/09/49th-Pacific-Islands-Forum-Communiqué.pdf](http://www.un.org/humansecurity/wp-content/uploads/2018/09/49th-Pacific-Islands-Forum-Communiqué.pdf). Accessed 11 January 2020.
- Republic of the Marshall Islands. 2017. *Post-Disaster Needs Assessment of the 2015–2016 Drought*.
- Sparreboom, Theo. 2012. "Labour Market Information an Analysis Systems". In *Perspectives on Labour Economics for Development*, edited by Sandrine Cazes and Sher Verick. 255–282. ILO.
- Thomas, Adelle, and Lisa Benjamin. 2018. "Policies and Mechanisms to Address Climate-induced Migration and Displacement in Pacific and Caribbean Small Island Developing States". *International Journal of Climate Change Strategies and Management* 10 (1): 86–104.
- Tonga, Statistics Department. 2018. *Tonga Strategy for the Development of Statistics 2019–2023*.
- UN (United Nations). 2015. General Assembly Resolution 69/283, Sendai Framework for Disaster Risk Reduction 2015–2030, A/RES/69/283.
- UNCTAD (United Nations Conference on Trade and Development). n.d. UNCTADstat database. Available at: <http://unctadstat.unctad.org/EN/>. Accessed 12 December 2019.
- UNDESA (United Nations, Department of Economic and Social Affairs), Population Division. 2019. "World Population Prospects 2019", Online Edition. Rev. 1. Available at: <https://population.un.org/wpp/>. Accessed 12 December 2019.
- UNDG (United Nations Development Group), WBG (World Bank Group), European Commission. 2013. *Post-Disaster Needs Assessments Guidelines, Vol. A*.
- . 2017. *PDNA Guidelines Vol. B: Employment, Livelihood and Social Protection*.
- UNDP (United Nations Development Programme). 2017. *Financing the SDGs in the Pacific Islands: Opportunities, Challenges and Ways Forward*.
- . 2019. *Human Development Report 2019*.

UNESCAP (United National Economic and Social Commission for Asia and the Pacific). 2019. *Asia-Pacific Disaster Report 2019: The Disaster Riskscape Across Asia-Pacific: Pathways for Resilience, Inclusion and Empowerment*.

UNDRR (United Nations Office for Disaster Risk Reduction). n.d. Disaster Inventory database (DesInventar). Available at: [www.desinventar.net](http://www.desinventar.net). Accessed 10 January 2020.

Vanuatu, National Statistics Office. 2015. *Vanuatu National Strategy for the Development of Statistics: A Strategy for the Agenda for Building Capacity in Statistics 2016–2020*.

World Bank. n.d. World Development Indicators database. Available at: <https://databank.worldbank.org/source/world-development-indicators>. Accessed 21 January 2020.

—. 2010. *Guidance Notes for Damage, Loss and Needs Assessment*.

—. 2014a. *Well-being from Work in the Pacific Island Countries*.

—. 2014b. "Building Back Better in Tonga after Cyclone Ian", 1 October 2014. Available at: [www.worldbank.org/en/results/2014/10/01/building-back-better-tonga-cyclone-ian](http://www.worldbank.org/en/results/2014/10/01/building-back-better-tonga-cyclone-ian). Accessed 12 January 2020.

—. 2016. *Tourism, Pacific Possible* Background Paper No. 4.

—. 2017. *Pacific Possible: Long-term Economic Opportunities and Challenges for Pacific Island Countries*.

—. 2018. *Post-Disaster Needs Assessment PNDA: Lessons From a Decade of Experience*.

WTO (World Trade Organization). 2019. *Natural Disasters and Trade Research, Study I*.

