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A Study on the Future of Work in the Pacific

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ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
AUD	Australian dollar
DLIR	Department of Labour and Industrial Relations, PNG
DNPM	Department of National Planning and Monitoring, PNG
EEZ	Exclusive Economic Zone
ERAB	Employment Relations Advisory Board, Fiji
FAO	Food and Agricultural Organisation
FD	Fiji dollar
FIBoS	Fiji Islands Bureau of Statistics
FICs	Forum Island Countries
FoW	Future of Work
FSM	Federated States of Micronesia
GDP	Gross Domestic Product
GoK	Government of Kiribati
GOS	Global Outsourcing Services
IDMC	International Displacement Monitoring Centre
IFC	International Finance Corporation
ILO	International Labour Organization
IMO	International Maritime Organization
ISSA	International Social Security Association
ITU	International Telecommunication Union
KIT	Kiribati Institute of Technology
KNSO	Kiribati National Statistics Office
KSON	Kiribati School of Nursing
LNG	Liquefied Natural Gas
MLHRD	Ministry of Labour and Human Resource Development, Kiribati
MSG	Melanesian Spearhead Group
MTC	Marine Training Centre, Kiribati
MTDP	Medium Term Development Plan, PNG
NAWPP	Northern Australia Worker Pilot Program
NEC	National Employment Centre, Fiji
NES	National Employment Services, PNG
NLMP	National Labour Migration Policy, Kiribati
NSO	National Statistical Office, PNG
ODA	Official development assistance
OHE	Office of Higher Education, PNG
PAC	Pacific Access Category, New Zealand
PACER	Pacific Agreement on Closer Economic Relations
PARDI	Pacific Agribusiness Research & Development Initiative
PIC	Pacific Island Country
PICTA	Pacific Island Countries Trade Agreement
PIFS	Pacific Islands Forum Secretariat
PITI	Pacific Islands Trade and Invest
PNA	Parties to the Nauru Agreement
PNG	Papua New Guinea
PQF	Pacific Qualifications Framework
RMI	Republic of Marshall Islands
RSE	Recognised Seasonal Employer scheme, New Zealand
SDGs	Sustainable Development Goals
SMS	Skills Movement Scheme
SPC	Secretariat of the Pacific Community
SWP	Seasonal Work Program, Australia
TMNP	Temporary movement of natural persons
TVET	Technical and Vocational Education and Training
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFPA	United Nations Population Fund
US	United States
USD	U.S. dollar
VDS	Vessel Day Scheme

FOREWORD

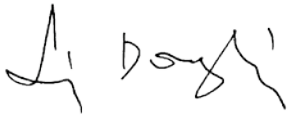
The world of work is changing. Profound transformations are taking place that affect countries big and small, regardless of their level of economic development. There are various key drivers contributing to these trends: demographic shifts, climate change, technological innovation, shifting contours of poverty and prosperity, growing inequality and the changing character of production and employment.

But, the future of work is not pre-determined. It is up to us, particularly the governments and social partners, to forge the kind of future we want. We should not reduce the discussion to whether the drivers of change create or destroy jobs. We have to think beyond that, and ask about the quality of jobs, their impact on labour market and education policies. Our task is to manage on-going changes so that we can harness the opportunities that the future is likely to bring.

The ILO launched the Future of Work Centenary Initiative in 2015 to mobilise global expertise to make the future of work the one we want. It is an important initiative for the ILO in the run up to our 100th anniversary in 2019. It seeks to broadly canvass the views of governments, workers and employers, as well as academics, prominent thinkers and other stakeholders. More than 130 National dialogues have been or are being held all over the world and a report based on their findings will be released in 2018.

In the Pacific, the High-Level Dialogue on Future of Work is being held in Fiji in May 2017, with the participation of the heads of ILO's tripartite constituents from eleven member states in the Pacific. This report intends to provide the participants in the Dialogue with the background on employment and labour issues in the Pacific, which will then form the basis for future of work discussions. Such discussions will make contribution to the development and implementation of the Decent Work Country Programs (DWCPs) in the Pacific, which reflects the ILO and its Constituents' commitment to achieve the SDGs.

Given the limited statistical data and research reports available on the subject, as well as addressing the diversity of eleven economies in the Pacific, I would like to acknowledge and express my high appreciation to the technical contributions made by Dr. Carmen Voigt-Graph of the Australian National University and Dr. Yoko Kanemasu of the University of South Pacific, in drafting this report. In addition, I am grateful to the ILO colleagues who provided feedback to earlier versions of the Report, namely Lawrence Jeff Johnson, Naren Prasad, Carla Henry and Uma Rani Amara from the Research Department in Geneva, Sameer Khatiwada from the Decent Work Technical Support Team in Bangkok and Satoshi Sasaki from the ILO Suva Office.



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EXECUTIVE SUMMARY

Labour markets in the Pacific are characterized by informality, gender disparity and youth unemployment

Pacific Island countries (PICs) are faced with significant challenges of being small in size, geographically dispersed and distant from major markets. They are also among the most exposed countries in the world to natural hazards and climate change impacts. The key challenges facing the labour market in the Pacific are large informal and subsistence economies, high youth unemployment rates and gender disparity. The dominance of the informal and subsistence economy poses a challenge to sustainable development due to the vulnerability of informal and subsistence workers and the lack of formal social security systems for those engaged in these activities. Gender gaps are apparent in unemployment, labour force participation, wage levels and opportunities to work overseas. Youth unemployment is high and a growing number of youths are neither in work nor training.

Demographic developments have differed between PICs. Melanesian countries have large populations and, with the exception of Fiji, high population growth rates, while urbanisation rates and population densities are low. In Polynesia and northern Pacific countries, population growth has been constrained by high emigration. The population in atoll states has increased rapidly. Both Kiribati and Tuvalu face increasing overcrowding on their main atoll where more than half of the entire population resides.

Migration has been an important factor, but there is a potential for intra-regional migration among the Pacific countries

Migration and overseas employment opportunities differ greatly between PICs. Fiji, the Polynesian and northern Pacific countries have experienced considerable emigration, while Melanesian countries (except Fiji) and the atoll states of Kiribati and Tuvalu have had few migration outlets.

In terms of absolute number of migrant workers in the PICs, the largest concentration of foreign workers are found in Papua New Guinea and Palau. This affects PIC labour markets in that it is expensive for companies and governments to employ foreign workers, thus adding to the cost of operating in the region. As has been shown in the case of PNG, the presence of foreign workers also takes away opportunities from local workers and reduces the incentive of employers investing in the upskilling of the local workforce. Moreover, the presence of foreign workers from China and the Philippines in Palau and PNG suggests that other PICs have generally not been able to take advantage of opportunities within the region itself.

Traditional forms of social protection are eroding while labour market institutions remain weak

In terms of social protection, traditional forms of social protections which operate informally and are based on the principles of reciprocity and solidarity, are gradually being eroded by urbanisation and weakening community ties. Formal social protection systems cover only a fraction of the population which generally consists of those who are employed in the formal sector and are already better-off.

Meanwhile, across the region, labour market institutions are insufficiently developed. Many Labour Departments are under-resourced and have little influence on national development and planning. The strength of the social partners and the tripartite process varies between the PICs. In several PICs, labour law reform is ongoing and is included as a priority in several DWCPs. It has to be noted that labour legislation tends to apply only to the formal sector and hence only to a small proportion of the labour force. In addition, enforcement of existing legislation has been poor owing to capacity constraints in many Labour Departments.

While climate change is a pressing issue for many small island states in the Pacific

Meanwhile, PICs are exposed to a wide variety of natural hazards, some of which have been exacerbated by climate change. The labour markets in the PICs are especially vulnerable to climate change due to the fact that agriculture, tourism, and fisheries, three of the sectors most vulnerable to climate change, provide most of the employment.

Meanwhile, the very survival of atoll states is threatened by climate change. Informal workers, women and youth are the most vulnerable population groups. There is a need to support the green economy and green job creation in areas including tourism, renewable energy, food production and recycling and waste management.

New technology underscores the need to enhance skills development in the region

Technological innovations of recent decades have significant potential to bring socio-economic benefits to PICs. Since the early 2000s, the regional telecommunications sector has undergone deregulation and reform, and prices have been dramatically reduced, leading to improved connectivity in the region. However, due to the unavailability of relevant data it is difficult to measure the total economic impacts of ICTs in PICs. Businesses and private sector organisations are beginning to utilise ICTs to improve productivity, entrepreneurship, financial intermediation, and innovation and reduce transaction costs. With further increases in internet connectivity in the coming years, e-commerce, e-government and other strategies for tapping into the potential of ICTs for the creation of decent work are likely to gain importance. A key challenge for PIC governments, businesses and private-sector organisations is to make necessary infrastructure investments and policy arrangements to maximise the potential of ICT to create employment and business opportunities.

Given the digital divide and the fact that PICs are behind most other regions in the world, it is important for PICs to gradually catch up with the rest of the world. As recent research indicates, ICT skill levels of the workforce need to be upgraded and matched with the demand arising from new sectors and technologies. While there is no current evidence of large-scale job automation in PICs, existing global research and trends point to the mining and garment industries as particularly susceptible to automation.

In addition to ICT skills shortages, many Pacific countries suffer from more general skills shortages. The key challenges in regards to skill development are a lack of quality and relevance of TVET, lack of links between labour market demand and training, low workforce skills in communication and information technology, shortcomings in generic workplace skills and entrepreneurial skills and lack of tracer studies.

Looking ahead, employment growth opportunities are in few key sectors: agriculture, forestry, mining, fishing, tourism and business process outsourcing

Agriculture's contribution to the region's output remains relatively high and in most PICs, the majority of the labour force is engaged in subsistence agriculture. Food production dominates the agricultural industry in PICs although many small-scale producers today also produce cash crops. The performance of the agricultural sector is also becoming increasingly critical for food security in the region. PICs have found it difficult to compete on the world market except for niche products.

A possible strategy for PICs is to focus on high value, low volume agricultural exports as Pacific small farmers cannot compete with low cost, high volume producers from other regions of the world due to cost disadvantages as a result of the small economies of scale, poor infrastructure, high input costs, frequent natural disasters, expensive transport, limited access to finance, poor technology and difficulties in accessing land under customary systems. Some PICs have invested in agricultural niche markets with positive results including the natural cosmetics industry in Fiji, the vanilla industry in PNG, Vanuatu and increasingly Tonga, and noni juice production in Samoa and Cook Islands.

In PNG, Solomon Islands, Vanuatu and Fiji, forest industries are important contributors to the national economies. The future of Pacific forestry lies in high-value, non-perishable products. With PICs facing depletion of forest resources, as is already occurring in Solomon Islands, round log exports are likely to decline. Many high-value plantation timbers on the other hand are suitable for growing in the Pacific and offer opportunities for export. These include sandalwood, mahogany, rosewood and ebony.

Amongst the PICs, PNG is particularly dependent on mining exports. Nonetheless, given the enclave and capital-intensive nature of extractive industries, the direct employment contribution of mining is limited. In addition to creating few jobs in the first place, global research has shown that the mining industry is highly susceptible to automation in the near future. While there is so far no evidence of large-scale job automation in PIC mining industries, over time more and more low-skilled jobs will become automated, and workers risk becoming unemployed. As such, the mining and petroleum industries can generally not be relied upon for future employment generation.

Fish production is common to all PICs. In the atoll states, the main natural resource are maritime resources in the countries' vast exclusive economic zones. Offshore fishing is undertaken mainly by large industrial-scale fishing vessels. Pacific tuna stocks supply some 34% of the world's tuna catch each year. Government revenues from tuna, both in terms of licensing and fishing, are estimated at 36% of GDP in Tuvalu and 32% in Kiribati . Although managing tuna fisheries fairly well, PICs have failed to capture more of the tuna value chains with less than 10% of the purse seine catch processed locally and it is estimated that tuna fisheries value chains employ less than 0.5% of the region's labour force. In regards to employment creation in fisheries, the main opportunity is linked to PNA's proposal to enforce mandatory crewing requirements which would eventually lead to PNA nationals comprising 50% of purse seine crews.

Tourism is a major employer in the region, particularly in Cook Islands, Fiji, Palau and Vanuatu. Since it creates strong multiplier effects through linkages with the local economy, a substantial number of jobs are created indirectly. In Vanuatu, for example, tourism contributes to over 18% of GDP and

employs some 14% of the working population. The World Bank's Pacific Possible report on tourism proposes several strategies to expand the tourism industry. One area to exploit are the linkages between tourism and agriculture, as these are the two productive sectors which offer the best opportunities for employment growth in several PICs.

In order to harness the potential for decent work creation, there needs to be concerted efforts in several key areas

In order to tackle informality, reliance on subsistence farming, gender gaps in employment outcomes and high youth unemployment, domestic economic and labour policy should target the key growth sectors including agriculture, fishing, forestry and tourism. Agricultural research and extension should be focussed on supporting the production of high value, non-perishable, niche products. Similar to agriculture, the future of Pacific forestry lies in high-value, non-perishable products. Policies are needed that are aimed at improving working conditions in the forestry industry. In fisheries, the enforcement of mandatory crewing requirements under which foreign vessels fishing in PNA waters are required to employ a certain proportion of workers from PNA countries would lead to a boost in employment figures. Increased linkages between different economic sectors especially agriculture and tourism, while enhancing processing capacity of agricultural products within the PICs is important.

In a region prone to natural disasters and already affected by climate change, much potential lies in exploring the potential of Green Jobs, e-commerce and ICT-integrated businesses. Given that the majority of Pacific Islanders will continue to work in the informal and subsistence economies, Governments have to support the development and growth of small and micro enterprises through policies and incentives. This includes supporting the development of an entrepreneurial culture especially among youth and women. Finally, given the precarious nature of work conditions in the informal economy, measures facilitating the transition of workers and businesses from the informal to the formal economy are needed. In particular, following are five policy areas where there is a need for concerted policy actions:

- In order to promote **skills development**, there needs to be increased collaboration between TVET institutions and employers in order to align training programmes with labour market demand and the development of strategies to increase private sector investment in skills development. Tracer studies among graduates from TVET institutions are needed to provide evidence of the labour market outcomes of particular training courses. Regional approaches to meet the training needs of small countries and "niche" markets should be encouraged and entrepreneurship training, specifically targeting workers in the informal economy with a focus on women and youth should be prioritised. Other areas where skills development should be focussed are skills required in domestic growth sectors (agriculture, ICT, hospitality and tourism), overseas labour markets (aged care, hospitality and tourism, construction), and areas where foreign workers are employed in the domestic economies.
- Leveraging **labour migration** for improved labour market outcomes should include training that is focussed on areas of overseas labour demand, development and implementation of National Labour Migration Policies as is already the case in Kiribati, a national debate on the preferred levels and type of labour migration and the development of strategies to take advantage of employment opportunities within the PIC region such as in PNG.

- Meanwhile, in order to strengthen **labour market institutions** and improve governance of labour, there is a need to complete labour law reform processes, develop the capacity of Labour Departments in order to strengthen labour institutions and labour inspection, as well as of social partners and of social dialogue mechanisms.
- The key recommendations with regards to **social protection** include increased efforts to ratify ILO Conventions (in particular the eight Fundamental Conventions) in order to enhance rights at work, upgrading social protection and minimum wage floors through social dialogue, and taking steps to enhance the protection of migrant workers' rights.
- Finally, in order to address the lack of **research and data on Pacific labour markets**, there is a need to strengthen efforts at the national and regional level to collect reliable, regular and timely labour market data, and conduct research on several key issues including women and youth, the potential of and working conditions in growth industries, and prospects of green job creation.

1. INTRODUCTION

The ILO and its member States have decided to implement a Future of Work Initiative that will culminate at the centennial International Labour Conference in 2019. The rationale behind the Future of Work Initiative is to reflect on the transformational changes taking place in the world of work, to understand the processes of change and to respond effectively so as to advance the shared commitment to decent work for all and the mandate of social justice.

