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The impact of COVID-19 on Urban Systems, Informal Settlements and the Urban Poor in the Pacific

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COVID-19 Socioeconomic recovery starts in cities

As gateways for trade, tourism and employment, cities globally have been most affected by COVID-19, both in terms of cases (with over 95 percent being in urban areas) and associated health effects, as well as the devastating effect on livelihoods and employment due to travel restrictions and local lockdowns. However, this has not impacted all equally, as within cities there are unequal coping capacities and existing structural inequalities that create multiple, intersecting deprivations in certain areas, particularly in underserved informal settlements and slums. This Pacific regional document and associated country annexes take an integrated approach to understanding the consequences of the pandemic on the urban system, working across the 5 main pillars of the overall **UN Joint Socio-Economic Impact Assessment of COVID-19 in the Pacific**. These are:

1. Health First: Protecting health services and systems during the crisis

Many urban residents (particularly the urban poor) face underlying health issues stemming from poor accessibility of quality nutrition, less active lifestyles, poor standards of basic service provision and the poor state of health infrastructure in many countries.

2. Protecting People: Social protection and basic services

Access to basic services including water and sanitation (WASH), solid waste management, transport, quality education, safety and security are essential to deal with pandemics as well as for achieving human development outcomes. Access remains highly uneven in cities, especially for vulnerable groups such as the poor, elderly, disabled, women and children, migrants and minority groups.

3. Economic Response and Recovery: Protecting jobs, small and medium sized enterprises and the informal sector workers

As centres of employment and economic activity, job losses have an especially significant impact on cities, especially for SMEs, the self-employed, daily wage earners and migrant workers. Those in urban areas are to a large extent dependent on the informal sector and the cash economy for food, housing and basic services and so without an income or social protection in place, people cannot afford to pay for these essentials.

4. Macroeconomic Response and Multilateral Collaboration

Cities are the largest contributor to national economies, being highly integrated and networked within the global economy, comprising more than 80 percent of the world's GDP (and at least half of national GDP for the majority of countries in the Pacific).

Strict measures to contain the virus have caused significant disruption to supply chains, trade and remittances, creating major implications for vulnerable groups and households already on the borderline of poverty.

5. Social Cohesion and Community Resilience

The social upheaval created by COVID-19 and presence of compound crises such as conflict and natural disasters are particularly felt in the already vulnerable and marginalised communities of cities. Yet these are also areas where networks and organisations of community support and response are often strongest.

Due to these significant impacts and underlying vulnerabilities, cities also represent a critical opportunity for recovery efforts, providing quick wins that can create lasting benefits from the immediate humanitarian response and provide opportunities for a long-term sustainable recovery and development that addresses many of the underlying issues that have contributed to the socio-economic impact of COVID-19 (Box 1).

Box 1: Why recovery efforts need to begin with cities

1. Cities are hotspots of contagion – recovery needs to reduce risk considering:

    - An integrated risk reduction approach to multiple hazards.
    - Increased public awareness of risks.
    - Investments in basic services such as WASH and healthcare.
    - Densities that are high enough to provide easy access to basic services and low enough to prevent easy transmission of diseases.
    - Access to safe public spaces including parks.
    - Improved land management and allocation.

2. The impact on informal settlements and the urban poor is particularly severe, creating resilient livelihoods is key to any build back better strategy and cost effective.

    - A socially inclusive approach that reaches the most vulnerable (women, youth, the poor, people with disabilities, migrants) requires targeting informal settlements where the **intersection of these vulnerabilities** is most acute.
    - **Labour intensive recovery** (targeted interventions with high cost-benefit ratio) should draw on skills available in informal settlements, develop circular economies, and invest in infrastructure.
    - Enhancing **rural-urban linkages and promoting urban ecosystems** can enhance food security and contribute to employment generation (for example in markets) and prevent import disruptions.

- Building up **social protection systems for workers in the informal economy** will protect during crises and can help wealth creation which strengthens resilience.

3. Locally specific, tailored responses can be highly effective if evidence based, coherent across sectors and with implementation capacities in place.

- A wide range of **community-based organizations (CBOs)** can be found across informal settlements, engaging with them can lead to quick action and accurate targeting.
- Strengthening the financial and institutional ability of local governments can support community action.

4. The opportunities and co-benefits for a sustainable recovery are particularly high in cities.

- Cities offer the chance to embrace **holistic, transformative change** to reduce climate change and natural disaster risk, inequalities between and within groups and poverty by working across the overlapping sectors that form the urban system such as housing, land, service provision, and livelihoods.
- As centres of economic activity and job creation, **linking the economic recovery with environmental sustainability** can provide green jobs in sectors such as renewable energy, tourism, urban agriculture, and clean forms of urban mobility that can also work to reduce generational and geographic inequalities and strengthen local production chains.
- **Digitalisation and the data revolution** have already been pioneered by many cities in the emergency response to the pandemic to monitor hotspots and assess communities most at risk, which can be leveraged to improve the delivery of information and municipal services to those that need it most. However, access to technology and the capacity to use it effectively remain highly uneven. This is creating a growing **digital divide** that could exacerbate inequalities in income, education and public participation if not paired with effective investment in accessible digital infrastructure, education and training. Given the growth in **telecommuting,** this would also enable more people to participate in digital work while attracting a growing number of high-tech industries and start-ups to cities.
- Seizing on the benefits of well-managed urban agglomeration and accessibility to employment, investments in **affordable and resilient housing and upgrading** coupled with strengthened basic services provide the foundation for the achievement of good health, education outcomes, livelihood and economic opportunities.