# Annex 1.

## Selected statistical tables

► Table A1. Labour force participation rate, by sex, latest available year (%)

Country	Total	Men	Women	Gender gap (pp)
Cook Islands (2019*)	70.4	77.8	63.4	-14.4
Fiji (2016)	57.6	77.0	38.6	-38.4
Kiribati (2015)	43.0	53.3	33.6	-19.7
Marshall Islands (2011)	41.3	53.3	29.0	-24.3
Palau (2014)	64.4	73.3	55.6	-17.7
Papua New Guinea (2010)	48.3	49.0	47.7	-1.3
Samoa (2017)	43.3	55.0	31.5	-23.5
Solomon Islands (2013)	86.0	87.9	83.9	-4.0
Tonga (2018)	46.7	56.2	38.4	-17.8
Tuvalu (2016)	55.4	71.2	38.3	-32.9
Vanuatu (2010)	64.4	70.7	58.1	-12.6

**Note:** (\*) Cook Islands data are provisional data from the 2019 Labour Force Survey, not yet published in ILOSTAT; pp = percentage points.

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

► Table A2. Unemployment rate, by sex, latest available year (%)

Country	Total	Men	Women	Gender gap (pp)
Cook Islands (2019*)	1.3	1.6	0.9	-0.7
Fiji (2016)	4.3	3.7	5.5	1.8
Kiribati (2015)	9.3	11.9	5.6	-6.2
Marshall Islands (2011)	4.7	4.9	4.5	-0.4
Palau (2014)	1.4	1.1	1.8	0.7
Papua New Guinea (2010)	2.0	2.7	1.3	-1.4
Samoa (2017)	14.5	10.6	21.3	10.7
Solomon Islands (2013)	0.7	0.7	0.7	0.1
Tonga (2018)	3.1	2.6	3.6	1.0
Tuvalu (2016)	8.5	4.6	16.2	11.6
Vanuatu (2010)	1.8	2.1	1.6	-0.5

**Note:** (\*) Cook Islands data are provisional data from the 2019 Labour Force Survey, not yet published in ILOSTAT; pp = percentage points.

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.



► **Table A3. Unemployment rate, by age and youth-to-adult unemployment rate ratio, latest available year (%)**

Country	Total	Youth (15-24)	Adults (25+)	Y-A UR ratio
Cook Islands (2019*)	1.3	3.5	0.8	4.4
Fiji (2016)	4.3	15.4	2.2	6.9
Kiribati (2015)	9.3	17.1	7.6	2.2
Marshall Islands (2011)	4.7	...	...	...
Palau (2014)	1.4	5.6	1.0	5.6
Papua New Guinea (2010)	2.0	3.6	1.5	2.4
Samoa (2017)	14.5	31.9	10.0	3.2
Solomon Islands (2013)	0.7	1.3	0.5	2.6
Tonga (2018)	3.1	8.9	2.0	4.5
Tuvalu (2016)	8.5	20.6	5.4	3.8
Vanuatu (2010)	1.8	4.8	1.1	4.3

**Notes:** (\*) Cook Islands data are provisional data from the 2019 Labour Force Survey, not yet published in ILOSTAT; Y-A UR = youth-to-adult unemployment rate ratio.

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.

► **Table A4. Employment distribution, by main sectors in Cook Islands, 2019**

Main sector (ISIC Rev.4)	Total	Male	Female
Agriculture	2.7	4.9	0.2
Manufacturing	3.8	5.1	2.3
Construction	5.2	9.1	0.6
Mining and quarrying; electricity, gas and water supply	2.5	3.4	1.4
Trade, transportation, accommodation and food, and business and administrative services	55.9	48.7	64.3
Public administration, community, social and other services and activities	29.8	28.7	31.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source:** Cook Islands Labour Force Survey 2019, provisional data, not yet published in ILOSTAT.

► **Table A5. Employment distribution, by main sectors in Tonga, 2018**

Main sector (ISIC Rev.4)	Total	Male	Female
Agriculture	19.6	33.2	1.9
Manufacturing	20.1	4.3	40.7
Construction	8.5	14.8	0.3
Mining and quarrying; electricity, gas and water supply	1.4	2.3	0.2
Trade, transportation, accommodation and food, and business and administrative services	30.5	27.0	35.0
Public administration, community, social and other services and activities	18.7	16.7	21.3
Not classified	1.2	1.6	0.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source:** Tonga Labour Force Survey 2018 and ILOSTAT, accessed 7 April 2020.