This Future of Work in the Pacific Islands Report contributes to the global initiative. The first stage of the work was a scoping study which included a document and literature review, and provided an overview of research available along the following five areas: i) the role of innovation and technology and consequences for the labour market in the sub-region; ii) implications for skills training considering the challenge of skills shortage prevalent in the Pacific Island countries (PICs)[1]; iii) migration and youth employment; iv) natural resource extraction, climate change and environmental sustainability; and v) future growth sectors and the implications for labour market policy. The scoping study informs this Future of Work Report which is structured as follows: Chapter 2 includes a brief labour market overview, followed by an analysis of the drivers of labour market change (Chapter 3), an overview of employment growth opportunities (Chapter 4), a discussion of key challenges (Chapter 5) and policy recommendations (Chapter 6). Gender is mainstreamed throughout the report. The recommendations of this report are closely aligned with the priorities of the Bali Declaration adopted in December 2016 at the ILO's 16th Asia and the Pacific Regional Meeting. A major challenge in compiling this report has been the scarcity of reliable and up-to-date labour market statistics and the absence of labour force projections.

Given the diversity of the Pacific Island region and the large number of PICs covered in this study, some analysis will be done at the sub-regional level. The four **Melanesian countries** of Fiji, PNG, Solomon Islands and Vanuatu have large land areas which are endowed with various natural resources and relatively large populations. The **Polynesian countries** of Cook Islands, Samoa and Tonga have experienced considerable emigration and have sizeable diaspora communities abroad, mostly in New Zealand. Culturally, Tuvalu is a Polynesian country. However, being an atoll country, it is economically and geographically very different from the other Polynesian countries. For this reason, it is grouped under the category of **atoll states** together with Kiribati. Tuvalu and Kiribati share a high degree of vulnerability to climate change and environmental degradation and a lack of opportunities for economic diversification. Finally, the three **northern Pacific countries** of FSM, Palau and RMI are associated with the US under the Compact of Free Association. Due to the special relationship with the US, the economies and labour markets of the northern Pacific countries display characteristics different from other PICs.

[1] The group of Pacific Island countries includes the Island member countries of the Pacific Islands Forum Secretariat (PIFS) which are: Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea (PNG), Republic of Marshall Islands (RMI), Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. All of these are ILO members with the exception of FSM, Nauru, and Niue.

2. LABOUR MARKET OVERVIEW[2]

2.1 The macro-economic context

PICs are faced with significant challenges of being small in size, geographically dispersed and distant from major markets. They are a group of highly diverse countries in terms of population size, land area, natural resource endowments and economic outcomes (see Table 2.1).

Table 2.1: Summary statistics for selected PICs (area, population, GDP per capita), 2015

	Land area (skm)	Population ('000)	GDP per capita (constant 2010 USD)
Tuvalu	30	10	3,706
Republic of Marshall Islands (RMI)	180	53	3,345
Palau	460	21	10,410
Federated States of Micronesia (FSM)	700	104	2,793
Tonga	720	106	3,700
Kiribati	810	112	1,616
Samoa	2,830	193	3,641
Vanuatu	12,190	265	2,823
Fiji	18,270	892	4,350
Solomon Islands	27,990	584	1,475
Papua New Guinea (PNG)	452,860	7,619	1,784

Source: World Bank (2017).

Note: GDP per capita data for PNG is for 2014.

Economic activity is concentrated in a few sectors where PICs have comparative advantages, such as the extractives industry (PNG, Nauru, Solomon Islands, and to some extent Fiji), fisheries (most PICs), forestry (Fiji, PNG, Solomon Islands), agriculture (most PICs) and tourism (Cook Islands, Fiji, Palau, Samoa, Tonga, Vanuatu). While the two biggest economies in the region, PNG and Fiji, have a considerably developed export basket, Kiribati and FSM export fewer than ten different products each.

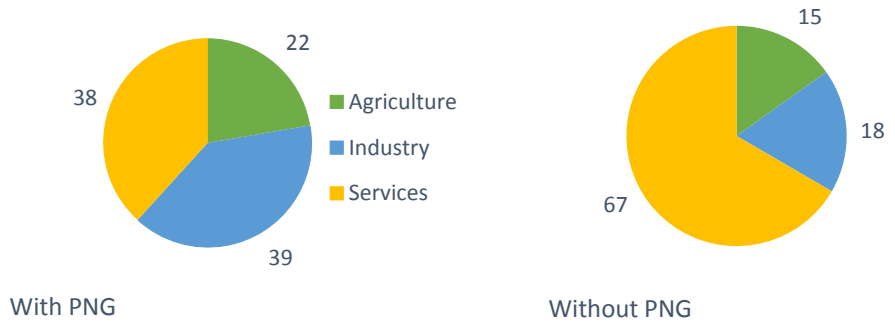
Agriculture is an important sector in the region and its relative value added is significant: 22% if PNG included and 15% if it is not (see Figure 2.1)[3]. Most PICs have been unable to develop their

[2] This Chapter includes a brief overview of the labour market in the PIC region. Additional background information is included in the Scoping Study report that preceded this study.

[3] PNG is the most populous country with a populatoin that is several times larger than that of the other PICs taken together. It is the biggest economy and has important mineral and gas resources and a sizeable mining industry. Regional averages of economic, social and demographic indicators vary considerably depending on whether or not PNG is included.

manufacturing sector as domestic markets are small and transport costs are high. Partial exceptions are Fiji (agri-processing, food, beverage and garment industry) and PNG (agri-processing, food and beverage industry). Excluding PNG, the regional weight of the industrial sector is below 20% of total output. Figure 2.1 shows that the services sector makes an important contribution to the region's GDP due to the importance of the tourism industry.

Figure 2.1: Value added to GDP by sector, regional weighted averages with and without PNG, latest available estimates



Source: ILO's calculations based on ADB, 2015 and World Bank, 2016a

Many PICs record high inflows of development assistance. The weighted regional average is USD 145 per capita per annum, rising to USD 363 if PNG is not included. In the Compact States of FSM, RMI and Palau per capita development assistance is particularly high, each receiving more than 1,000 USD per capita per year (ILO calculations based on OECD DAC, 2016, UNDESA, 2015).

Economic growth in PICs has been disappointing in recent decades but has improved since 2010 (see Table 2.2). The regional average growth rate for 2010-2015 was 6.4%, which was much higher than during the previous three decades. However, the regional growth figure is inflated by the contribution of PNG. Between 2010 and 2015, PNG experienced an economic boom, mainly driven by high mineral prices as well as the construction and subsequent start of production of the PNG Liquefied Natural Gas (LNG) project. When excluding PNG from the regional average, growth between 2010 and 2015 falls from 6.4% to 3% (which is still the region's best performance since the 1980s). Projections for 2016 and 2017 indicate that growth rates are likely to remain positive.

Table 2.2: Pacific Islands Countries GDP growth rates and 2016, 2017 projections

	1980s	1990s	2000s	2010-2015	2016	2017
Fiji	2.0	0.5	1.1	3.6	2.4	3.8
Kiribati	2.7	-1.2	0.1	2.7	2.7	2.5
RMI	-1.8	0.7	-0.7	1.4	1.8	1.8

FSM	-0.2	-0.1	0.9	-0.4	1.1	0.7
PNG	2.2	0.6	-0.6	8.2	3.0	4.1
Samoa	0.5	0.9	3.6	0.9	1.2	-0.1
Solomon Islands	0.4	1.5	-2.6	5.4	3.0	3.3
Tonga	1.4	2.0	2.4	1.3	2.8	2.6
Vanuatu	1.3	0.3	0.0	2.0	3.2	3.2
Average	1.9	0.6	0.1	6.4		
Average without PNG	1.4	0.6	0.9	3.0		

Note: ILO's calculation, averages are weighted by GDP.

Source: World Bank (2016c); World Bank (2016a) for data for 1980-2009.

2.2 Labour Market outcomes

2.2.1 Labour force overview

Table 2.3 summarises some labour market indicators for selected PICs. It shows the dominance of PNG in terms of the number of employed persons and the working age population. Labour force participation rates vary between 48% in Samoa and over 70% in PNG and Vanuatu.

Unemployment rates also show considerable variation between countries in the region, from 3% in PNG to 31% in Solomon Islands. Unemployment rates have to be interpreted with caution in economies dominated by subsistence and informal activities as surplus labour is easily absorbed into these activities. Moreover, PIC governments offer very few incentives for those unemployed to register as "looking for job" (Duncan and Voigt-Graf, 2010). While generally not a good indicator of the labour market, unemployment rates for different sub-groups of the population within one country can be used to compare the labour market outcomes for sub-groups such as by age and gender.

Table 2.3 also indicates the importance of informal employment. In Fiji, about 60% of the workforce are engaged in informal or subsistence activities (78% in rural areas and 37% in urban areas) (ADB and ILO, 2015). In PNG and Solomon Islands, over 80% of the workforce are in informal employment.

Table 2.3 Selected labour market indicators, 2016

	Labour force ('000)	Working age population ('000)	Labour force participation rate (%)	Unemployment rate (%)	Informal employment (%)
Fiji	348	641	54	8	60
PNG	3,461	4,917	70	3	84 (2014)
Samoa	51	123	41	7	68 (2012)
Solomon Islands	244	362	67	31	85

Tonga	43	63	68	5	10
Vanuatu	123	173	71	5	40

Source: ILO, 2017 for labour force, working age population and labour force participation rate; World Bank, 2017 for unemployment; ILO unpublished report for informal employment; SBS 2012 for informal employment in Samoa; Jones and McGavin 2015 for for informal employment in PNG.

Notes: Working age population is defined as the population of 15 years and above.

There are substantial gender disparities in regards to labour market participation in many PICs. Table 2.4 shows that PNG has high labour force participation rates for both men and women, but gender gaps are much larger in the other PICs. In Vanuatu, 81% of men are in the labour force, compared to only 62% of women. A notable gender gap exists in the labour market in Samoa where only one in four women participates in the labour force.

Table 2.4: Labour force participation rate by gender in selected PICs, 2016

	Labour force participation rate (%)	Labour force participation rate, male (%)	Labour force participation rate, female (%)
Fiji	54	71	37
PNG	70	71	70
Samoa	41	58	23
Solomon Islands	67	74	61
Tonga	68	74	53
Vanuatu	71	81	62

Source: ILO, 2017.

Notable gender gaps also exist in regards to unemployment rates. In Kiribati for instance, the unemployment rate was 31% of the labour force in 2010; higher amongst females (34.1%) than males (27.6%) (KNSO, 2012 and 2013).

In terms of employment by sector, agriculture employs an average of 67.3% in the PICs (ILO calculations). The services sector is relatively strong, constituting 26.1% of employment on average. Within services, the tourism sector is a large employer, especially in Vanuatu, Cook Islands and Fiji. Across the region, a large share of formal employment is in the public sector. Some 30% of formal employment in Solomon Islands and as much as nearly 80% in Kiribati is in the public sector (World Bank, 2014b).

2.2.2 Large informal and subsistence economies

The majority of Pacific Islanders is engaged in the informal and subsistence economies and moves between agricultural production for the market, subsistence agriculture, and other activities in the informal economy. Although difficult to estimate, the size of the informal economy is substantial (see Table 2.3). In Fiji, some 60% of the working age population are engaged in the informal economy. In Solomon Islands, 85% of the working aged population are engaged in the informal economy and semi-subsistence agriculture provides livelihoods for 95% of the rural population (Solomon Islands Ministry of Development Planning and Aid Coordination, 2007). In PNG, most people are engaged in subsistence activities including agriculture, hunting and forestry (71% of males and 81% of females) according to the 2011 Census (ADB and ILO, 2017), with women concentrated in traditional activities involving food production, sale of fresh produce, betel nuts, fishery and bakery products.

Dominance of subsistence and informal activities is also a key characteristic of labour markets in Polynesia. Only a quarter of total agricultural production in Samoa is for the market while the remaining three-fourth is primarily for own consumption and local exchange. Furthermore, 68% of the workers in Samoa are in informal employment (ILO, 2014a).

The capacity of the subsistence and informal economy to provide livelihoods has increasingly been questioned. Work in the informal economy is associated with low and unstable incomes, lack of access to employment related protection, and underemployment (ADB, 2014).

2.2.3 Youth unemployment

The formal economy has only limited capacity to generate employment opportunities and to absorb the growing population. Although there are country variations, which are partly linked to migration opportunities, youth unemployment is a serious issue in all PICs (see Table 2.5). Young people are considerably more likely to be unemployed than their adult counterparts. In all countries, young women are particularly disadvantaged.

Table 2.5 Unemployment and youth unemployment rates (15-24 years old), 2015

	Total %	**Youth % (15 – 24 years old)**		
		Total	**Female**	**Male**
Cook Islands	8 (2011)	16 (2011)	15 (2011)	16 (2011)
Fiji	8 (2016)	18 (2015)	24 (2015)	15 (2015)
Kiribati	31 (2010)	54 (2010)	62 (2010)	48 (2010)
PNG	3 (2016)	7 (2015)	7 (2015)	6 (2015)
Samoa	6 (2011)	14 (2015)	19 (2015)	12 (2015)
Tonga	5 (2016)	12 (2015)	15 (2015)	10 (2015)
Vanuatu	5 (2016)	9 (2015)	9 (2015)	8 (2015)

Source: ADB, 2016a.

It is likely that official unemployment figures understate the magnitude of youth unemployment in the region, as many youths drop out of the labour force and give up actively seeking work. Youth unemployment is particularly acute in Kiribati, Nauru, RMI and Tuvalu with youth unemployment rates of over 50%. The issue is slightly less serious in Polynesian countries where youth have better access to migration opportunities (ADB and ILO, 2017).

The majority of youth are in informal employment in often highly insecure circumstances with low earnings and no social protection. For instance, in PNG less than 10,000 of the approximately 80,000 school leavers per year are absorbed into the formal labour market. The majority of the remaining youths secure their livelihoods from non-monetary activities within their village communities (ADB and ILO, 2017). While more young Papua New Guineans leave the school system and enter the labour force each year than young persons in the rest of the PICs taken together, the gap between the number of labour force entrants and the number of new jobs is alarming in all countries for which data is available (see Table 2.6). In Tonga, some 2,300 young people entered the labour market in 2012 after leaving secondary school, yet only between 180 and 300 new jobs in the formal sector were available (Government of Tonga, 2013). Most school leavers across the region therefore have little choice but to enter the urban informal economy or work in subsistence agriculture or fishing.

Table 2.6: Number of labour force entrants and new jobs in selected PICs

	Number of labour force entrants per year	Number of new jobs in the formal economy
Fiji	17,000	600
Kiribati	2,000	400-600
PNG	84,300	10,000
Samoa	2,300	n/a
Solomon Islands	10,000	400
Tonga	2,300	180-300
Vanuatu	3,500	700

Source: World Bank, 2016f.

The main reasons for high youth unemployment rates are low economic growth, high population growth and skills mismatches. Research conducted in Fiji (Voigt-Graf and Kanemasu 2015), PNG (ADB and ILO, 2017) and Tonga (Government of Tonga, 2013) highlight significant levels of imbalance between employer needs and skills supplied by training and education institutions.

2.2.4 Skill shortages and training

Most PICs are characterised by an oversupply of low skilled workers and considerable skill shortages in the workforce in regards to technical and vocational, managerial and professional skills as well as entrepreneurial and general workplace skills.

Skill shortages are most pronounced in technical and vocational skill areas. The low quality of TVET in the region is partly a result of the private sector not being involved in the planning and delivery of training. In the absence of reliable labour market data, training is often provided for the sake of training, rather than in response to labour market needs and skill shortages. Enterprise-based training is rare and where formal apprenticeship schemes exist, such as in Fiji and PNG, trainee numbers are small and the systems not particularly efficient. On the positive side, one country that has made considerable progress in raising the quality of TVET and aligning it to international standards is Kiribati.

Another skill shortage area are entrepreneurial skills. A survey by Tebbutt Research (2014) in PNG found that entrepreneurial skills were lacking in small and medium enterprises in the formal economy as well as the informal economy. The lack of entrepreneurial skills is a severe disadvantage because the majority of Pacific Islanders work in subsistence agriculture and/or the informal economy, where a certain level of entrepreneurial skills is required in order to operate successfully. With youth unemployment being a serious issue, a widespread lack of entrepreneurial skills hinders them pursue opportunities in different areas of self-employment and business ownership.