01 COVID-19 and Urban Systems in the Pacific

In the Pacific Island Countries (PICs)[1], the rapid closure of borders to international travellers and swiftly imposed lockdowns mean at this stage COVID-19 has not led to a health crisis of the scale seen in other regions around the globe (see Table 1 below). As of 31 December 2020, only four of the 14 PICs have confirmed cases totalling 71 with 2 deaths; Fiji (49 total cases/2 deaths), Solomon Islands (17/0), Marshall Islands (4/0), and Vanuatu (1/0), all except Fiji being imported and confined to quarantine. However, widespread lockdowns and State of Emergencies with curfews and movement restrictions, the inability to work, the closure of schools and borders, reductions in trade and remittances have triggered significant macroeconomic and socioeconomic impacts across the Pacific.

Table 1: State of Emergencies and other associated restrictions imposed to curb the spread of COVID-19 in the PICs[2].

Country	State of Emergency	From	To	Type(s) of restrictions
Cook Islands				Health emergency response, restrictions on domestic travel, schools and gatherings in March 2020 until the country declared COVID free in April 2020. Only citizens, permanent residents, work permit holders, and resident permit holders allowed entry.
Federated States of Micronesia (FSM)	Y	January 2020	January 2021 (extended)	Border closure to non-citizens, social distancing and hygiene measures. Schools initially closed in Yap, Chuuk and Pohnpei states.
Fiji				No formal State of Emergency but border closure to non-citizens, nationwide curfew

[1] For this assessment the following Pacific Island Countries are included: Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu.

[2] Information compiled from the Australian National University (ANU) COVID-19 Pacific Island Response Matrix (https://docs.google.com/document/d/1Utn29IbJIwYooy23shKGvgEbcvbkqSuP002LsqL9JaU/edit), GardaWorld (https://www.garda.com/crisis24/news-alerts/407046/pacific-nations-and-territories-in-the-south-pacific-continue-to-adjust-covid-19-related-measures-as-of-december-4-travel-restrictions-ongoing-update-46) and other government sources.

				from 11pm to 4am, church, sports and venues operating at 50 percent capacity, social distancing and hygiene measures. Schools closed until June 2020.
Kiribati	Y	March 2020	December 2020 (extended)	Border closure to non-citizens. Lockdown in effect until April 2020 during which all schools, non-essential businesses and public transport closed.
Marshall Islands	Y	February 2020		Only outbound and domestic flights operational, large gatherings over 20 people discouraged, social distancing and hygiene measures. Schools closed for several weeks.
Nauru	Y	March 2020		Commercial flights suspended and borders closed to non-citizens.
Niue				Border closure to all those except citizens, diplomats and essential workers.
Palau	Y	March 2020		Border closure to non-citizens, non-essential healthcare services were reduced, and schools closed.
Samoa	Y	March 2020	December 2020 (extended)	Border closure to non-citizens, gradual easing enabling limited roadside vendor sales and increased opening hours, reduced capacity of restaurants and entertainment venues. Schools closed until May 2020.
Solomon Islands	Y	March 2020	March 2021 (extended)	Border closure to non-citizens, public gatherings banned, social distancing and hygiene measures. Schools closed until May 2020.
Tonga	Y	March 2020	December 2020 (extended)	Border closure to non-citizens, curfew from midnight to 5am, mass gatherings of up to 40 people indoors and 80 outdoors, social distancing and hygiene measures. Schools closed for

				two weeks.
Tuvalu	Y	March 2020	March 2021 (extended)	International flights suspended; borders remain closed to all vessels except essential supplies. Schools closed and restrictions on public gatherings for three months.
Vanuatu	Y	March 2020	December 2020 (extended)	Border closure to non-citizens, social distancing and hygiene measures. First state of emergency-imposed curfew from 9pm to 4am, preventing bars, restaurants and shops opening past 7:30pm. Schools closed until June 2020.