► **Table A6. Employment distribution, by main sectors in Vanuatu, 2010**

Main sector (ISIC Rev.4)	Total	Male	Female
Agriculture	63.6	61.5	66.1
Manufacturing	2.3	1.7	2.9
Construction	3.4	5.9	0.4
Mining and quarrying; electricity, gas and water supply	1.2	1.3	1.1
Trade, transportation, accommodation and food, and business and administrative services	17.4	19.3	15.1
Public administration, community, social and other services and activities	11.8	9.8	14.3
Not classified	0.4	0.6	0.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source:** Vanuatu Household Income and Expenditure Survey 2009–2010 and ILOSTAT, accessed 7 April 2020.

► **Table A7. Employment distribution, by main occupation in Cook Islands, 2019**

Occupation (ISCO-08)	Total	Male	Female
Managers	8.4	6.3	10.9
Professionals	11.3	9.9	12.9
Technicians and associate professionals	13.3	14.5	11.9
Clerical support workers	8.7	3.1	15.2
Service and sales workers	26.1	17.3	36.4
Skilled agricultural, forestry and fishery workers	3.8	6.9	0.2
Craft and related trades workers	11.0	17.2	3.8
Plant and machine operators, and assemblers	4.7	7.2	1.7
Elementary occupations	12.7	17.6	6.9
Armed forces occupations	..	..	..
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Note:** (..): not applicable.

**Source:** Cook Islands Labour Force Survey 2019, provisional data, not yet published in ILOSTAT.

► **Table A8. Employment distribution, by main occupation in Tonga, 2018**

Occupation (ISCO-08)	Total	Male	Female
Managers	4.2	4.3	4.0
Professionals	14.2	12.8	16.2
Technicians and associate professionals	6.1	6.3	5.9
Clerical support workers	6.1	2.6	10.7
Service and sales workers	13.3	11.2	16.0
Skilled agricultural, forestry and fishery workers	17.8	30.0	1.9
Craft and related trades workers	27.2	17.0	40.5
Plant and machine operators, and assemblers	3.5	5.5	0.9
Elementary occupations	6.4	8.3	3.8
Armed forces occupations	1.2	2.0	0.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Source:** Tonga Labour Force Survey 2018 and ILOSTAT, accessed 7 April 2020.

► Table A9. Employment distribution by main occupation in Vanuatu, 2010

Occupation (ISCO-08)	Total	Male	Female
Managers	1.0	1.4	0.5
Professionals	3.4	3.1	3.7
Technicians and associate professionals	2.2	3.3	1.0
Clerical support workers	2.2	1.8	2.7
Service and sales workers	8.5	7.5	9.7
Skilled agricultural, forestry and fishery workers	64.5	62.8	66.6
Craft and related trades workers	6.0	8.5	2.9
Plant and machine operators, and assemblers	3.7	5.7	1.3
Elementary occupations	8.5	5.9	11.6
Armed forces occupations	..	..	..
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Note:** (..): not applicable.

**Source:** Vanuatu Household Income and Expenditure Survey 2009–2010 and ILOSTAT, accessed 7 April 2020.

► Table A10. Employment distribution, by status in employment, latest available year (%)

Country	Employees	Employers	OAW	CFW	MOC	WNC
Cook Islands (2019*)	82.4	5.1	7.2	5.3	...	...
Fiji (2016)	63.6	1.2	15.6	0.9	1.0	17.7
Kiribati (2015)	40.5	4.1	42.5	10.8	...	2.1
Palau (2014)	89.3	1.7	3.6	2.8	...	2.6
Samoa (2017)	63.7	3.0	24.9	4.8	...	3.6
Solomon Islands (2013)	25.3	0.9	10.7	49.8	...	13.4
Tonga (2018)	56.0	16.1	22.7	5.3	...	..
Tuvalu (2016)	60.1	0.7	4.0	25.5	...	9.7
Vanuatu (2010)	29.8	0.7	65.4	4.1	...	...

**Note:** (\*) Cook Islands data are provisional data from the 2019 LFS, not yet published in ILOSTAT.

OAW: own-account workers (self-employment with no employee); CFW: contributing family workers; MOC: members of cooperatives; WNC: workers not classifiable by status in employment; (...): not applicable.

**Source:** Various national sources, as compiled by ILOSTAT, accessed 7 April 2020.



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ISBN: 978-92-2-032605-3 (print)

978-92-2-032604-6 (web pdf)