Studies in different countries have shown shortcomings in generic workplace skills including communication skills, English proficiency, professionalism, attitude, punctuality, and attire (see e.g. Voigt-Graf and Kanemasu, 2015 for Fiji, and Voigt-Graf and Odhuno, 2015 for PNG). A lack of generic workplace skills affects the employability of workers and makes Pacific Islanders less competitive in the domestic and global labour market compared to workers from other labour-sending countries.

One consequence of skill shortages is the employment of foreign workers in skill shortage areas in all PICs. The largest number of foreign workers is employed in PNG (see Box 1).

Box 1: PNG's foreign workforce as an indication of skill shortages

PNG's labour market is characterised by a shortage of adequately skilled workers. There is not only a quantitative shortage of skilled workers but many TVET and university graduates struggle to find employment as their skills do not match employers' expectations. The quality of TVET is below the expectations of employers for reasons including outdated equipment and training programmes, low quality of teachers, and a lack of alignment of training to labour market needs. As a consequence of inadequate training, foreign workers are employed as managers, professionals, technicians and trade workers (Voigt-Graf, 2016b).

The number of foreign workers by occupation and industry is the best available indicator for current skill shortages in PNG. PNG's Department of Labour and Industrial Relations (DLIR) maintains a database of work permits issued per year and of active work permits at present. In May 2015, 41,096 foreign nationals held work permits to work in PNG's private sector. Of these, 17,551 were working in various managerial positions, 13,440 were technicians and trade workers, and 8,100 were professionals. The two technical occupations with the largest number of foreign work permit holders were "Technicians and Trade Coordinators and Supervisors", followed by "Specialist Heavy Machinery Mechanic or Technician (Voigt-Graf and Odhuno, 2015).

Despite the demand for TVET skills in PNG's labour market and the increasing number of foreign workers in technical and trades occupations, white collar jobs remain favoured among PNG nationals.

2.2.5 Migration, labour mobility and remittances

Permanent migration

Migration and overseas employment opportunities differ greatly between PICs. Some PICs such as Cook Islands, Fiji, Samoa and Tonga have experienced considerable emigration, particularly to New Zealand and the US with a total stock of Pacific-born migrants living overseas of over 400,000, or some 4% of the region's population (see Table 2.7). Palau, RMI and FSM have free access to the US under the Compact. Similarly, Cook Islanders are New Zealand citizens with full residential and work rights in New Zealand. Cook Islands records a resident population of about 20,000 compared to 61,839 Cook Islanders in New Zealand (Statistics New Zealand, 2013).

New Zealand grants residence to 1,100 Samoans per year under the Samoa Quota. Samoans are the largest group of Pacific Islanders in New Zealand, comprising some 144,000 people in 2013 (Statistics New Zealand, 2013). Under the Pacific Access Category (PAC) Scheme, New Zealand also offers 250 places per year to citizens from Fiji and Tonga, and 75 places each to citizens from Kiribati and Tuvalu.

There are no migration schemes in Australia providing preferential access to Pacific Islanders. Australia's migration programme is largely built around skilled migration and few Pacific Islanders (with the exception of Fiji citizens) have had opportunities to meet the skills requirements.

Melanesian countries (except Fiji) and the atoll states have had few migration outlets, except Kiribati's and Tuvalu's small allocations under the PAC scheme. The main overseas employment opportunity in recent decades has been as seafarers on German merchant ships and Asian fishing boats. In the wake of the global economic crisis, seafarer numbers have declined and there is currently an oversupply of trained maritime workers in both countries.

In general, migration is primarily a response to real and perceived inequalities in incomes, education, training, socio-economic opportunities and health care (Voigt-Graf, forthcoming 2018) as well as demand for skills and labour in destination countries. Climate change and environmental degradation are likely to further increase migration pressures, especially in the atoll states.

Table 2.7: Labour mobility and remittance indicators for PICs, latest available estimates

	Migrant Stock	Emigrants/Population (%)	Migrant remittance inflows (USD millions)	Remittance/ GDP (%)
Fiji	204,934	23.0	206	4.5
Kiribati	4,717	4.2	16	9.6
RMI	6,901	13.0	26	14.0
FSM	19,798	19.0	23	7.3
Nauru	2,391	23.4	n.a.	n.a.
Palau	2,552	12.0	2	0.9

Papua New Guinea	4,631	0.1	10	0.1
Samoa	113,139	58.6	141	17.6
Solomon Islands	3,833	0.7	16	1.4
Tonga	56,524	53.2	118	27.1
Tuvalu	3,472	35.0	4	10.7
Vanuatu	8,583	3.2	28	3.5
TOTAL	431,475	4.3	590	2.3

Notes: Population numbers refer to the resident population, irrespectively of their citizenship status. Remittance inflows are in current (nominal) USD. Migration data is for 2015, remittance data for 2014.

Source: UNDESA, 2015; World Bank, 2016f. Migrant remittance inflows data is from World Bank staff calculation based on data from IMF Balance of Payments Statistics database and data releases from central banks, national statistical agencies, and World Bank country desks.

Box 2: Climate change and migration in Kiribati

The United Nations University Institute for Environment and Human Security found that over 70% of households in Kiribati would opt to migrate in the event of worsening climate change impacts (UNU, 2016a). The lack of migration opportunities is serious in light of the projected loss in habitable land due to climate change (Wyett, 2013).

The former President of Kiribati – Anote Tong – was a strong advocate of 'migration with dignity', which supports education and training to create opportunities for the permanent migration of skilled migrants in order to ensure that the population remains at a level that supports Kiribati's climate change adaptation effort (Voigt-Graf and Kagan, 2017).

The Government of Kiribati (GoK) implements the "National Labour Migration Policy" (NLMP) which was adopted in 2015. Its long-term vision is to "provide I-Kiribati with increased opportunities to migrate with dignity by accessing decent work opportunities abroad" (GoK, 2015; Voigt-Graf, 2016a). The broad scope of the policy as well as the concrete actions proposed under four policy areas are likely to lead to an increase in labour mobility, including into new destinations and in non-traditional occupational areas.

Seasonal and temporary labour mobility

In addition to permanent migration flows, several seasonal and temporary migration opportunities for Pacific Islanders have opened up over the last decade. New Zealand's Recognised Seasonal Employer (RSE) scheme and Australia's Seasonal Worker Programme (SWP) attempt to fill seasonal labour shortages in the horticulture and viticulture industries.

Table 2.8 shows the number of participants in the SWP and RSE between 2012-13 and 2015-16. Numbers in New Zealand have been considerably higher than in Australia. PNG has performed very poorly. Fiji only joined the schemes in 2014/15 and has already recorded remarkable growth rates. Participation in the programmes is heavily male, due partly at least to the physical nature of the work.

Table 2.8: Number of seasonal workers under the RSE and SWP by country of origin, 2012-13 to 2015-16

	2012-13		2013-14		2014-15		2015-16	
	RSE	SWP	RSE	SWP	RSE	SWP	RSE	SWP
Fiji	0	0	0	0	30	<5	83	160
Kiribati	138	34	127	14	136	11	142	20
Nauru	0	10	0	0	20	0	20	17
PNG	31	26	58	26	96	35	61	42
Samoa	1,137	22	1,169	162	1,238	185	1,427	140
Solomon Islands	423	42	491	9	511	21	532	61
Tonga	1,573	1,199	1,538	1,497	1,750	2,179	1,529	2,624
Tuvalu	56	0	71	20	70	7	64	<5
Vanuatu	2,829	119	3,070	212	3,435	567	3,030	1,198
All PICs	6,187	1,452	6,524	1,940	7,286	3,005	6,888	4,262

Source: Sherrell, 2016a, for Australia; Rarere, 2016 for New Zealand.

Note: Data for New Zealand is until March 2016 only.

In 2015, the Australian and New Zealand governments announced new initiatives under their respective seasonal work schemes. The Australian Government introduced the Northern Australia Worker Pilot Program (NAWPP) which provides 250 places over five years for citizens of Kiribati, Tuvalu and Nauru to work in lower-skilled jobs in Northern Australia in non-seasonal occupations in any industry. (Sherrell, 2016b). The first workers from Kiribati arrived on Hayman Island in November 2016 to work in housekeeping, maintenance, stewarding, and food and beverage positions (PITI, 2016). So far, over 80% of workers are women indicating a welcome shift from the heavily male dominated SWP.

New Zealand announced a pilot scheme for fishermen and seafarers from Kiribati and Tuvalu. No quotas or numbers have been released and no workers have been recruited at the time of writing this report. The scheme targets skilled workers (Rarere, 2016). New Zealand has also announced that it will recruit workers from PICs for the Canterbury Rebuild. Samoa, Tonga and Fiji have been selected as pilot countries for the scheme which will later be expanded into PNG, Vanuatu and Solomon Islands.

Regional trade agreements which are currently being negotiated could also bring greater access to the Parties' labour markets (Voigt-Graf, 2016c). These include the Trade in Services Chapter of the Pacific Island Countries Trade Agreement (PICTA) and the Pacific Agreement on Closer Economic Relations (PACER) Plus negotiations with Australia and New Zealand. Regional labour mobility has been a core component of the PACER Plus negotiations which have been concluded in April 2017.

A Skills Movement Scheme (SMS) is already in place under the sub-regional Melanesian Spearhead Group (MSG) comprising Fiji, PNG, Solomon Islands, and Vanuatu. Although introduced in 2012, not a

single worker has moved under the SMS due to a number of reasons including a low level of awareness of the SMS among recruitment agencies and companies (Voigt-Graf, 2015).

Main economic effects of migration

Remittances

In 2014, remittances to the PICs were estimated at USD 590.5 million per year and were 2.3% of GDP on average (see Table 2.7), albeit with large variations between countries. For example, in 2014 remittances were worth more than 27% of GDP in Tonga; while being a mere 0.1% in PNG. Remittances have raised living standards of many households. Studies in PICs show that remittances and migration have led to increases in household income, assets, savings, educational attainment, and knowledge sharing (World Bank, 2006, Gibson and McKenzie, 2010 and 2013, Chand and Clemens, 2008). There is less evidence of remittances being used for productive investments.

Brain drain

With long-term migration opportunities in metropolitan states largely targeting skilled workers, migration flows from the Pacific have consisted of skilled migrants from various sectors including health (Connell, 2004) and education (Iredale et al., 2015). The negative effects of brain drain are particularly obvious in PICs experiencing high rates of permanent migration, i.e. the Polynesian countries and Fiji.

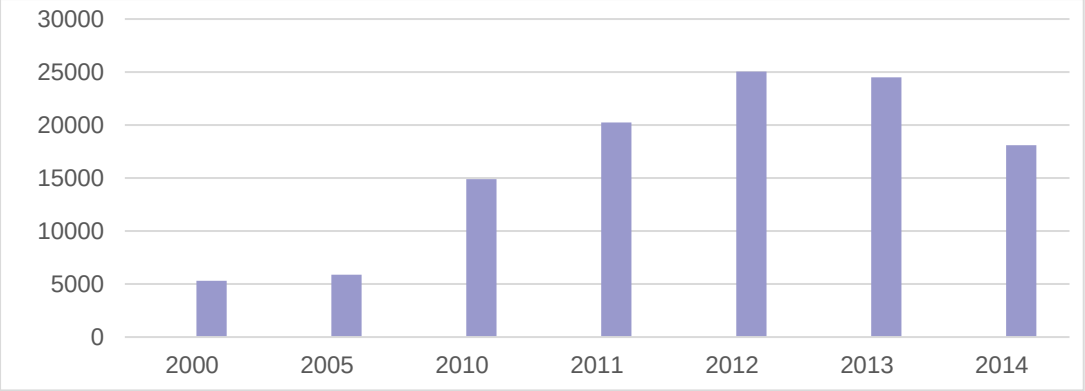
Approximately 5,000 citizens emigrate from Fiji to New Zealand, Australia, Canada, the USA and elsewhere every year (Voigt-Graf and Kanemasu, 2015). In 2010/11, total emigration rates in Fiji for persons of 15 years and above were 22.4% (meaning that 22.4% of all persons over 15 years of age had emigrated). As many as 34.4% of the tertiary educated had migrated (OECD, 2015).

Labour mobility into PICs

While all PICs are destination countries for some skilled, professional and managerial workers, the largest numbers of foreign workers are employed in Palau and PNG. The majority of foreign workers are from Asian countries, particularly the Philippines.

In PNG, there has been an enormous increase in the number of foreign workers since 2005, which was partly due to the increased demand for skilled workers during the construction of the LNG project between 2007 and 2012 (see Figure 2.2). The industries most reliant on non-citizen workers are construction and infrastructure; agriculture, forestry and fishing; and mining. Most non-citizens work as managers, technicians and skilled trade workers (Voigt-Graf, 2016b).

Figure 2.2: Number of new work permits issued to foreign workers in PNG, 2000 to 2014



Source: DLIR, annual work permit data

In 2014, 4,330 foreign workers accounted for 41.7% of total employment in Palau (ADB and ILO, 2017) and in the Cook Islands, migrant workers are concentrated mainly in the restaurant and accommodation sector and make up around 16% of the workforce (Government of Cook Islands, 2015).

2.3 Labour market governance

2.3.1 Social protection systems

There are two different social protection systems in the PICs: traditional and formal protection systems. Traditional forms of social protections operate informally. They are based on the principles of reciprocity and solidarity, and provide assistance to the majority of the population. However, urbanisation and migration have weakened community and family ties, and have led to a gradual erosion of informal systems, leaving an increasing part of the population without adequate protection.

Formal social protection systems cover only a fraction of the population which generally consists of those who are employed in the formal sector and are already better-off. These systems include national provident funds, which usually provide lump sums for retiring at a certain age, permanent migration, death or invalidity. There is significant variation in terms of government spending on social protection systems among PICs. Most PICs spend around 1-2% of GDP on social protection, while FSM and Tuvalu spend 10% and 4% of GDP respectively, and PNG spends only 0.1% of GDP (ILO, 2016c).

All PICs have some form of pension system and social welfare assistance. For example, in Fiji the pension for those in the formal sector employment, is covered through the National Provident Fund. In addition, those above 70 years of age receive a Government pension of FD 50 per month (ISSA, 2015). Pensions have proven to substantially reduce the incidence of poverty among beneficiaries (AusAID, 2012). However, there are few other types of social protection. Indeed, high rates of public sector employment have been used as a substitute for the implementation of social protection systems (ADB, 2014).

In terms of active labour market policies, some PICs have national employment services. In Fiji, the National Employment Centre (NEC) covers formal employment, foreign employment, self-employment, and volunteer service. PNG's National Employment Services (NES) largely focuses on

employment agent licensing, and manages the seasonal work schemes. A recent detailed report on employment services in Fiji and PNG found that they were quite ineffective (ADB and ILO, 2017).

2.3.2 Social dialogue and tripartism

Across the region, labour market institutions are insufficiently developed. Many Ministries and Departments of Labour are under-resourced and have little influence on national development and planning. National development plans and policies therefore generally make little reference to labour and employment issues.

Partly as a result of the continuing dominance of subsistence economies in PICs, the trade union movement is a relatively new phenomenon in the region and trade unions are generally weak, except for Fiji and, to some extent, Solomon Islands.

Various bodies represent the private sector in the PICs. They are part of the social dialogue mechanisms that exist in many of the countries. The most common private sector bodies are the national Chambers of Commerce. There are also sectoral bodies and business councils representing the private sector in various PICs.

There is considerable diversity in regards to tripartite bodies in the PICs. In Fiji, PNG, Samoa and Solomon Islands tripartite bodies have been established by law. There are various mechanisms in the PICs to negotiate wages and set minimum wages. Collective wage bargaining (including minimum wage) exists in Fiji, PNG, Solomon Islands and Vanuatu. Several PICs including RMI, Tonga and Tuvalu have no wage negotiation mechanism. There is no national minimum wage in Kiribati and Tonga.

2.3.3 National and international policy framework

In September 2015, all Member States of the United Nations have adopted a new Sustainable Development Agenda, with 17 SDGs at its core. Goal 8 of the 17 SDGs refers to “promoting inclusive and sustainable economic growth, employment and decent work for all”. It is therefore expected that employment issues will increasingly be included in national planning documents in order to assist the PICs’ progress towards achieving SDG 8.