More people are living in cities and towns than rural areas in many PICs including the Cook Islands, Fiji, Kiribati, Marshall Islands and Palau (see Table 2 for population statistics), with population densities comparable to many Asian megacities. Nauru is the only PIC to be considered completely urban as the smallest republic in the world with an area of just 21km^2. Based on the most recent population censuses, the average proportion of Pacific islanders (excluding PNG) living in areas classified as urban is **51 percent**, with urban growth rates continuing to exceed rural growth rates in nearly all Pacific economies[3]. Annual increases in the urban population are projected to reach between 3.5 and 4 percent by 2050[4], greater in the Melanesia region where the urban growth rate of some countries such as the Solomon Islands already exceeds 5 percent[5]. Furthermore, many PICs, like the Federated States of Micronesia and its 607 islands, have very large territories, increasing the disparities between states and islands, inequalities and logistical challenges.

[3] UN-Habitat (2020). National Urban Policy: Pacific Region Report. https://unhabitat.org/national-urban-policy-pacific-region-report
[4] WFP and SPC (2018). Regional Food Security Atlas of the Pacific.
[5] Solomon Islands National Statistics Office (2019). National Population and Housing Census Provisional Count

Table 2: National population and urban population intercensal changes over the last two census periods[6].

Pacific Island Country (PIC)	Last two census years		Population as counted at last census		Urban population (%)		Annual intercensal urban growth rate (%)	
Cook Islands	2011	2016	14,974	14,802	74	75	-1.2	
Fiji	2007	2017	837,271	884,887	51	56	1.5	1.6
FSM	2000	2010	107,008	102,843		22		-2.2
Kiribati	2010	2015	103,058	110,110	54	57	4.4	2.1
Marshall Islands	1999	2011	50,840	53,158	65	74	1.8	1.4
Nauru		2011		10,084		100		1.8
Niue	2006	2011	1,625	1,611	36	40	-4.1	2.1
Palau	2005	2015	19,907	17,661	77	78	3.2	
Samoa	2011	2016	187,820	195,979	20	19	-0.3	
Solomon Islands	2009	2019*	515,870	721,455	20	26	4.1	5.3
Tonga	2011	2016	103,252	100,651	23	23	2.4	-0.2
Tuvalu	2012	2017	10,837	10,645	57	63	3.2	3
Vanuatu	2009	2016	234,023	272,459	24	25	3.5	2.6

Source: National Population and Housing Censuses and Statistics for Development Division, Pacific Community. NB: Asterisk indicates census undertaken recently but full results not yet available.

The climate-related impacts experienced by coastal urban areas; including rising sea levels, storm surges and cyclones bring further complexities when dealing with a pandemic, coupled with pre-existing deficits in access to education, food security, waste management, among others. Increased pressure on the availability of

[6] Note: With most urban growth occurring in peri-urban areas and communities outside of official urban boundaries, it is difficult to gain an accurate estimate of the urban population from census data and so is likely to be greater than suggested by the table.

resources and land due to landowner conflicts, topographical constraints, lack of land mass, and greater rural-to-urban migration and inter-island migration has led to an **increase in "urban villages" and informal settlements throughout the PICs**, especially in peri-urban areas. The absence of clear land policies and jurisdictional areas often creates conflict over which authority is responsible for providing services and security of tenure, leaving many settlements without access to basic sanitation and water facilities. The poor recognition among officials and even the humanitarian community of the distinct issues faced by residents of informal settlements (often to discourage their growth), leads to an exclusion from decision-making processes and the disaster response.

Informal settlements are therefore particularly vulnerable to both the health and socioeconomic impacts of COVID-19. Crowded housing and dense neighbourhoods often home to marginalised groups coupled with limited access to clean water and sanitation and higher rates of chronic health conditions, create the ideal conditions for the spread of the virus.

Many residents of informal settlements work as daily wage labourers in the informal economy, dependent on access to urban markets for trading local produce and handicrafts from rural areas. Under State of Emergency measures in many PICs, travel restrictions were imposed between these areas and markets closed, placing livelihoods and incomes at significant risk, especially for women who are concentrated in these sectors and already face the additional burden of unpaid care work. The limited social protection systems and resources to cover the gap between job losses and household income reduces the purchasing capacity of the urban poor for basic food items, which are also more volatile as a result of border closures and decline in production elsewhere. This has **intensified food insecurity, poverty, exclusion, and homelessness** in urban areas which already face reduced employment opportunities, while **pre-existing inequalities** have worsened the impacts of COVID-19 for those already in poverty.

It is therefore important for this assessment to consider the whole urban system and the relationships between the various sectors including urban basic services, livelihoods and access to markets, food security, education and housing. This is critical for making Pacific cities and informal settlements more resilient to multiple shocks and stresses from public health to climate change. Ensuring that those most affected by pre- and post-disaster exclusion, inequality and discrimination are heard, and directly involved in the response and recovery process is also of great importance for meeting the SDGs and leaving no one behind.

It is expected that many of the socioeconomic gains achieved in recent decades across the region may be swept away, but the magnitude of the losses, and the full impact on urban areas is yet to be determined[7]. Significant data gaps remain and so the initial work of this assessment has been to gather existing data from secondary literature, supplemented by consultations with government partners and other UN

[7] UN ESCAP (2020). Future of Asian and Pacific Cities in the post-COVID19 era, ESCAP Virtual Expert Group Meeting, held on 9 to 10 December 2020.

agencies, household surveys and focus group discussions to gain an impression of COVID-19 impacts on the urban poor and those living in informal settlements. The addition of boxes throughout also provide important country case studies and some reflections on the wider implications for Pacific urbanisation post- COVID-19. Where possible, data has been disaggregated to understand the gendered and spatial dimensions of the pandemic.

02 Socioeconomic Impact Assessment

i. The urban poor

Around one in four of the Pacific population live below national poverty lines, with **seven out of 11 PICs having greater urban populations below the basic need's poverty line than rural populations**[8]. The urban population is the most likely to be affected by COVID-19 given the dependence on cash for food and non-food basic needs compared to rural areas. A 20 percent fall in household income or expenditure is expected to create an increase between 7 and 17 percent in the incidence of basic-needs poverty (SPC estimate). **Half of the region's population is now aged under 23, creating a growing "youth bulge" in urban areas** attracted by the possibilities of jobs, improved access to technology and wider social networks, but they are also more likely to face poverty and hardship[9]. Those who remain in the outer, rural islands tend to be the more dependent members of society, while at the same time, the increasing urban population is generating social tensions and increasing the numbers of those without land[10].

Transport costs are high in the Pacific and markets small, limiting economies of scale and economic opportunities. Thus, a large percentage of populations are forced to rely on subsistence activities and cash crops which are frequently jeopardized by natural disasters and the shrink in global demand and disruption to supply chains and shipping brought about by COVID-19. **Only Nauru's economy is still expected to grow by the end of 2020, with more modest declines in Kiribati and Tuvalu at -1.1 and -0.52 percent respectively[11]** due to falls in construction, remittances and exports. They have perhaps suffered less compared with other PICs due to financial reserves and strong earnings from fishing licenses, which in Kiribati represented 70 percent of government revenue pre COVID-19 but are expected to fall by 10 percent by the end of 2020 as demand drops, with many still stranded abroad in the hospitality and seafaring sectors.

Pre COVID-19 tourism accounted for up to 20-30 percent of economic activity in countries such as Samoa, Tonga and Palau, and as high as 85 percent in the Cook Islands. Tourism is both a direct and indirect source of income for much of the populations of the Pacific, especially those working in small and medium sized enterprises and the informal economy. Travel restrictions have led to significant drops in tourist numbers, creating layoffs and closures with ripple effects further down the supply chain. For example, one organic farmer in the Cook Islands estimates they have

[8] ADB (2016). The Emergence of Pacific Urban Villages: Urbanization trends in the Pacific Islands.
[9] Lowy Institute (2020). Demanding the Future: Navigating the Pacific's Youth Bulge. https://www.lowyinstitute.org/publications/demanding-future-navigating-pacific-youth-bulge
[10] ADB (2004). Priorities of the People. Hardship in the Federated States of Micronesia.
[11] IMF (2020). World Economic Outlook, October 2020. https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020

lost around 60 percent of their business with the drop in demand from resorts and hotels[12].

Many thousands of Pacific Islanders also migrate internationally to places like Australia and New Zealand through annual and seasonal educational and worker schemes, where they use their skills to support family members back home through remittances. With migrant workers facing employment losses and wage cuts, the inability of new workers to travel and suspension of labour mobility schemes, COVID-19 is expected to lead to a fall in remittances of 20 percent. Remittances usually account for 10 percent of GDP in the PICs[13] (exceeding 40 percent in Tonga and around 15 percent in Samoa and the Marshall Islands) being an important supplementary income source and informal form of social protection[14] during economic shocks and natural disasters. Migration often produces gendered impacts with men largely travelling abroad and women reliant on remittances, leaving them in a more vulnerable position more likely to move into basic-needs poverty[15]. There is the possibility for return migration if unemployment rises abroad which could lessen the impact of capacity gaps and skills shortages that have grown over the years due to greater emigration of highly qualified migrants.

Moreover, **COVID-19 has altered patterns of rural-urban migration significantly**, with people leaving the cities for fear of losing cash incomes and thus aiming to ensure food security in their rural homes. In many cases this was mandated by the government under the State of Emergency measures (Box 2).

[12] Inside Story (2020). Smart Harvest. https://insidestory.org.au/smart-harvest/
[13] IMF (2020). Pacific Islands Threatened by COVID-19. https://www.imf.org/en/News/Articles/2020/05/27/na-05272020-pacific-islands-threatened-by-covid-19
[14] Richard P. C. Brown, John Connell, and Eliana V. Jimenez-Soto Brown, R. P., Connell, J., & Jimenez-Soto, E. V. (2013). Migrants' Remittances, Poverty and Social Protection in the South Pacific: Fiji and Tonga. Population, Space and Place.
[15] UNFPA (2014). Population and Development Profiles: Pacific Island Countries.