According to the Bali Declaration (ILO, 2016b), that was adopted at the ILO’s Asia and Pacific Regional Meeting in Bali in December 2016, growth will have to become more inclusive, labour governance and social dialogue will need to be improved and the autonomy and independence of workers’ and employers’ organizations needs to be enhanced and respected in all ILO member states. Ratification of the ILO’s eight Fundamental Conventions is one crucial step towards achieving the Bali Declaration’s goals. Four PICs (Palau, RMI, Tonga, Tuvalu) have ratified none of the eight Fundamental Conventions and Cook Islands has ratified only two.

DWCPs are ILO’s strategic policy documents in its member States. They are designed and implemented together with the social partners. DWCPs have yet to be formulated in Cook Islands, Palau, RMI, Tonga and Tuvalu. In the other PICs, the strengthening of tripartism and the social partners and employment/youth employment are priorities in all DWCPs, followed by labour law reform (5 PICs), social protection (2 PICs) and labour market information (one PIC) (see Table 2.9).

Due to the considerable shortcomings of skills development across the region, many of ILO's Decent Work Country Programmes also include outcomes around skills development under employment priorities (see e.g. ILO, 2010a for Kiribati; ILO, 2010b for Solomon Islands, and ILO, 2013 for PNG).

Table 2.9: Priorities in PIC DWCPs

	DWCP priorities				
Country	**Labour Law reform**	**Employment/youth employment**	**Social protection**	**Tripartism**	**Labour market information**
Fiji 2010	Review and implementation of the ERP and related legislation	Promotion of decent employment opportunities	Extending social protection	Capacity building of tripartite partners and strengthening of tripartism	
Kiribati 2009	Application of the ILS and Kiribati's labour laws	Promotion of decent employment opportunities, including for young women and men		Capacity building of tripartite partners	
PNG 2013	Completion and implementation of national labour law reform, including migration law and policy	A national employment strategy and implementation framework that creates and improves access for young women and men to decent employment		Tripartite capacity is strengthened	
Samoa 2013	Completion of the labour law reform and implementation of labour laws	Young women and men have greater access to information and employment services to support their transitions from school to work		Tripartite capacity is strengthened	
Solomon Islands 2009		Promotion of decent employment opportunities, particularly for young women and men, and inclusive of persons with disabilities	Increasing social protection	Capacity building of tripartite partners and improvement of social dialogue	Improvement of the labour market information and analysis system
Vanuatu 2009	Completion of labour legislation reform and application of International Labour Standards	Promotion of decent employment opportunities, particularly for young women and men		Capacity building of tripartite partners and improvement of social dialogue	

3. DRIVERS OF LABOUR MARKET CHANGE

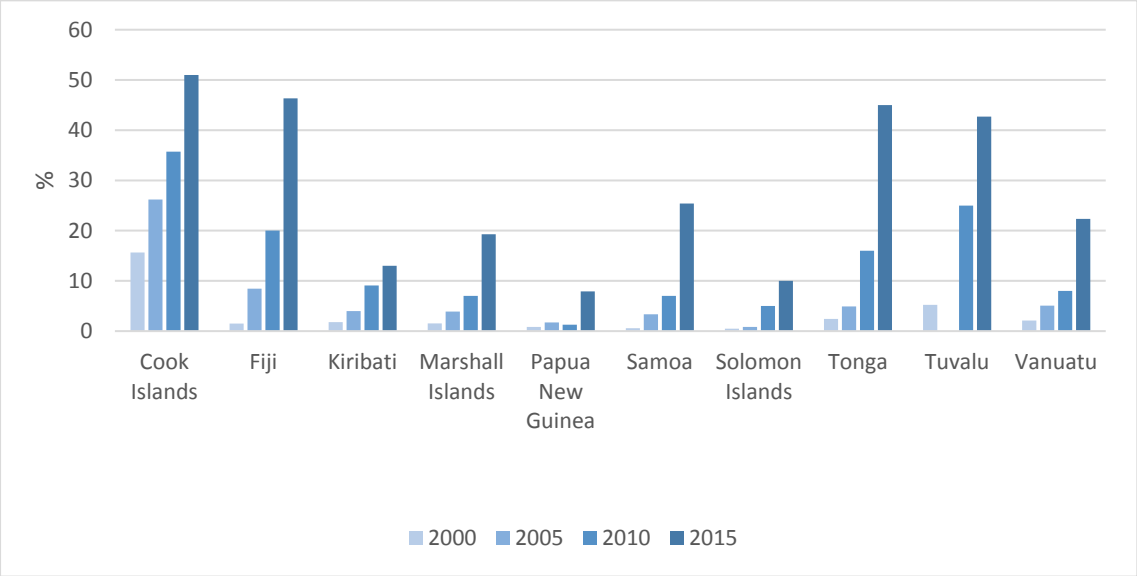
3.1 Innovation and technology

Technological innovations of recent decades have significant potential to bring socio-economic benefits to PICs. New communication technologies can improve connectivity within PICs, especially within the large Melanesian countries where some remote populations have little access to government services, markets and employment opportunities. These technologies also improve connectivity with the rest of the world including the region's main trading partners (Beschorner et al., 2015). Due to the unavailability of relevant data it is difficult to measure the total economic impacts of ICTs in PICs.[4]

3.1.1. Internet Connectivity

Since the early 2000s, the regional telecommunications sector has undergone deregulation and reform, and prices have been dramatically reduced (Beschorner et al., 2015), leading to greatly improved connectivity in the region (see Figure 3.1). While it was noted in 2010 by a Pacific Islands Forum report that e-government, e-commerce, e-health, e-education, etc. were at the time "non-existent or in their infancy" (New Strategies, 2010), businesses and private sector organisations are beginning to utilise ICTs, especially the internet, to improve productivity, entrepreneurship, financial intermediation, innovation and transaction costs (Stork, 2015). It is not possible to provide a list of these initiatives due to absence of comprehensive data, but two examples are discussed here.

Figure 3.1: Percentage of individuals using the internet, 2000 to 2015



[4] Stork (2015) pointed out that the only telecommunication operators in the five PICs he studied (Fiji, Samoa, Solomon Islands, Tonga and Vanuatu) that published annual financial reports is Fiji's ATH Group. He also noted that, with the upgrade to 3G/4G in progress in the region, the real impact of mobile broadband would become clearer in the future.

Source: ITU, 2017

Private-sector initiatives include the development of digital tourism. Digital tourism can be defined as: "the digital support of the tourist experience" (Benyon, et al. 2014), whereby digital technology is used to improve marketing and customer communications as well as to increase productivity through improved business processes (Scottish Enterprise, n.d.). Pacific Islands Trade and Invest (PITI)'s Digital Tourism Programme has built nearly 300 websites and generated more than AUD 6.4 million in online bookings since 2012. Training workshops have also been held throughout the region on instant booking capabilities, third party distribution, social marketing and outsourcing (PITI, 2017).

Another sector with potential for growth and job creation is the Global Outsourcing Services (GOS) industry, which encompasses nearshoring and offshoring diverse types of services in IT, business processes (including voice or nonvoice-based), and knowledge processes. GOS are discussed as an industry with employment growth opportunities in Chapter 4.5.

ICTs may also be utilised to improve the quality of and access to government services. E-government strategies that entrench the right to information could bridge the governance divide in the region (Mistry and Rodrigues, 2005). The latest introduction of cloud technology (Cloud IT, 2017) may bring further opportunities to render government agencies more transparent, systematic and efficient.

With further increases in internet connectivity in the coming years, e-commerce, e-government and other strategies for tapping into the potential of ICTs for the creation of decent work and inclusive economic growth are likely to gain added importance.

3.1.2 Mobile phone coverage

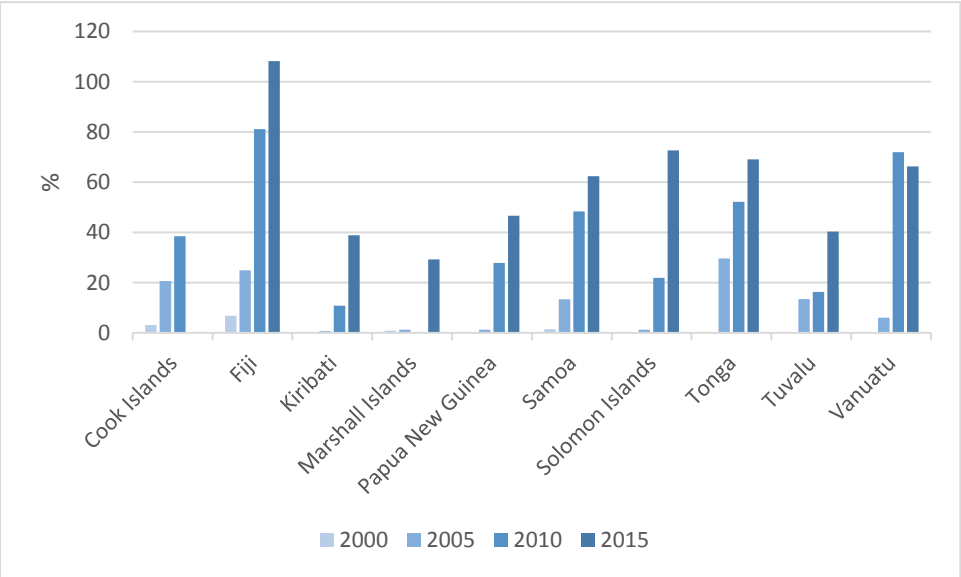
While affordability and network coverage remain major challenges, the unique mobile subscriber (i.e., single individual that subscribes to one or more mobile services) base in the region reached 4.1 million by the end of 2014, at an annual growth rate of 12.6% (see Figure 3.2 for related information) (GSMA, 2015). The rise of smartphones in the 2000s has seen mobile phones offer, in addition to telephony, a range of services such as text messaging, email, and internet access. Of particular importance in developing regions with a lack of alternative access technologies is that mobile phones bring internet access to previously unconnected populations. Indeed, research (Cave, 2012; Intermedia Europe, 2012; Minges and Stork, 2015) shows a rising trend in the use of mobile devices to access the internet and radio programmes in PICs. At the end of 2014, around 15% of the population across PICs were using mobile devices to access the internet, a figure that the GSM Association (2015) expects to more than double by 2020.

In 2014, mobile technology was directly and indirectly responsible for 4.7% of the region's GDP or USD 1.8 billion in value added terms, which, according to the GSM Association (2015), will increase to over 6% of regional GDP by 2020. In 2014, mobile technology is estimated to have directly and indirectly provided employment to over 25,000 people.

Mobile operators and other players in the region have also launched services to address social issues in areas such as health and education. For instance, mobile operators and governments are increasingly using mobile services to coordinate disaster preparedness, response and assessment

activities across the region (GSMA, 2015). In 2016 in Fiji, for the first time in the region, WHO began using mobile technology as part of a post-disaster Early Warning Alert and Response System following Tropical Cyclone Winston in 2016 (WHO, 2016).

Figure 3.2: Percentage of mobile-cellular telephone subscribers, 2000 to 2015



Source: ITU, 2017

3.2 Climate change and environmental degradation

PICs are among the most exposed countries in the world to natural hazards and climate change impacts. PICs are exposed to a wide variety of natural hazards, including cyclones, droughts, earthquakes, electrical storms, extreme winds, floods, landslides, storm surges, tsunami and volcanic eruptions, some of which have already been exacerbated by climate change. In the World Risk Index of 2016, four PICs are among the ten most at risk countries (including Vanuatu, Tonga, Solomon Islands and PNG) (UNU, 2016b). According to the World Bank (2016b), between 1950 and 2011, extreme weather-related events in the region affected some 9.2 million people, 10,000 reported deaths and damage costs of USD 3.2 billion. The losses caused by natural disasters in the region are estimated to far exceed those in most other countries in the world. Global Climate Risk Index 2014 (see Table 3.1) shows that several PICs including Solomon Islands, Tonga and Vanuatu face particularly high climate change risks.

Table 3.1: Global Climate Risk Index, 2014

Country	Rank
Solomon Islands	12
Tonga	17
Vanuatu	29
Samoa	74
RMI	79

PNG	81
Fiji	84
Kiribati	138
Palau	138
Tuvalu	138

Source: Kreft, et al. 2015

Biophysical risks of climate change include threats to freshwater supplies, submergence, coastal flooding, and coastal erosion (ADB, 2016b). Rates of sea level rise in Solomon Islands over the past 20 years are among the highest in the world (an average of 7–10 mm per year). By 2014, rising seas and coast erosion had completely submerged five of the country's 20 vegetated reef islands and reduced the land area of another six islands by more than 20% from their 1947 measurements (Albert et al. 2016). PICs are at risk of further such damage in the future.

Economic risks of climate change are equally significant. Climate change is predicted to increase the incidence of natural disasters, the socio-economic impacts of which are severe. For instance, Vanuatu was hit by Cyclone Pam in 2015 with total economic damages equivalent to 64% of GDP (ILO, 2015b). Severe flooding in Solomon Islands in 2014 killed 23 people, damaged key infrastructure, disrupted livelihoods and caused economic losses equivalent to 9.2% of GDP (Government of the Solomon Islands, 2014). Notably, recent research on disaster impacts (Noy 2015) shows that the most commonly used datasets greatly underestimates the burden of disasters for PICs.

PICs also face multiple **social risks** associated with climate change. Among the most significant are the pressures for large-scale migration and displacement of people. As a result of real or perceived environmental hazards, and real or perceived reduction in access to natural resources, migration increases due to climate change (ADB, 2012) (see also Box 2 on climate change and migration in Kiribati). According to the International Displacement Monitoring Centre (IDMC, 2015), Fiji, Tonga, Solomon Islands, RMI, Cook Islands and PNG were among the world's 12 Small Island Developing States with the highest displacement levels between 2008 and 2014. It is likely that as a response to climate vulnerability, more of the rural population of PICs will migrate to urban areas in search of better access to employment, healthcare, and education. UNESCAP (2015) estimates that by 2055 internal migration in Kiribati and Tuvalu will increase by 100% and 70% respectively, which will result in a population increase in South Tarawa by 72% and in Funafuti by 25%. ILO (2010c) warns that the urban centres in many PICs are unable to cater for increasing numbers of internal migrants and do not have the capacity to provide sufficient employment opportunities. In addition, climate-related international migrations are also expected to increase over the next years (ADB and ILO, 2017).

3.3 Population growth and urbanisation

Demographic developments have differed between PICs. The regional population is expected to double in less than three decades (World Bank, 2014a) with most of this growth occurring in Melanesia. Melanesian countries have large populations and, with the exception of Fiji, high population growth rates, while the percentage of the population in urban areas is comparatively low (see Table 3.2).

PNG's population has doubled over the last 20 years and is projected to reach 10 million by 2030. Vanuatu and Solomon Islands experienced population increases of 44.8% and 41.6% respectively between 2000 and 2015 (ADB, 2016a). PNG, Solomon Islands and Vanuatu also have some of the highest proportions of population under 25 years of age (58%, 58% and 57% respectively, and 46% for Fiji) and continue to have high population growth rates (UNFPA, 2014). Being land-rich, population densities in Melanesia are low compared to Polynesia and the atoll states.

The population in atoll states has increased rapidly and there is overcrowding in the urban centres on the main atolls. In Melanesia (except Fiji) and the atoll states, high population growth rates have resulted in a rapidly increasing working age population with youth unemployment being a major development challenge.

In contrast, in Polynesia and northern Pacific countries, population growth has been constrained by high emigration rates. The population in Cook Islands and FSM are not experiencing any growth.

Table 3.2: Population indicators, latest available

Country	Population estimate (2015) ('000)	Population projection (2030) ('000)	Population projection (2050) ('000)	Population density (2015) (persons/skm)	Annual population growth rate (2014) (%)	Urban population (%)
Melanesia						
Fiji	892	940	924	48	0.2	51 (2007)
PNG	7,619	10,057	13,240	18	2.1	13 (2000)
Solomon Islands	584	757	992	19.5	2.3	20 (2009)
Vanuatu	265	354	476	23	2.4	24 (2009)
Polynesia						
Cook Islands	21	23	25	79	0.0	74 (2011)
Samoa	193	210	241	70.0	0.6	20 (2011)
Tonga	106	121	149	160.1	0.3	23 (2011)
Atoll states						
Kiribati	112	142	178	135.3	2.1	54 (2010)
Tuvalu	10	11	11	417.0	1.1	57 (2012)
Northern Pacific						
FSM	104	118	129	145.7	0.0	22 (2010)
Palau	21	25	28	41	0.5	77 (2005)
RMI	52	56	67	303	0.4	74 (2011)

Source: UN, 2015 for population estimates and projections; UNFPA, 2014 for population growth rates and urban population, ADB, 2016a for population density.