Box 2: Reverse urban-rural migration during COVID-19

Almost all the PICs declared a State of Emergency during the early stages of the pandemic in March, closing borders to international travel, banning large public gatherings and curfews. In some countries, the government also encouraged voluntary relocation from urban centres to rural islets and outer islands, including the Solomon Islands where **up to 20 percent of Honiara's population migrated to outer islands** and other urban areas since the State of Emergency was declared in March 2020[16]. **As of May 2020, about 1500 of Funafuti's 6500 population voluntarily moved to the outer islands, a 25 percent decrease in population**[17].

According to anecdotal evidence and interviews this was largely to reduce risk exposure to COVID-19 and ensure food security, with more labour available for fishing and farming, in turn decreasing reliance on the cash economy and imported food[18], especially for those that lost their jobs. For instance, in the Federated States of Micronesia, the rural population have started to plant more gardens and taro patches to compensate for stock shortages in stores and price increases[19]. This may create additional pressures on already fragile island environments, with greater demand for food, land and water resources, while simultaneously reducing pressures on the natural environment and resources in the capital. The well-established **systems of exchange between rural and urban areas** - supplying food and other locally produced items from the outer islands to the capital in exchange for cash in order to purchase building materials and other goods, are likely to have been disrupted, with less opportunities for cash income and increased demand for local food. However, there is also evidence of a return to more traditional forms of food production, preservation and storage, **reviving customary knowledge among young people** who have often remained independent from their rural families[20]. This may provide an opportunity to increase self-reliance and resilience, including adapting to climate change challenges in the longer-term.

Whether these changes will become more permanent remains to be seen. They may only last until the regional and global COVID-19 situation improves and borders can reopen again, but there is the possibility some will choose to remain, especially if urban economies do shrink significantly, in turn affecting the dynamics of rural-urban linkages. **This presents a clear need to monitor and assess the effects of such population changes on cultural practices, the environment, employment, health and education in the future.**

[16] World Bank (2020). Solomon Islands High Frequency Phone Survey on COVID-19: Results from Round 1. http://documents1.worldbank.org/curated/en/167041607012187892/pdf/Solomon-Islands-High-Frequency-Survey-on-COVID-19-First-Round-Results.pdf

[17] IOM (2020). Reducing COVID-19 risk through population relocation and closed borders: effects of pandemic emergency measures in a small island state. https://environmentalmigration.iom.int/blogs/reducing-covid-19-risk-through-population-relocation-and-closed-borders-effects-pandemic

[18] Development Policy Centre (2020). How is Tuvalu securing against COVID-19? https://devpolicy.org/how-is-tuvalu-securing-against-covid-19-20200406/ and interview with Hon. Minster Katepu Laoi.

ii. Informal Settlements

Worldwide, nearly 1 billion people live in informal settlements with living conditions characterized by overcrowding, insecure tenure, and poor access to infrastructure[21]. In the Pacific, the growing urbanisation of poverty is concentrated in informal and squatter settlements, their growth exceeding the overall urban growth rate in the Solomon Islands, and some 80 percent of all new houses built in Fiji being in informal settlements[22]. **In 2012, it was estimated that between 800,000 to 1 million Pacific urban residents lived in informal and squatter settlements, representing approximately 15-50 percent of each country's total urban population**[23]. These numbers are likely to be even higher due to data collection challenges, old census data, the circular movement of people between rural and urban locations and the fact that peri-urban growth, which occurs outside formal city boundaries, is not included in urban census data. Furthermore, official recognition and definitions vary throughout the region, for instance in Samoa there are no settlements classified as informal, but many continue to be well below the standards set by the National Building Code and are vulnerable to storms and flooding.

A. Housing and overcrowding

With the growing number of informal settlements, limited supply of affordable housing and lack of available land across the PICs, there are several issues that create the ideal conditions for the spread of infectious diseases such as COVID-19. **These include overcrowding[24] at the household and community level, housing quality, construction, and accessibility.**

Population densities are among the highest in the world in urban areas like South Tarawa (averaging 11,000 people per km^2 in Betio Town Council) and Funafuti (with 5-10 people per household in informal settlements). Many families live in shelters made of non-durable and poor-quality building materials, construction proceeding in a "stop-start" manner based on the resources they have available including tin or corrugated iron, timber and sometimes brick. **These are poorly adapted to the local context and climate, insufficiently ventilated and highly sensitive to natural disasters and climate change**. The average size varies, with some as small as 10 square meters