Note: Population projections are based on the UN's median projections.

All PICs experience rural-to-urban migration, and the urban population grows more quickly than the overall population (ADB, 2012). The proportion of the population in urban areas differs considerably between PICs, ranging from a low 13% in PNG to 77% in Palau (see Table 3.2). While the urban population has increased in all PICs, the negative effects of urbanisation are felt most severely in the atoll states. Both Kiribati and Tuvalu face increasing overcrowding on their main atoll where more than half of the entire population resides and where population densities reach 2,500 per skm in Funafuti and 3,200 per skm in South Tarawa. Kiribati's population growth was high at 2.2% per annum between 2005 and 2010, reaching 4.4% per annum in the capital of South Tarawa (KNSO, 2012). The situation in South Tarawa is already desperate as a result of the impacts of unmanaged urbanisation, a continuing crisis of inadequate sanitation, a lack of solid waste disposal controls and ineffective freshwater management. All of these present serious threats to Kiribati's overall sustainability (Storey and Hunter, 2010).

Urbanisation has adverse environmental and social impacts. It leads to weakening community and family ties, and a gradual erosion of informal social protection systems. Urbanisation has also led to increased levels of crime and unemployment in Pacific towns including Port Moresby, Honiara and South Tarawa. On the positive side, urbanisation facilitates the realisation of economies of scale and specialisation, and makes it easier for governments to deliver services. By creating and taking advantage of the links with the agricultural economy, urbanisation can be a driver of rural development, stimulating growth and reducing inequalities within the local population.

3.4 Access to opportunities in overseas labour markets

Access as well as lack of access to opportunities in overseas labour markets has affected labour markets in PICs in various ways. Migration opportunities are very unequal between the PICs. Countries with migration opportunities such as Polynesia and the northern Pacific have benefitted from remittances that have led to a reduction in poverty in remittance receiving households and communities. Emigration has also resulted in lower population growth rates. At the same time, it has aggravated skill shortages especially if migration is permanent and is based on skills such as has been the case in Fiji.

Pacific Island governments have identified the aged care, hospitality/tourism and construction industry in major receiving countries as having potential employment opportunities for their populations. This potentially affects skill training provided in the PICs. In Kiribati, for instance, training has increasingly been directed towards areas of overseas demand. As a result of increased training to supply the overseas market, it is likely that the general level of training in the population will increase as more Pacific Islanders pursue training opportunities in order to migrate. Some of them will eventually not migrate, thereby increasing the skill level in their country. This process has been observed in other migrant sending countries such as the Philippines.

Over the past decade, Australia and New Zealand have introduced seasonal and temporary work schemes. The impacts of these types of short-term labour mobility have not been fully investigated.

In addition to the potentially positive effects of remittances and enhanced skills, there are potentially adverse social and economic effects through the absence of workers from families and communities. In contrast to permanent migration, the families of temporary and seasonal workers stay behind in the PICs.

Labour migration also affects PIC labour markets in that there is a large foreign workforce filling domestic skill shortages. This affects PIC labour markets in that it is expensive for companies and governments to employ skilled foreign workers, thus adding to the cost of operating in the region. As has been shown in the case of PNG, the presence of foreign workers also takes away opportunities from local workers and reduces the incentive of employers investing in the upskilling of the local workforce (Voigt-Graf, 2016b).

3.5 Labour law reform

In several PICs, labour law reform is ongoing and is included as a priority in the DWCPs (see Chapter 2.3.3). Taking PNG as an example, the country's comprehensive framework of employment and industrial relations law is outdated and currently under review, including the Employment Act 1978 and the Industrial Relations Act 1962. In Samoa, the legal framework for labour and employment has been strengthened and the labour law reform process is more advanced than in most other PICs. While the main focus in recent years has been on strengthening the legal framework for labour and employment, the challenges ahead include the drafting of subsidiary legislation and enforcement of the Laws and Regulations.

Progressing labour law reform will affect Pacific labour markets in various ways. In Samoa, for instance, new legislation affects both employers and workers as there are new provisions on fundamental employment rights including equal pay for equal work; no forced labour; prohibition of discrimination in employment on the grounds of ethnicity, race, gender, religion, sexual orientation, marital status etc.; right to bargain collectively; freedom of association, employment permits for noncitizens and conciliation and arbitration processes to settle disputes as well as for maternity and paternity leave entitlements. It also establishes the National Tripartite Forum that consists of Government, employers and workers representatives.

Labour legislation generally applies only to the formal sector and hence only a small proportion of the PICs' labour force. Generally, in most PICs including PNG enforcement of existing legislation has been poor and compliance with labour standards weak, particularly among small businesses and in the agricultural and logging industries. Jones and McGavin (2015) found that in many cases labour regulations were not enforced. Following the review of the legislation, there is need to improve enforcement of it including through reinvigorating the labour inspection systems.

4. EMPLOYMENT GROWTH OPPORTUNITIES

The environment in PICs is generally not conducive for business due to policies and regulatory arrangements that restrict foreign investment, land tenure regimes that make it difficult to use land for different economic purposes, poor infrastructure, small local markets, remoteness, and high utility

costs. In this chapter, the following sectors are identified as future growth sectors as they are either not adversely affected by remoteness or PICs have some unique comparative advantages: agriculture, forestry, mining, fishing, tourism, mining, green jobs and global outsourcing services.

Few reliable statistics are available on current employment in these industries. In addition, no employment projections are available[5]. It is neither possible to quantify present employment in industries covered in this chapter, nor make quantitative projections. Instead, for each industry, employment growth opportunities are discussed qualitatively based on available information.

4.1 Land-based resources

4.1.1 Agriculture

The share of agriculture, forestry and fishing ranges from 3.1% of GDP in Palau to 28.1% in Solomon Islands (see Table 4.1).

Table 4.1: Share of agriculture, forestry, fishing of GDP at current prices

	Year	Agriculture, forestry, fishing
Cook Islands	2015	8.4
Fiji	2014	9.5
FSM	2015	26.1
Kiribati	2014	22.9
Nauru	2012	4.1
Palau	2015	3.1
PNG	2013	19.4
RMI	2015	14.0
Samoa	2015	9.4
Solomon Islands	2014	28.1
Tonga	2014	17.1
Tuvalu	2012	21.9
Vanuatu	2014	25.2

Source: ADB 2016 Key indicators

[5] The only report that was found which includes quantitative projections is ILO's Statistical report of the Decent Work Decade 2006–15: Asia-Pacific and the Arab States (ILO, 2016c). Unfortunately, Australia and New Zealand are included in the group of PICs, distorting the numbers and making them useless for the Pacific Island region as defined in this report.

In most PICs, the majority of the labour force is engaged in subsistence agriculture and agriculture provides the greatest source of livelihoods for more than eight million people across the region (Morgan, 2013). There is limited scope for agriculture in atoll states like Kiribati, Tuvalu and RMI due to small land areas and poor quality of soils, with the only commercial agricultural product being copra.

Food production dominates the agricultural industry in PICs. Small holder farmers grow a large quantity and variety of fresh vegetables, root crops, nuts and fruits. Pacific women are heavily represented in agriculture. In PNG, for instance, women contribute more than 50% of the workforce, particularly in small holder agriculture. PNG's National Agriculture Development Plan 2007-16 acknowledges the importance of considering gender in agriculture.

Many small-scale producers today also produce cash crops. In the highlands of PNG, for instance, more than one million villagers rely on coffee for their cash income (Morgan, 2013). The cocoa industry alone provides livelihoods to 20% of households in Solomon Islands and 25% in Vanuatu (PARDI, 2011).

The two most diversified economies among PICs, Fiji and PNG, also have more diversified agricultural sectors. PNG's commercial crop output is concentrated in tree crops (coffee, cocoa, tea, palm oil). Macro-economic policies, including a 'hard Kina policy' pursued from independence to 1993, have been partly responsible for the gradual decline of the large estates and the associated decline in formal agricultural employment from 52,000 jobs in 1970 to 25,000 by the late 1990s. As a result, employment on small-holder farms has become increasingly important (Parker et al., 2012). Fiji's commercial agricultural sector is dominated by sugar. The withdrawal of preferential pricing for sugar in the European Union and the non-renewal of land leases have started a gradual demise of Fiji's sugar industry.

Agriculture offers more sustainable and broad-based incomes than the mining and tourism industries. During the ups and downs of PNG's mineral boom, for instance, agriculture has remained the mainstay of PNG's economy, providing employment to about 85% of its population, and contributing about 28% to the GDP and 18% by value to total exports (Intellecap, 2015: 30).

In regards to future developments in the industry, PICs have found it difficult to compete in the world market except for niche products (World Bank, 2009). Pacific small farmers cannot compete with low cost, high volume producers from other regions due to cost disadvantages as a result of small economies of scale, poor infrastructure, high input costs, frequent natural disasters, expensive transport, limited access to finance, poor technology and difficulties in accessing land under customary systems.

Morgan (2013) argues that the best strategy for PICs is to focus on high value, low volume agricultural exports. Given the tropical climate and the low level of pollution, PICs have a comparative advantage in the cultivation of high-value agricultural products including coconut oil and coconut products, natural cosmetics, preserved spices, organic crops and beef, indigenous nuts, tropical fruits and vegetables. In the case of these products, remoteness and limited globalisation present an advantage rather than an obstacle, as they can be branded and promoted as exotic, pure and environmentally friendly (Morgan, 2013; Connell, 2006).

Some PICs have already invested in agricultural niche markets with positive results. In Fiji, traditional knowledge and fine agricultural products were combined to set up a natural cosmetics industry that is now internationally renowned and competitive (Oxfam, 2010). The vanilla industry, already prosperous in PNG and Vanuatu, is at the centre of a fair trade and local development project in Tonga (Fox, 2014). In Samoa and Cook Islands, a number of companies collect fruit of the Noni tree and process it to create an organic health juice that is exported around the world. In some countries, coffee, cocoa, coconut oil and other products have achieved fair trade and / or organic certification which helps their international marketing efforts.

Maximising this scope of developing the agricultural; sector largely depends on the advancement of agricultural research and its effective application through the transfer of technology and innovation (FAO, 2013). For instance, while the delivery of information, technical advice and agricultural skills training for farmers in PICs has traditionally rested with national extension services, effective use of ICTs could significantly improve the quality of and access to these services. Some related initiatives have been implemented in Fiji. In 2013, Digicel Fiji launched Makete, a USSD-based32 platform for farmers that allows buyers and sellers access to live prices for crops. In 2014, Vodafone in Fiji launched mFarmacy in collaboration with the Western Charity Alliance, which provides information on farming practices to ensure that healthy produce reaches the market (GSMA, 2015).

Another strategy for agricultural development is to build linkages with the tourism industry which is discussed in Chapter 6.1. The main risks to future growth of the sector are associated with climate change and the need to maintain quality and consistency of supply, especially when products are destined for export or to supply the tourism industry.

Summary: Employment growth potential in agriculture

Agriculture is the main industry in terms of employment in the Pacific region. It absorbs the growing labour force, especially in the agricultural subsistence sector. There is potential for formal employment in agriculture to expand, especially if PIC governments pursue strategies to support agricultural niche products, use ICT for agriculture, and expand linkages between agriculture and tourism.

4.1.2 Forestry

In PNG, Solomon Islands, Vanuatu and Fiji, forests have been commercially exploited and forest industries are important contributors to the national economies. Forests are held under custom landownership, with governments regulating commercial forestry operations (ACIAR, 2012). In some countries logging has occurred at unsustainable rates and working conditions for many of the largely unskilled workers are poor.

In Solomon Islands, where about 79% of the land area is forest and half of this is primary forest, forestry has contributed double-digit shares to GDP and government revenues for several decades, but employs only around 5,000 unskilled workers, mostly at wage rates below the national minimum established for all other industries. Forestry methods are purely extractive as logs are exported and

there is no domestic timber processing industry other than mobile sawmills. Forests have been harvested at an unsustainable rate with the annual harvest of logs often exceeding one million m^3 (ACIAR, 2012).

In contrast, Fiji has had a successful plantation program, beginning with pine plantations from the late 1980s, and hardwood plantations, especially mahogany, in the early 2000s. Mahogany plantations in particular have great economic potential as Fiji is one of only few countries in the world where mahogany can be grown in plantations and Fiji has the world's largest mahogany plantations. However, at present there is only limited value adding to mahogany in country. The forestry sector contributed 0.6% to GDP and 3.8% to exports in 2014 (Voigt-Graf and Kanemasu, 2015).

In most countries, including PNG, the number of forestry workers is subsumed under the general category of agricultural and forestry workers and is therefore not known. In is known, however, that forestry and logging employs the largest number of foreign workers of any economic sub-sector (more even than the mining sector). In 2015, almost 2,400 foreign workers were employed in PNG's forestry and logging industry (ADB and ILO, 2017). Due to the remote locations of most forestry and logging operations, breaches of employment and work permit conditions are reported to be widespread.

Similar to agriculture, the future of Pacific forestry lies in high-value, non-perishable products. With PICs facing depletion of forest resources, as is already occurring in Solomon Islands, round log exports are likely to decline. Many high-value plantation timbers on the other hand are suitable for growing in the Pacific and offer opportunities for export. These include sandalwood, mahogany, rosewood and ebony (Morgan, 2013).

Summary: Employment growth potential in forestry

Forestry is of some relevance in Melanesia while being irrelevant in the smaller PICs. Even in the Melanesian countries, it does not employ large numbers of workers although exact figures are not known. Given the adverse environmental impact of the industry which in turns threatens employment potential in other industries, such as tourism, forestry is not an industry that should be relied on for future employment growth. Moreover, logging operations are located in remote parts of the PICs and working conditions are reportedly poor especially in PNG and Solomon Islands due to the inability of Labour Departments to enforce labour standards. The main possibility for employment growth in forestry is by localising the foreign workforce in the industry.

4.1.3 Mining

Amongst the PICs, PNG and Nauru are particularly dependent on mining exports (see Table 4.2). PNG exports petroleum, gold, and copper, while Nauru is dependent on phosphate exports.

Table 4.2: Share of mining and quarrying of GDP at current prices

	Year	Mining and quarrying
Cook Islands	2015	2.6

Fiji	2014	0.7
FSM	2015	0
Kiribati	2014	0.3
Nauru	2012	21.3
Palau	2015	0.4
PNG	2013	12.7
RMI	2015	0
Samoa	2015	0
Solomon Islands	2014	0.8
Tonga	2014	0.8
Tuvalu	2012	0.1
Vanuatu	2014	0.0

Source: ADB 2016 Key indicators

Since 1975 when PNG became politically independent, mining has been the country's leading sector. There are six major operating mines in PNG. Since the early 1990s, PNG has embarked on major oil and gas production projects. Mining, quarrying and petroleum accounted for 26.7% of PNG's GDP in 2011. Nonetheless, given the enclave and capital-intensive nature of extractive industries, the direct employment contribution of these industries is limited. In PNG, the 10,000 mark was only surpassed in recent years with the start of the construction phase of the LNG project. With the end of the construction and beginning of the production phase employment has declined (ADB, 2014). In addition, there are around 60,000 small miners in PNG, working informally.

Despite low employment numbers, the mining sector strongly influences the labour market. Through the high wages offered by mining companies, workers from other industries are attracted into mining, exacerbating skill shortages in these industries. The effect was most pronounced during the LNG construction phase (Voigt-Graf, 2016b) when many Papua New Guineans left their positions to work on the project which offered very attractive remuneration packages.

In addition to creating few jobs in the first place, global research has shown that the mining industry is highly susceptible to automation in the near future (ADB and ILO, 2017). While there is so far no evidence of large-scale job automation in PIC mining industries, over time more and more low-skilled jobs will become automated, and workers risk becoming unemployed (ADB and ILO, 2017). With PNG's mining sector heavily reliant on skilled foreign workers while many local workers are low skilled, local workers are more prone to automation.