[19] SPREP PROE (2020). COVID-19 impacts on Fishing and Coastal Communities, 3rd update, 15 June 2020 https://pipap.sprep.org/content/covid19-impacts-fishing-and-coastal-communitiesupdate-3-federated-states-micronesia
[20] Devpolicy (2020). Youth resilience to COVID-19: indigenous knowledge in Tuvalu. https://devpolicy.org/youth-resilience-to-covid-19-indigenous-knowledge-in-tuvalu-20200708/
[21] United Nations (2016). Urbanization and Development: Emerging Futures. World Cities Report; United Nations Publication: New York, NY, USA.
[22] Jones, P (2012). The Challenges of Implementing Millennium Development Goal Target 7D in Pacific Island Towns and Cities, Asia-Pacific Development Journal Vol. 19, No. 1
[23] ADB (2016). The Emergence of Pacific Urban Villages: Urbanization trends in the Pacific Islands.
[24] UN-Habitat defines a dwelling unit overcrowded where more than 3 people share the same habitable room.

in Vanuatu[25]. Overcrowding is therefore a significant issue, producing health impacts relating to the spread of infectious diseases since mainstream prevention measures of physical distancing are impossible to apply. Psychological impacts such as anxiety, stress and pressures on family and social relationships have also been exacerbated due to long periods of isolation, increasing the number of reported cases of violence against women and children. **In Fiji, calls to the national domestic violence hotline spiked in April with over 500 calls**, over half of which were domestic violence related against women linked with movement restrictions and economic strains on families[26].

The accessibility of informal settlements via roads and paths to emergency vehicles and medical personnel is also limited, as they generally form out of the residual spaces adjoining houses and land boundaries, with much lower vehicle access possible in the steeper settlements. Along with being narrow, many are affected by flooding, high rainfall and landslides due to inadequate drainage creating washaways, stagnant waters prone to the emergence of water-borne diseases and other damage. This makes it difficult for people, especially the elderly and disabled, to access medical treatment and when needing to evacuate during natural disaster events such as recent TC Harold.

Some informal settlement upgrading programmes and national housing policies have created improvements. These include the Fiji City-wide Squatter Upgrading Project and Town Wide Informal Settlement Upgrading Project, the National Urban Policy of Kiribati promotes standardized building codes and the provision of affordable housing, while in the Solomon Islands there are some upgrading efforts led by the Ministry of Lands, Housing and Survey. However, these are small in scale and lack sufficient budget to be fully effective.

B. Land rights and tenure security

The absence of a formal land supply system and shortage of available land in many of the PICs means there is a lack of affordable housing for low-income groups, with market-based development tending to be prioritised for the middle- and high-income groups backed by access to credit and more stable formal employment (for instance in Tuvalu where private sector housing can account for over 40 percent of household income). With most public and freehold land and property in urban centres too expensive to purchase or rent, the pressure to occupy is often greatest at the peri-urban fringe which are likely to be **customary and traditional lands** outside the boundaries of local government and service providers, as shown in Table 3. Many also settle on marginal lands such as riverbanks, beaches, steep undeveloped lands or flood-prone areas, where they claim land rights by occupation. This creates a patchwork of different tenure arrangements where struggles over access to land are increasingly intense due to greater infrastructure and economic development as well

[25] UN-Habitat Participatory Slum Upgrading Programme. Participatory National Urban Profile, Vanuatu.
[26] RNZ (2020). Fiji records increase in domestic violence cases during COVID-19 lockdowns. https://www.rnz.co.nz/international/pacific-news/415881/fiji-records-increase-in-domestic-violence-cases-during-covid-19-lockdowns

as climate change reducing the amount of viable land for housing and agriculture. Recent migrants, with temporary tenure, are part of a growing urban landless class. They are usually relatively poor without stable access to employment and have weaker prospects for stability or access to services, accentuated where they are of different ethnicity or cultural characteristics from the dominant urban population group.

Matrilineal systems exist in parts of the Solomon Islands, Vanuatu, Marshall Islands, FSM and Palau where land rights are inherited along the matrilineal line but are a minority in the Pacific[27]. Chieftaincy, kin and clan groups largely dominated by men incorporate aspects of land tenure and have the main power in adjudicating claims over customary land and property resulting in the exclusion of women, emigrants and non-group members[28]. Also, in some contexts, the concept of land priority extends to the sea, where reefs opposite the land are part of the same "land unit", potentially leading to conflicts within the same community[29]. Tonga is one of the few PICs to have no customary land held by individual families and groups, with all land being state owned and distributed by the king. Women and minority groups cannot own land, except in limited cases, 77 percent of households being headed by men according to the 2016 census. In the Solomon Islands, approximately 73 percent of land titles are held by men and only 2 percent in the hands of women[30]. This creates barriers towards women and minorities from being able to participate in economic activities such as home-based enterprises, decision and policy-making structures and access to safe and decent housing. In the context of COVID-19 and the surge in gender-based violence it can also trap women in abusive relationships.

Table 3: Distribution of tenure systems in the Pacific[31].