Mining has had detrimental effects on the environment in PICs. Nauru has suffered an environmental catastrophe due to years of relentless phosphate mining. Mining in PNG has also led to environmental degradation. Discharge of mine waste has polluted local rivers and this in turn has adversely affected the livelihoods of many who depend on the rivers (ADB and ILO, 2017). While few women are

employed in mining, they are often disproportionately negatively affected by mining activities through agricultural land loss and environmental degradation (IFC, 2010).

Summary: Employment growth potential in mining

Of ILO's member States in the Pacific, only PNG has a sizeable mining and gas industry. The mining industry is capital intensive, with adverse environmental impacts and little direct employment generation. Given the future risk of increased automation in the industry, the mining and petroleum industries can generally not be relied upon for future employment generation.

4.2 Ocean resources

4.2.1 Fisheries

Fish production is common to all PICs. The main natural resource in atoll states are maritime resources in the countries' vast Exclusive Economic Zones (EEZs).

The region's fishery resources consist of oceanic or offshore, and coastal or inshore resources. Coastal fishing can be divided into small-scale commercial fishing for the domestic or export markets; subsistence fisheries, which support rural economies and are extremely important to the region's nutrition and food security; and industrial-scale shrimp fisheries, which only occur in PNG (Gillett, 2011). In general, coastal fishery resources are heavily fished and often show signs of overexploitation, especially in areas close to population centres and for fishery products in demand in Asia.

Offshore fishing is undertaken mainly by large industrial-scale fishing vessels. Approximately 1,500 of these vessels operate in the EEZs of PICs, mainly using purse seine, longline, and pole-and-line gear to catch tuna (Gillett, 2011). The EEZs form part of the migratory paths of Pacific tuna stocks which supply some 34% of the world's tuna catch each year. It is estimated that across the PICs about 16,000 workers are employed in tuna processing and industrial tuna fishing (ADB and ILO, 2017). While not distributed evenly, these benefits have been significant for some PICs, in particular Tuvalu, Kiribati and FSM (World Bank, 2016h). Government revenues from tuna, both in terms of licensing and fishing, are estimated at 36% of GDP in Tuvalu, 32% in Kiribati, and 10% in FSM (World Bank 2016b). The World Bank's Pacific Possible report on tuna develops a best case scenario for tuna fisheries in the year 2040, identifying the industry's potential economic contributions to PICs.

Women are also estimated to contribute 20-50% of fishing yields through informal labour. However a lack of analytical, gender-specific data has seen economic planners overlook women as stakeholders in fisheries, and donor and Government development schemes also focus on male-dominated commercial off-shore fishing (Parker et al., 2012).

Since 1992, Solomon Islands, Tuvalu, Kiribati, RMI, PNG, Nauru, FSM and Palau, commonly referred to as the Parties to the Nauru Agreement (PNA), have worked collaboratively to manage tuna stocks within their national waters. Under the so-called Vessel Day Scheme (VDS), vessel owners can purchase and trade fishing days in places subject to the PNA.[6] The purpose of the VDS is to constrain

[6] For more information, see the website of the Pacific Islands Forum Fisheries Agency at http://www.ffa.int/

catches of target tuna species, and increase the rate of return from fishing activities through access fees. The total allocation of fishing days is set and apportioned between Pacific Island members.

Although managing tuna fisheries fairly well, PICs have failed to capture more of the tuna value chains. Overall, less than 10% of the purse seine catch is processed locally and it is estimated that tuna fisheries value chains employ less than 0.5% of the region's labour force (World Bank, 2016h). In regards to future employment potential, an important aspect of the PNA is a crew requirement which was announced to be enforced from 2016 by progressively increasing waiver fees to vessels that do not have the required crew levels (Gillett, 2015). Although it could not be confirmed whether these requirements are already enforced, PNA's proposal to enforce mandatory crewing requirements would eventually lead to PNA nationals comprising 50% of purse seine crews.

Looking ahead, climate change and related disasters will affect Pacific fisheries by reducing yields, increasing yields variability, reducing profitability, and increasing the risks associated with fishing (ADB and ILO, 2017). There is already an alarming decline of the bigeye tuna stock, while fishing of other tuna stocks approaches limits recommended by scientists.

If PICs continue to manage tuna stocks in a sustainable way through regional cooperation, it is possible that the fishing industry, in particular the tuna industry, will play an increasing role in employment in many PICs. Ultimately, for PICs to benefit more from their rich tuna stocks, they will have to capture a greater share of the value chain by increasing their tuna processing capabilities.

Summary: Employment growth potential in fisheries

There is substantial potential for employment growth in fisheries, particularly on commercial purse seiners, as a consequence of enforcing PNA's mandatory crewing requirement. This will provide enormous benefits to PNA member countries with otherwise very limited domestic or overseas employment opportunities including Kiribati, Tuvalu, Solomon Islands and PNG.

4.2.2 Deep sea mining

Since the 1970s, exploration of the deeper sea floor has produced indications of widespread metallic mineral commodities in the Pacific Ocean and there are likely to be many lucrative opportunities to explore sea bed mining across the region (World Bank, 2016g).

Being a new industry where economic, environmental and social impacts remain uncertain, many risks are associated with sea bed mining. According to the World Bank, PIC Governments need to prepare for what seems to be the inevitable arrival of seabed mining (World Bank, 2016g). In its Pacific Possible Report, the World Bank (2016g) recognises that information gaps need to be filled before any informed decisions can be taken, and advocates precautionary measures.

Summary: Employment growth potential in deep sea mining

It is too early to say which path PIC governments will pursue in regards to seabed mining. It is therefore impossible to predict whether or not seabed mining will be an area of future employment growth.

4.3 Tourism

Tourism has developed into a booming industry, mainly as a result of the favourable natural conditions and cultural diversity in the region. Tourism is a major direct employer in the region (see Table 4.3). Since it creates strong multiplier effects through linkages with the local economy, a substantial number of jobs are created indirectly (ADB and ILO, 2017). In Vanuatu some 10,000 people are employed in the industry, which is equivalent to 14% of the employed population (World Tourism Organisation, 2016). In Cook Islands, 37% of the working population worked in the tourism and retail industries in 2011 (Government of the Cook Islands, 2015). The sector is also important for Fiji, where its share of direct employment 12%. In 2014, PICs received a record of 1.37 million overnight visitors (World Bank, 2016i). The increase in global demand for tourism and the economic power in Asian economies suggests there is further growth potential in this sector.

Table 4.3: Tourism's direct contribution to GDP and employment, 2016

	Share of GDP (%)	Share of total employment (%)
Fiji	13	12
Kiribati	9	8
Papua New Guinea	1	0.4
Solomon Islands	3	3
Tonga	6	6
Vanuatu	18	14

Source: World Tourism Organisation, 2016.

Palau's economy has been largely driven by tourism. Industries connected to tourism employed 29.4% of workers (15.2% in accommodation and food services, and 14.2% in wholesale and retail trade) (ADB and ILO, 2017). In October 2015, the Palauan Government converted 80% of its territorial waters into a marine sanctuary, prohibiting commercial fishing, oil drilling, and seabed mining. Tourism-related activities, such as diving and snorkelling, are possible alternative livelihoods for Palauans whose livelihoods are negatively affected by the creation of the sanctuary (ADB and ILO, 2017). There is also potential in Palau to expand the domestic share of the tourism value chain, including marketing and services and food production to meet tourism demand.

In contrast, tourism is negligible in PNG as a result of high costs and considerable security risks especially in the major urban areas. However, aware of the volatility of the mining sector in terms of output and employment, the PNG Government has declared tourism development a national priority, identifying PNG's rich culture and potential for eco-tourism as strategic assets (DNPM, 2016).

The industry is threatened by climate change and sea level rise, potentially resulting in land inundation and coral bleaching, an increased frequency of climate change induced disasters, and changes in biodiversity (ADB and ILO, 2017).

Despite these threats, tourism remains a major industry for the development in the region. The World Bank's Pacific Possible report on tourism (World Bank, 2016i) proposes four strategies to expand the tourism industry. These include targeting the Chinese visitor market, engaging more directly in the Pacific cruising product by basing large cruise ships in the islands, expanding the high-end resort market, and capitalizing on the ageing population in key origin markets by developing a long-stay visitor opportunity for retirees. These opportunities have the potential to deliver substantially higher revenues and more employment opportunities.

One area to exploit are the linkages between tourism and agriculture (FAO, 2012), as these are the two productive sectors which offer the best opportunities for employment growth in several PICs.

Summary: Employment growth potential in tourism

The tourist industry is already a major employer in the Pacific region with enormous potential for future employment growth, given the industry's global growth and the unique characteristic of the PICs. There is also potential to expand the domestic share of the tourism value chain and to explore linkages between tourism and agriculture and thereby increasing indirect employment.

4.4 Green jobs

Given the exposure of PICs to climate change risks, there are likely to be short-term effects of climate change where jobs will be lost in industries directly affected by climate change, and new ones will be created in the replacement industries. For instance, some agricultural products will no longer be viable and will be replaced by others. In the long run, however, climate change will induce innovation and development that will create growth and new job opportunities (ADB and ILO, 2017). In general, there is insufficient awareness of the implications of climate change in the region, and many PICs lack sector-specific climate change adaptation and mitigation strategies.

Comprehensive research on green job creation in the region is not available. However, according to an ILO study (2010c) on Fiji, Solomon Islands, Samoa and Vanuatu, four economic sectors have the most potential for green job creation. These are: (a) **tourism**, though sustainable tourism, eco-tourism and village-based tourism with Fiji and the Solomon Islands being primary examples; (b) **renewable energy** with the implementation of solar energy systems, which is again observed in Fiji and the Solomon Islands; (c) **food production**, in light of the region's fertile agricultural land and the large proportions of rural population; and (d) **recycling and waste management**, where opportunities exist for implementing programmes that employ a significant number of people. The study also stressed that the impact on the creation of green jobs from climate change adaptation and mitigation would be different for each of the four case study countries and that the loss of jobs and the absorption capacity of laid off workers by other sectors would also differ between PICs.

Preventive and remedial measures to limit and reduce the impact of climate change and natural disasters also have the potential to create jobs through public projects such as investments in natural disaster resilient infrastructure. For instance, the Tuvalu Coastal Adaptation Project which will be funded by the Green Climate Fund with USD 36 million can be expected to create many employment opportunities for Tuvaluans.

Given that there is no guarantee that the gains of green growth can be evenly distributed, green growth has to be complemented by inclusive policies to make sure that all segments of the population and labour force benefit from it.

Some attempts have already been made to implement green technologies, such as solar systems, as a means of electricity in rural areas of Fiji and Solomon Islands, leading to green job creation. However, generally among policy makers there is lack of awareness about green jobs.

In the past, a lack of skilled workers was one of the reasons why many green projects have not been implemented successfully. For instance, the ADB funded Sanitation, Public Health and Environment (SAPHE) project in Kiribati began in 1999 with an overall objective to improve the health and well-being of people in South Tarawa through improvements to the water supply, sanitation services, solid waste disposal and environmental conservation. Shortly after the project's completion follow-up studies showed that the advancements made were already in disrepair due to poor design, lack of maintenance, and lack of skilled workers to operate and implement equipment and manage new processes (Storey and Hunter, 2010).

Summary: Employment growth potential in green jobs

There is considerable potential for green job creation, especially in tourism, renewable energy, food production, recycling and waste management. In addition, preventive and remedial measures to limit and reduce the impact of climate change and natural disasters have the potential to create jobs through public projects.

4.5 Global outsourcing services

Another sector with potential for growth and job creation is the GOS industry. A World Bank study (Beschorner et al. 2015) argued that the industry had significant potential in Fiji, Samoa and Tonga due to their comparative advantages of having some of the youngest workforces in the world, the ease of doing business, and nearshoring opportunities with Australia and New Zealand. Fiji already hosts major offshoring operations for ANZ Pacific Operations (with 400 workers) and Mindpearl (660 workers). Fiji also won the European Outsourcing Association's Offshoring Destination of the Year Award in 2014 (Lewis, 2014).

Creating employment in the GOS industry could also bring about other socioeconomic benefits such as knowledge and technology transfer, local innovation, jobs for youths and positive social change for women. The World Bank study noted that Fiji is significantly more ready than Samoa or Tonga for GOS industry development, especially in terms of connectivity, infrastructure, and existing operational experience (Beschorner et al., 2015). The World Bank's optimistic estimate of the industry's direct jobs potential for Fiji is 5,809 jobs; even a conservative estimate of 1,936 jobs is more than the combined total of the country's agriculture, forestry, and fishing industrial sectors (Beschorner et al. 2015). Notably, Australia and New Zealand offer significant GOS markets, estimated to be worth USD 31 billion per year. On a more cautious note, the GOS industry also faces growth in technology automation (e.g. through voice recognition technology) which could limit future job prospects. This is already a growing concern for established countries like India and Philippines.

Summary: Employment growth potential in GOS

There is considerable potential for job creation in GOS, especially in PICs with good internet connectivity and infrastructure.

4.6 Overseas employment

Polynesian countries in particular have sizeable diaspora communities overseas and permanent migration specifically to New Zealand will continue on the basis of family reunification and under the Samoa quota and PAC scheme. Over the last ten years, additional seasonal and temporary labour migration opportunities have opened up and the existing agricultural schemes are expected to expand further. Opportunities in additional occupational areas and new destination countries are likely to increase. In addition to unskilled seasonal agricultural workers in Australia and New Zealand, temporary workers from Kiribati, Nauru and Tuvalu can access work in tourism and aged care in northern Australia under the NAWPP. Opportunities for fisheries workers from Kiribati and Tuvalu and for construction workers from Fiji, Samoa and Tonga will soon become available in New Zealand.

In addition, PIC governments have increasingly considered targeting the aged care market in Australia and New Zealand and other Pacific Rim countries with ageing populations including Japan, Korea, Taiwan, Canada and the US. Another sector with potential is the hospitality and tourism industry in Australia, New Zealand and within the PIC region such as in Palau and Cook Islands where migrant workers are already engaged. There are several trades-based occupations including in construction with skill shortages in Australia and New Zealand. There are also widespread skill shortages in PNG's construction industry that could be filled from within the PIC region.

In addition to moving overseas, there is potential to replace foreign workers within the region either by local workers or by workers from other PICs. In Palau, limiting the presence of foreign workers has become a key component of Palauan labour law (ADB and ILO, 2017). In 2014, 4,330 foreign workers accounted for 41.7% of total employment in Palau. The Skilled Palauan Workforce Investment Act (SB 9-46) signals the country's commitment to developing TVET skills in the country as a step towards localisation. While Fijians already work in several PICs in different areas, there is generally limited intra-regional labour mobility due to PICs facing skill shortages in similar technical areas, a lack of economic integration in the region, the role of recruitment agencies that tend to recruit in Asia and Australia, a lack of a qualifications recognition framework and high intra-regional travel costs.

Summary: Employment growth potential in overseas labour markets

There are growing employment opportunities in agriculture, aged care, tourism/hospitality and possibly construction in the Pacific Rim countries. Moreover, employment opportunities for Pacific Islanders exist within the region itself through a process of localisation or regionalisation of positions currently held by workers from outside the region.

5. KEY CHALLENGES

5.1 Labour force characteristics

PIC labour markets are challenged by large proportions of informal and subsistence activities, high youth unemployment rates, gender disparity and unequal access to migration opportunities.

The **dominance of the informal and subsistence economy** poses a challenge to sustainable development due to the vulnerability of informal and subsistence workers and the lack of formal social security systems for those engaged in these activities. At the same time, the informal economy also has the potential to contribute to future employment growth especially if jobs become formalised and more productive. With the majority of Pacific Islanders engaged in informal or subsistence activities, expanding income generation opportunities for subsistence and informal workers is of utmost importance. This can be achieved by helping informal businesses get stronger and grow, thereby facilitating their transition to formality.