[27] Monson, R. (2017). The Politics of Property: Gender, Land and Political Authority in Solomon Islands. *Kastom, Property and Ideology: Land Transformations in Melanesia*. https://library.oapen.org/bitstream/handle/20.500.12657/31420/628310.pdf
[28] Petersen, G. (2015). At the Intersection of Chieftainship and Constitutional Government: Some Comparisons from Micronesia, Journal de la Société des Océanistes, 141 | 2015, 255-265.
[29] Putney, R. (2008). Customary marine tenure and traditional ecological knowledge in Palau.
[30] UN Women. Solomon Islands https://asiapacific.unwomen.org/en/countries/fiji/co/solomon-islands
[31] Source: ADB (2019). The Dynamics of Urbanization, Housing, and Land Provision in the Pacific Island Countries. https://www.adb.org/sites/default/files/publication/488221/adbi-pb2019-1.pdf

	Public [a]	Freehold [b]	Customary [c]
Cook Islands	Some	Little	95%
Fiji	4%	8%	88%
Kiribati	50%	<5%	>45%
Marshall Islands	<1%	0%	>99%
Micronesia, Federated States of	35%	<1%	65%
Nauru	<10%	0%	>90%
Niue	1.5%	0%	98.5%
Palau	Most	Some	Some
Papua New Guinea	2.5%	0.50%	97%
Samoa	15%	4%	81%
Solomon Islands	8%	5%	87%
Timor-Leste	Some	Some	Most
Tokelau	1%	1%	98%
Tonga	100%	0%	0%
Tuvalu	5%	<0.1%	95%
Vanuatu	2%	0%	98%

[a] Includes crown land and land owned by provincial and local governments.
[b] Includes land that is not strictly freehold, but similar in characteristics, such as the "perpetual estates" found in Solomon Islands.
[c] Timor-Leste does not yet have a separate legal category of "customary land," even though most of its rural land remains under customary forms of authority.
Source: Australian Aid (2008, compiled and calculated from various other sources including field trips and interviews).

The differing governance systems between customary and state-owned land often create a barrier to cross-border provision of services and strategic planning for urbanisation. Ambiguous and inadequately defined rights, frequent unrecorded land use changes, land grabbing by powerful elites and poorly monitored and implemented land use plans are just some of the multiple challenges confounding efforts towards more sustainable urban development[32]. In most of the PICs there has been no expansion in urban and municipal boundaries since independence. There is an urgent need to involve all sectors, agencies and institutions including customary and non-customary landowners, local government and communities to assess how potential redefinitions will impact the rural edge and the development of culturally acceptable governance solutions such as hybrid systems between custom and state.

Some temporary or permanent leasing occurs on state lands in Solomon Islands (with Temporary Occupancy Licenses granted to many informal settlers since the 1960s), Kiribati and Fiji. For those living on customary lands, settlers may negotiate informal arrangements with landowners using customary practices that may or may not be enshrined in legal statutes[33]. The security of land tenure is dependent on a range of factors including socio-cultural norms and values, legal frameworks and regulations, the relationship between traditional and modern governance systems and market demand and supply. Many will keep an informal record and pay cash or in-kind contributions to ensure the right to use and develop the land, but there is still no guarantee of permanency, especially where there is no legislation or policy to protect informal settlers from eviction. This can create a disincentive for households to

[32] Mecartney, C. and Connell, J. (2017). Urban Melanesia: The Challenges of Managing Land, Modernity and Tradition. *Kastom, Property and Ideology: Land Transformations in Melanesia*. https://library.oapen.org/bitstream/handle/20.500.12657/31420/628310.pdf
[33] ADB (2012). The State of Pacific Towns and Cities: Urbanization in ADB's Pacific Developing Member Countries.

improve and invest in their housing as well as utility companies to extend essential services such as water and sanitation into informal settlements. **The reduction in available income due to COVID-19 has impacted on people's ability to pay and/or sustain rent or mortgage payments.** Although this can lead to potential eviction for the many informal settlement dwellers who live without security of tenure, it does not appear to have been the case for most of the PICs, **with only 7 percent of Fijian households and 5 percent of Solomon Island households being threatened with eviction**[34]. However, in many cases households pay yearly rent to landowners and thus it remains to be seen how COVID-19 will impact the ability to make these payments, whether alternative payment types can be made and the impact on tenure security in the long-term.