In economies where surplus labour is absorbed relatively easily in subsistence and informal activities, official unemployment figures hide underemployment and employment under precarious working and social conditions. However, unemployment figures can be used to indicate differences in labour market performance between different population groups within each country. They show that youth and women are more likely to be unemployed and young women are particularly affected by unemployment. Youth unemployment rates are considerably higher than general unemployment rates in all PICs. Young women face the highest unemployment rates in all countries except for Cook Islands. In Fiji for instance, the unemployment rate is 7.7%, rising to 18.2% for young people and as much as 23.9% for young women.

The number of school leavers far exceeds the number of new jobs and training places in all PICs, leaving the majority with no alternative but to join the informal and subsistence economies. **Youth unemployment** is high and a growing number of youths are neither in work nor training. Areas of continuing and future challenges for youths in the Pacific include education and skills development, transition from school to work, labour migration and gender gaps in the workplace. Young people need help to find decent work opportunities, either through own entrepreneurship or through employment in the formal or informal economies. With few opportunities available in the formal economy, entrepreneurship training and skill training for the informal economy are the best strategy to assist them access work opportunities.

Gender gaps are apparent not only in unemployment but, as shown in Chapter 2.2, also in labour force participation rates (with women less likely to participate in the labour force), in wage levels (with women earning less than men) and in opportunities to work overseas.

In Melanesia (except Fiji) and Kiribati, the challenge of employment opportunity creation is exacerbated by the fact that there are limited **emigration** opportunities. Polynesian countries have experienced high emigration rates, which has reduced youth unemployment, while also exacerbating skill shortages. At the same time, there is a high number of **foreign workers** in the region particularly in managerial, professional and technical positions.

Summary of key challenges in terms of labour force characteristics:

- Dominance of informal and subsistence economies;

- Gender gaps;

- High youth unemployment;

- Unequal access to migration opportunities;

- Large number of foreign workers in the region.

5.2 Skill shortages and skills development

As analysed in Chapter 2.2.4, there are widespread shortages in technical, managerial, professional, entrepreneurial and generic workplace skills in all PICs. TVET in particular lacks quality and relevance and rarely responds to labour market demands. Training systems are characterised by a lack of industry input, outdated course contents and equipment, poor quality of trainers, and the provision of training for the sake of training rather than being focussed on outputs and labour market needs. Region-wide there have been few tracer studies in training institutes and the relevance of specific training and the occupational outcomes of graduates of specific training institutions are largely unknown (see Voigt-Graf and Kanemasu, 2015 for Fiji, Voigt-Graf and Odhuno, 2015 for PNG). There is considerable variation in the progress that individual PICs have made over the last decade in improving their TVET systems.

Upgrading the skill level of the workforce and matching it with labour market demand including in growth sectors and new technologies is a key challenge in all PICs (see also Chapter 5.3 below). There is also a widespread lack of generic workplace skills, resulting in disadvantages in the domestic and overseas labour markets.

In most PICs, the number of school leavers far exceeds the number of training places in higher education institutions or technical institutes, as well as the number of job openings. Hence, many young Pacific Islanders enter the labour market without skills needed to find formal employment.

Entrepreneurial skills are also lacking and have negatively impacted particularly on small and medium enterprises in the formal economy as well as in the informal economy. The traditional communal way of life in the Pacific means that many Pacific Islanders lack an entrepreneurial outlook and business-mindedness, making entrepreneurship particularly challenging. With the majority of Pacific Islanders working in the informal economy where most school-leavers have to find work, entrepreneurship training for the informal economy should be a top priority, but remains scant

The challenge for PIC policymakers is to direct training efforts into skill areas required by growth sectors, especially those identified in Chapter 4.

Summary of key challenges in terms of skill shortages and skills development:

- Lack of quality and relevance of TVET;

- Lack of links between labour market demand and training;

- Low workforce skills in communication and information technology;

- Lack of entrepreneurial skills;

- Shortcomings in generic workplace skills;

- Lack of tracer studies indicating relevance of training provided in training institutions.

5.3 Technology and innovation

In the light of the unique development challenges in PICs, there is great scope for considering ICT and other technological innovations for job creation and sustained and inclusive economic growth (Beschorner et al., 2015). Promotion of e-commerce such as digital tourism can help improve productivity, entrepreneurship, financial intermediation, innovation and transaction costs. In addition, as noted in Chapter 4.5, among the ICT-assisted industries with particular potential for PICs is the GOS industry. Creating employment in the GOS industry could also bring other socioeconomic benefits such as knowledge/technology transfer, fostering local innovation, creating jobs for youths and driving positive social change for women.

Furthermore, e-government offers scope for enhancing access to and quality of government services especially in remote areas and islands. Despite extensive aid projects and e-government capacity-building initiatives, adoption of e-government remains low in the region due to a lack of ICT infrastructure and policy and inappropriate cultural models of e-government derived from industrialised countries (Cullen and Hassall, 2013). According to the UN E-government Development Index 2016, PICs have low levels of e-government readiness and uptake. Fiji has the highest ranking in the region (at 96), and PNG the lowest, ranked at 179 (see Table 5.1).

A key challenge therefore is for PIC governments and businesses to make necessary infrastructure investments and policy arrangements to maximise the potential of ICT to create employment and business opportunities.

Table 5.1: UN E-government Development Index, 2016

Country	Rank
Fiji	96
Kiribati	145
Palau	111
PNG	179
RMI	156
Samoa	121
Solomon Islands	164
Tonga	105
Tuvalu	151
Vanuatu	149

Source: United Nations, 2016

Importantly, while technological innovations offer significant opportunities, governments must ensure these enhance welfare. There are wide disparities in ICT development and access between and within PICs (UNESCAP, 2016). Some of the smaller PICs are particularly challenged by capacity and resource constraints (Network Strategies 2010). Affordability presents a major obstacle for those at the bottom of the income pyramid. The cost to connect is even higher for women in these groups due to the gender wage gap (Alliance for Affordable Internet, n.d.).

Given the digital divide and the fact that PICs are behind most other regions in the world, it is important for PICs to gradually catch up with the rest of the world. As recent research indicates, ICTs are currently "used in varied ways with varying skill" in the region (Harris et al., 2016, p.55). In order for more PICs to benefit from increased employment and business opportunities in this area, skill levels of the workforce need to be upgraded and matched with the demand arising from new sectors and technologies.

Finally, it is also important to note the potential negative impacts of innovation and technology, especially automation, on labour markets. Most workers in PICs are employed in low-skilled and medium-skilled jobs, which are more susceptible to automation than highly skilled jobs. The World Economic Forum (2016) predicts that more than 5.1 million jobs will be lost between 2015 and 2020 due to robotics and automation. While there is no current evidence of large-scale job automation in PICs, existing global research and trends point to the mining and garment industries as particularly susceptible to automation.

The mining industry, which is of key importance in the economies of Nauru and PNG (and to a lesser extent Solomon Islands and Fiji), employs a considerable number of expatriate workers in managerial and professional positions while most low-skilled or medium-skilled positions are held by local workers. According to a recent study (cited by ADB and ILO, 2017), as many as 96% of all mining jobs stand the chance of being automated. The garment industry of Fiji employs about 8,000 workers. A recent report by the ILO (Chang et al., 2016) focusing on the ASEAN region has found that textiles, clothing, and footwear industry is highly susceptible to automation. With advancements in technologies (e.g., 3D printing, virtual fitting, automated sewing, cutting machines, computer-aided designs), most of the jobs in operations are becoming obsolete. The Fiji garment industry will need to invest in upgrading the skills of its workforce to keep up with the rapidly changing skills requirements and to attract new investment from multinational brands seeking quick turnover, high performance clothing, and high-tech footwear (ADB and ILO, 2017).

In short, changes in the workplace brought on by innovation and new technologies pose both significant opportunities and challenges for the creation of decent work and inclusive growth in PICs.

Summary of key challenges in terms of technology and innovation:

- Need to identify strategies to maximise the potential of ICT-assisted industries (including e-commerce and GOS) and e-Government;

- Considerable digital divide within and between PICs;

- Low skills in communication and information technology;

- Possibility of job losses due to automation, especially in the mining and garment industries.

5.4 Labour governance

A lack of reliable labour market data continues to hamper evidence-based decision-making by governments in relation to employment issues across the region. Most PICs rely on their five- or ten-yearly Census for labour market data which provide very little detailed information.

In most PICs, the capacity of Labour Departments to implement and enforce policies and standards is insufficient. This regularly results in the denial of rights at work. Employment goals and decent work goals are included only in a small number of national development plans and relevant national policies. In many PICs labour law reform processes have not been completed. In addition, workers' unions are weak in most PICs with considerable diversity in regards to tripartite bodies in the PICs and several PICs.

Summary of key challenges in terms of labour governance:

- Lack of labour market data;
- Insufficient capacity of Labour Departments;
- Weak trade unions;
- Incomplete labour law reform process.

5.5. Inequality

Despite the fact that most PICs are among the highest per capita aid recipients in the world and have high remittance inflows, all PICs except for Vanuatu have poverty rates of over 20% (see Table 5.2). In PNG, 40% of the population is poor according to national standards. However, poverty figures must be taken with caution as most data is outdated, and national averages hide regional differences, which are considerable given that many PICs comprise scattered archipelagos. Poverty in PICs is associated with lack of access to goods, services and employment opportunities (Prasad, 2008) and residents living in remote areas generally have less access to these. In some outer islands of Fiji and in Kiribati the percentages of the population living below the national poverty line were found to be significantly higher than national averages (AusAID, 2012; Umapathi et al., 2011).

Table 5.2: Poverty and inequality measures, latest available estimates

	% of population living below national poverty lines	Year	GINI index (World Bank estimates)	Year
Fiji	28	2013	43	2008
Kiribati	22	2006	38	2006
FSM	30	2005	61	2000
PNG	40	2009	44	2009

Palau	25	2006	n.a.	n.a.
Solomon Islands	23	2005	46	2005
Samoa	27	2008	43	2008
Tonga	23	2009	38	2009
Tuvalu	26	2010	n.a.	n.a.
Vanuatu	13	2010	37	2010

Source: World Bank, 2016a; FIBoS, 2015.

There is a lack of data on inequality in PICs. Most Gini coefficient estimates date back to the 2000s. Estimates in Table 5.2 show that Kiribati, Tonga and Vanuatu had lower levels of inequality than the other PICs. Across the region, inequality and poverty have been exacerbated by the current transformation processes occurring in PICs. As discussed above, internal migration and urbanisation are posing challenges to the traditional social protection systems, often also leading to the most vulnerable components of households being left behind and that pockets of poverty increasing in the cities.

Despite considerable proportions of the population living below the poverty line, some PIC governments spend a very small proportion of GDP on public protection and health (see Table 5.3).

Table 5.3: Public social protection expenditure and health expenditure, latest available year (% of GDP)

	Total public protection expenditure and health expenditure (% of GDP)	Year
Fiji	3.4	2010
Kiribati	10.1	2011
Palau	15.8	2010
PNG	4.4	2012
RMI	24.0	2010
Samoa	5.0	2012
Solomon Islands	8.3	2010
Vanuatu	5.4	2010

Source: ILO, 2016c

Although no reliable data are available, the incidence of low-paid work is widespread across the region in both the formal and informal economies. A recent study in PNG found that employees in the informal economy were paid the lowest wages, generally below the minimum wage, and that many women and youth were among those paid the lowest wages (Jones and McGavin, 2015). While the number of working poor in the PICs is unknown, it has been found that employment in the formal

economy does not guarantee an escape from poverty (AusAID, 2012) and that many workers in the formal economy have to complement their income with informal activities to provide their families with adequate livelihoods, especially if they have many dependants. The situation of the working poor in the formal economy is likely to be exacerbated in Kiribati and Tonga that do not have a minimum wage as it has been shown that the existence of a minimum wage is highly relevant for workers' welfare. In Kiribati, there is a provision for a minimum wage at the discretion of the Labor Ministry, but it has never been implemented. Tonga does not have a minimum wage, but has proposed to introduce one (ADB and ILO, 2017).

. Work in the informal economy is often associated with low and unstable incomes, lack of access to employment related protection and underemployment (ADB, 2014).

5.6 Social protection

PICs are performing relatively well in terms of social development as reflected in international outcome indicators, showing progress in the areas of health and education in many countries. In regards to social protection, rapid social and economic changes and migration have started to break down the way of living and community values including traditional social protection systems. In increasingly urbanised settings, informal protection systems have gradually been eroded.

Formal protection systems potentially have two crucial roles: to provide an adequate degree of security for those who work and an adequate degree of security for those who cannot or no longer work. In the PIC region, social protection mechanisms are largely restricted to the first role and cover only a fraction of the population which generally consists of those who are employed in the formal sector and are already better-off. In Samoa, for instance, formal sector workers are protected against some loss of income due to age, death and disability through the provisions of the Samoa National Provident Fund (SNPF), Senior Citizens Benefits Fund and Workers Compensation and Accident Insurance.

Throughout the region, it appears that high remittances and overseas development assistance have crowded out governments' expenditure on social protection and social assistance in terms of governments not assuming the responsibility to introduce or maintain adequate social protection systems. Social protection has to become a national responsibility. In some PICs, health services and primary education are provided free of charge although their quality is often poor especially in rural areas and remote islands, and many Pacific Islanders have to travel far to access even the most basic services. Region-wide, affordable healthcare is accessible to only around 20% of the population.

While some forms of active labour market policies can be found in the region, there are no unemployment insurance schemes and the unemployed have to rely on the informal economy for work or on family support. Despite high poverty incidences in the region, there is a lack of support programs for the most vulnerable including informal workers and youth. In Samoa, as in most other PICs, an important challenge looms for the government to extend social security to the informal economy, particularly to women who live in rural areas and to self-employed workers, many of whom are also women in the urban informal sector. In the past, extended families have played a central role in providing social protection.

Summary of key challenges in terms of social protection:

- Social protection mechanisms restricted to workers in the formal economy;

- Some PICs without minimum wage legislation;

- Traditional systems of social protection gradually being eroded.

5.7 Climate change and environment

The labour markets in the PICs are especially vulnerable to climate change due to the fact that agriculture, tourism, and fisheries, three of the sectors most vulnerable to climate change, provide most of the employment (ADB and ILO, 2017). Agriculture is expected to be affected by climate change in a number of ways. For coastal communities, food production may be affected by land erosion, saltwater contamination of groundwater and estuaries, cyclones and storm surges, heat stress, and drought (Barnett, 2011). Climate-induced disasters may also critically damage infrastructure that supports food production. A recent report by ADB and ILO (2017) stresses that most agricultural workers in PICs are not skilled for non-farm activities, which may result in large rural unemployment in the case of agriculture being adversely affected by climate change. According to the ILO (2014b), climate change can alter tourism seasonality by increasing demands for casual workers while reducing full-time employment. Many tourism companies are also likely to lay off workers due to increasing costs of cooling, insurance, and disaster recovery. Labour demand in the fishing supply chain may also witness variation due to changes in fisheries productivity. Fishing communities may be impacted by productivity loss and by climate-induced disasters damaging their assets and habitats (ILO, 2014b).

Across the region, most workers are in informal employment, which exacerbates their vulnerability to climate change. Also of concern is that both women and youth are heavily employed in the informal economy, often in poor working conditions, which increases their vulnerability to the impacts of climate change (ADB and ILO, 2017).

In this context, mitigating the impact of climate change by supporting the green economy is of critical importance not only as a strategy for preserving natural capital but also because it can create additional employment, improve resource efficiency and provide opportunities for poverty reduction. Although PIC economies are already relatively 'green' in terms of carbon emissions and usage (PICs produced only 0.03% of global CO2 emissions in 2010) (UNESCAP, 2012), there is considerable scope for green economic policies.

An ILO study (2010c) highlighted challenges in regards to green job creation, including: (a) lack of knowledge of potential green jobs; (b) lack of local capacity to develop sector-specific climate change adaptation and mitigation strategies; (c) lack of communication between governments and line ministries; and (d) lack of data and documentation of green growth-led activities in the region.

Given the significant implications for the region, there is great scope and urgent need for comprehensive empirical research on the current status, challenges and future prospects of climate change mitigation and adaptation, environmental protection and green job creation initiatives in PICs.

Summary of key challenges in terms of climate change and the environment:

- High degree of vulnerability of major industries (agriculture, fisheries, tourism) to climate change;

- Informal workers, women and youth are the most vulnerable population groups;
- Need to support the green economy and green job creation.

6. RECOMMENDATIONS

As summarised in Chapter 5, PICs face various challenges in regards to employment growth. In this chapter, recommendations are made in regards to the key challenges identified above. These recommendations are of a general nature and will need to be refined and adjusted to the situation of the individual countries. Goals, outputs and action plans need to be developed as part of country programmes based on tripartite consultations. DWCPs could be developed in line with this FoW report, the Bali Declaration, tripartite constituents' needs, and progress towards the 2030 Sustainable Development Agenda.

6.1 Domestic employment creation

Being negatively affected by remoteness and high transport costs, PIC economies have few comparative advantages in the world market. Agriculture is the main sector in terms of employment creation, providing livelihoods to the majority of Pacific Islanders. It is necessary to continue and increase research and extension services in order to increase the productivity of the millions of small holders and subsistence farmers. There is growth potential in high value, non-perishable, niche products for export. As argued in Chapter 3.1, maximising the potential of agriculture depends on the advancement of agricultural research and its effective applications through the transfer of technology and innovation (FAO, 2013). Policies aimed at introducing and expanding the production of such products and to enhance linkages between agriculture and the tourism industry are likely to positively affect employment in agriculture.

Similar to agriculture, the future of Pacific forestry lies in high-value, non-perishable products. With PICs facing depletion of forest resources, as is already occurring in Solomon Islands, round log exports are likely to decline. Many high-value plantation timbers on the other hand are suitable for growing in the Pacific and offer opportunities for export. The sector offers potential for employment growth if it is supported by governments through research, policies and extension services. At present, work conditions in forestry are often poor which is partly due to Labour Departments unable to enforce labour standards in the remote locations where most logging operations are located. If employment in forestry is extended, it is very important to ensure decent work conditions in the industry.

In regards to employment creation in fisheries, the best strategy is to enforce mandatory crewing requirements under which foreign vessels fishing in PNA waters are required to employ a certain proportion of workers from PNA countries, or be penalised with higher fees. This would create employment opportunities particularly in PICs where there are few domestic employment opportunities, such as in Kiribati and Tuvalu. PIC governments should also explore the potential to enhance processing capacity in the region in regards to their major fisheries products.

The tourism industry faces challenges associated with the impacts of climate change, difficulties in access, declining competitiveness with dated facilities, limited demand, and constrained marketing.

This is coupled with a lack of effective data for decision making. The World Bank's Pacific Possible report on tourism (World Bank, 2016i) proposes strategies to expand the tourism industry which would create additional employment opportunities in the industry that were discussed in Chapter 4.3. For long-term, sustainable growth of the tourism industry, the PICs will need to overcome their dependence on Australia and New Zealand as the principal markets and introduce strategies to attract more and higher yielding tourists. This will require concerted, long-term market development that emphasizes yield, rather than volume.

One area to exploit is to actively foster the linkages between tourism and agriculture (FAO, 2012), as these are the two productive sectors which offer the best opportunities for inclusive employment growth in several PICs. The promotion of linkages between them would help create additional economic and employment opportunities, build resilience in rural communities and enhance sustainable development in both sectors. In all PICs, development in the agriculture and tourism industries have been pursued separately and policies and institutions have not been geared toward fostering linkages between the industries. One strategy to address this is to introduce policies aimed at directing a larger proportion of tourist spending towards locally produced goods and services. The tourism food sector offers an important potential demand point for agricultural produce, and the highest value products used by this sector are meats, dairy products, seafood and beverages. Local producers are currently only able to supply seafood in considerable quantities while their capacity to meet the needs of the tourism industry for meats, dairy products and beverages remains limited due to the inconsistent quality and quantity of supplies (FAO, 2012). In several PICs including Samoa and Tonga, local products are at present not extensively promoted in tourist outlets (FAO, 2012).

In a region prone to natural disasters and already affected by climate change, employment growth opportunities lie in the areas of green jobs, e-commerce and ICT-integrated businesses, such as Global Outsourcing Services. To realise this potential, PICs should make necessary infrastructural investment and policy arrangements, take steps to overcome the digital division within and between PICs by improving access to and affordability of ICTs for all, strengthen ICT skills, identify strategies to harness the opportunities presented by increased internet connectivity, explore the scope for e-government facilitating service delivery in remote areas and remote islands, and address negative impacts of innovation and technology, especially automation, on the labour markets.

Given the particular challenge of youth unemployment, employment creation must focus on youth. In PNG, the World Bank runs the Urban Youth Employment Project in Port Moresby targeting disadvantaged urban youth between the ages of 16 and 35, which attracted 11,860 young people between 2011 and 2016, who gained work experience and received training. 21% of the Urban Youth Employment Project participants placed on work attachment were in paid employment 15 months after completion of the work attachment (ADB and ILO, 2017).

Given that the majority of Pacific Islanders will continue to work in the informal and subsistence economies, Governments have to support the development and growth of small and micro enterprises through policies, skill development and incentives with a view to strengthening informal businesses and facilitating their formalisation. Special focus has to be put on supporting the development of an entrepreneurial culture among traditionally disadvantaged categories of workers including youth, women, and persons with disabilities. Targeted efforts are needed to ensure decent work conditions

for these disadvantaged groups as well as for migrant workers through the elimination of non-standard forms of employment that do not respect fundamental principles and rights at work, and are not in accordance with elements of the Decent Work Agenda. Given the precarious nature of work conditions in the informal economy, measures facilitating the transition of workers from the informal to the formal economy are needed.

Key recommendations for domestic employment creation:

Policies aimed at sustainable job creation in growth sectors, with focus on the agricultural, fishing and tourism industries;

Encouraging linkages between different economic sectors especially agriculture and tourism;

Focussing agricultural research and extension on supporting the production of high value, non-perishable, niche products;

Exploring the potential to add value to agricultural, fisheries and logging products by building processing capacity in PICs;

Policies aimed at improving work conditions in the forestry industry;

Exploiting the potential that lies in actively pursuing employment growth in Green Jobs and GoS;

Supporting the development and growth of small and micro enterprises through policies, skill development and incentives;

Supporting the development of an entrepreneurial culture especially among youth and women;

Facilitating businesses to transition from the informal to the formal economy.

6.2 Skills development

In order to raise the skills level in the Pacific region, the delivery of TVET has to be improved and aligned with labour market requirements. This can only be achieved if collaboration between training institutions and the private sector is increased. The recommendations of a regional technical assistance project which analysed the TVET systems in 13 PICs some ten years ago (ADB and PIFS, 2008) still hold today. It argued that quality skills development required occupational standards, sufficient inputs, and measurement of outputs against those standards. It was recommended that the development of occupational standards should be pursued by designing national qualifications frameworks which focused on outputs (competencies). Information on the impact of training and labour market outcomes should be gathered through tracer studies of graduates and should inform training policies, resource and scholarship allocations. While progress has been made towards developing national qualifications frameworks, other shortcomings have not been addressed.

Institutions for skills development, certification and valuation have to be responsive to employers' and workers' needs and have to be established through social dialogue. PIC Governments need to develop strategies to encourage the private sector to invest in training and skills development and address the situation where many employers invest little in training and regard training expenses as costs rather than investments.

One consequence of the small size of PIC labour markets is that most PICs only require a small number of skilled workers in any particular skill area and there is the risk of local training provision quickly turning skill shortages into a skill oversupply. Small islands like Tuvalu might only need one or two persons with a specialised skillset. Providing training in the country itself is therefore rarely viable and instead regional approaches to training are required. Moreover, skills required for the development of niche markets, such as the production of high value agricultural products such a vanilla or noni juice, are very specialised and only a relatively small number of agricultural extension workers need to have these skills in order to develop the niche industries. Regional approaches to training are therefore more cost-effective.

Some progress has been made in the development of national and a regional qualifications frameworks, supported by SPC's Educational Quality and Assessment Programme (SPC, 2015). The main purpose of national qualifications frameworks is to regulate the qualifications within the national education and training system with the objective of facilitating pathways to, and through, formal qualifications. The Pacific Qualifications Framework (PQF) is a regional reference framework to establish comparability and to facilitate recognition of qualifications across and between PICs' education and training systems, as well as with other regional or international frameworks.

With the majority of Pacific Islanders working in the informal and subsistence economies and many young persons and women in particular entering the informal economy, entrepreneurship training for the informal economy should be a top priority.

In addition to entrepreneurship training, Governments should support training in areas needed for developing domestic growth sectors identified in Chapter 4. While these vary between PICs, region-wide these include agriculture, forestry, mining, fisheries, tourism, green jobs and global outsourcing services. Training efforts should also be focussed on areas where there is overseas demand including in agriculture, seafaring, aged care, tourism/hospitality and construction. Most overseas employment opportunities are seasonal or temporary and will therefore not be lost permanently. Rather, many of these skills are in areas which are also in demand in the PICs.

In countries with large foreign workforces including PNG and Palau training has to focus on areas where foreign workers are employed with a view of localising the workforce (including tourism/hospitality, mining, skilled forestry work, construction). Another area where training efforts should be focussed are generic workplace skills. These include English language skills and communication skills, as well as general work ethic such as in regards to punctuality. Not only will generic skills help Pacific Islanders find employment in the domestic labour, but they will also improve their chances to compete in the global labour market.

Finally, with PIC economies being increasingly impacted by advances in communication and information technologies, as discussed in Chapter 3.1, training institutions have to address this area in order to assist graduates take advantage of opportunities in the domestic and global labour markets.

Key recommendations for skills development:

- Increased collaboration between TVET institutions and employers in order to align training programmes with labour market demand;

- Strategies to increase private sector investment in skills development;

- Tracer studies among graduates from training institutions to determine the relevance of training and employment outcomes of graduates;

- Promoting regional approaches to meet the training needs of small countries and “niche” markets;

- Entrepreneurship training, specifically targeting workers in the informal economy with a focus on women and youth;

- Prioritising skills development in areas needed for domestic growth sectors (agriculture, forestry, fisheries, hospitality/tourism), overseas labour markets (aged care, hospitality/tourism, construction), and areas where foreign workers are employed in the domestic economies (forestry, hospitality/tourism, mining, construction);

- Incorporating generic workplace skills training in other training programmes;

- Improving ICT skills.

6.3 Labour migration

The lack of domestic employment opportunities and labour demand in Pacific Rim countries have been the main drivers for migration, with climate change and environmental degradation becoming an increasingly important factor too. All PIC governments are committed to increasing their number of labour migrants in order to ease local labour market pressures, increase remittances and skills transfers. With labour migration opportunities being increasingly for seasonal and temporary work, the risk of brain drain and declining remittances are lower than under permanent migration schemes. In order to increase the number of Pacific labour migrants, which all PIC governments want to achieve, training efforts have to be concentrated in areas of overseas labour demand including hospitality/tourism, aged care and construction. Adopting educational and training standards that are in line with those of the main destination countries and introducing internationally recognised qualifications are important steps that could increase migration. This strategy is particularly beneficial in the case of temporary migration opportunities as the enhance skills will not be permanently lost. Skills training for expor5t should be focussed on skill areas that are also potentially useful at home. This is the case for tourism/hospitality skills, construction related trades as well as nursing skills which can be used in the aged care industry overseas.

The GoK has adopted a National Labour Migration Policy which includes a coherent strategy and detailed action plan to increase labour migration. Other PICs should develop and implement similar policy documents in order to increase labour migration.

At present, migration and temporary / seasonal work opportunities in overseas countries vary widely between the PICs with Melanesian countries and atoll states having few opportunities in contrast to Polynesian and northern Pacific countries.

A public debate involving the social partners over the preferred levels and type of labour migration is desirable in all PICs. The debate should take into account the economic benefits for the migrants, communities and sending countries, as well as the potentially adverse social and economic impacts of

migration. Skilled migration has also been associated with the negative impact of brain drain. Weighing up the advantages and disadvantages associated with labour migration, PIC Governments can then make informed decisions on the desirable level of migration. Moreover, strategies have to be developed to ensure migrant workers' rights overseas, especially as these are threatened by increasing competition among labour sending countries.

Another aspect of labour mobility is that many skill gaps within the Pacific region are filled by foreign workers from outside the region with a particularly large foreign workforce in PNG, Palau and the Cook Islands. This indicates that other PICs have not been able to take advantage of opportunities where they present themselves within the region itself. If more training was directed into areas of demand (tourism/hospitality, mining, construction, forestry), Pacific Islanders would be in a better position to take advantage of opportunities that present themselves within the region.

Key recommendations for labour migration:

- Increased training in areas of overseas labour demand;
- Develop and implement National Labour Migration Policies;
- Debate and decisions on the preferred levels and type of labour migration;
- Develop strategy to take advantage of employment opportunities within the PIC region.

6.4 Labour governance

As discussed in this report, Labour Departments across the region are generally weak and lack capacity to formulate and implement research and evidence-based policies, conduct labour inspections and integrate decent work objectives into national development frameworks and policy dialogue. Through capacity building of the tripartite constituents ongoing labour law and employment policy reforms and implementation will be enhanced. Strengthening social dialogue and tripartism based on full respect for freedom of association and collective bargaining, and the autonomy and independence of workers' and employers' organizations are necessary to achieve progress.

Key recommendations for labour governance:

- Complete labour law reform process;
- Develop capacity of relevant Departments, strengthen labour institutions including labour inspections;
- Develop capacity of social partners and of social dialogue mechanisms.

6.5 Social protection

The incidence of low-paid work has to be reduced by establishing collective bargaining as a wage-fixing mechanism in those PICs where it does not yet exist, and by building on a minimum wage floor through social dialogue. Labour standards have to be enforced and monitored in both the formal and informal economies.

Five PICs have yet to sign the all-important Freedom of Association Conventions (C87 and C98). Increasing the ratification rate and application of fundamental labour standards are important for realizing fundamental principles and rights at work and international labour standards.

In light of the limited social protection mechanisms available in PICs, it is necessary to extend social protection, including by establishing sustainable social security systems that cover formal and informal workers and by establishing, maintaining and upgrading social protection floors comprising basic social security guarantees based on ILO's Social Protection Floors Recommendation, 2012 (R202). Adequate social protection has to be extended to all migrant workers within PICs and as much as PIC governments are able to, also to Pacific labour migrants overseas. Mechanisms to achieve this are through better portability of skills and social security benefits, taking into account the ILO Multilateral Framework on Labour Migration (ILO, 2006); and redressing employer–worker relationships that impede the freedom of movement of workers and their right to terminate employment or change employers, and their right to return freely to their countries of origin.

Key recommendations for social protection:

- Increasing efforts to ratify ILO Conventions in order to enhance the rights at work, in particular the 8 Fundamental Conventions;

- Upgrading social protection floors and minimum wage floors through social dialogue;

- Taking steps to enhance the protection of migrant workers' rights.

6.6 Research and data gaps

There is a lack of reliable and up-to-date labour market data in all PICs. It is necessary to strengthen efforts at the national and regional level to collect reliable labour market data to inform labour and employment policies including on issues related to the future of work. The preceding sections of this report have pointed out several significant gaps in existing labour market knowledge, research and data in key areas including general labour forced data and projections, informal employment; women and youth in the labour market; working conditions in major potential growth industries (especially mining and logging), the impact of climate change on major growth industries, impacts and potential of ICTs, and the current status of and prospects for green job creation.

These data are necessary to enable PIC governments and stakeholders to formulate effective labour market policies with appropriate attention to disadvantaged groups, especially youths, who face challenges of unemployment and are heavily reliant on informal employment, and women, who are disadvantaged in labour force participation, securing formal employment and wage levels. While research and data are key to overcoming these and other long-standing challenges, filling knowledge gaps is equally important for PICs to maximise the opportunities presented by the recent developments in the labour markets highlighted in this report. In particular, the significant potential of ICTs (especially through e-commerce and e-government) and green job creation, as well as major potential growth industries (especially mining and logging), can only be fully realised with evidence-based policies, strategies and regulatory frameworks.

Key recommendations for research and data gaps:

- Strengthen efforts at the national and regional level to collect reliable labour market data;

- Research on several key issues including women and youth, the potential of and working conditions in growth industries, and prospects of green job creation.

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