C. Urban basic services (WASH, health, education, waste management)

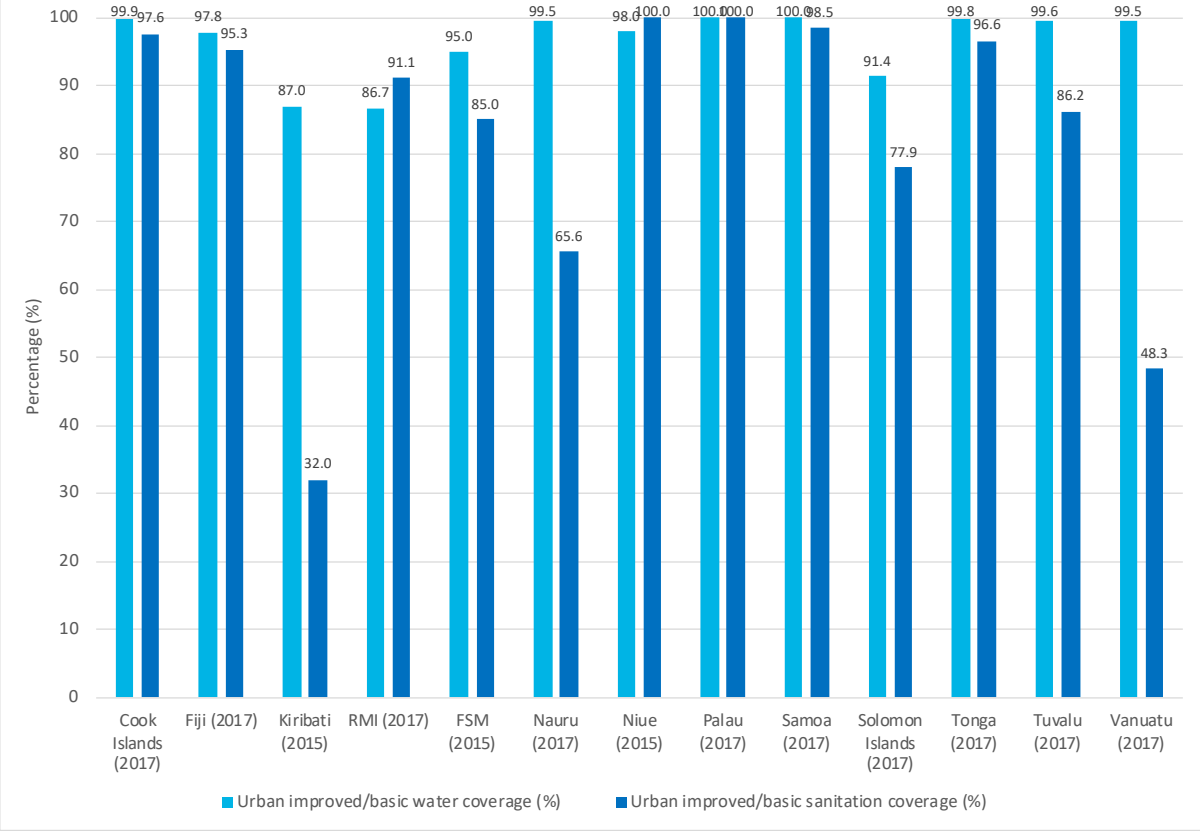


Figure 1: The percentage of urban areas with an improved or basic water and sanitation supply in the PICs as defined by the JMP service ladder.

In the Pacific, access to a safe, clean and resilient water supply is challenging. According to JMP statistics, about 93 percent of the urban population in Pacific island countries have access to improved drinking-water, with 67 percent having piped water

[34] Results from UN-Habitat Rapid Assessment of COVID-19 in Informal Settlements in Fiji and Solomon Islands.

into the household[35]. This does not account for those who reside in informal or under-served settlements within urban and peri-urban locations which do not contribute to formal urban statistics. **Even in cases such as Fiji where much of the urban population has access to improved water supplies, water shortages and cuts are common** due to insufficient capacity to meet growing demand, while in Kiribati piped water is only available for an average of 2 hours a day due to high leakage and lack of freshwater resources increasingly under threat from saltwater intrusion. Rainwater harvesting systems are also common where piped or surface water is unavailable or insufficient, but these are vulnerable to extended dry periods. For instance, in the Marshall Islands, rainwater accounts for 79 percent of drinking water supply, while groundwater is only used by 9 percent of all households[36]. Where improved water supplies are not easily available, women are the most likely to bear the economic and financial burden of securing alternative supply sources. **This makes it extremely difficult to maintain levels of personal hygiene that would be needed if exposed to the spread of COVID-19.**

Climate change is already exacerbating concerns related to access to safe drinking water, as many Pacific countries increasingly face periods of drought and flooding. For example, in 2016 Palau declared a State of Emergency due to severe drought conditions affecting the country. Water rationing has been introduced, with people being able to use taps for only six hours a day[37]. Recent extreme events in Kiribati have shown that king tides and storm surges can wash over entire islands, causing floods that contaminate drinking water supplies for weeks or even months, worsening the already high number of diarrhoea cases that contribute to the highest infant mortality rate in the Pacific[38].

Table 4: Typical water and sanitation tariffs for connected households for a selection of PICs[39].

[35] WHO (2016). Sanitation, Drinking-Water and Health in Pacific Island Countries: 2015 Update and Future Outlook.
[36] Reliefweb (2020) Access to clean, safe and resilient water to be boosted for Pacific communities https://reliefweb.int/report/marshall-islands/access-clean-safe-and-resilient-water-be-boosted-pacific-communities
[37] Republic of Palau (2016). Drought Report.
[38] World Bank (2017). Water, water, everywhere, but not a drop to drink: Adapting to life in climate change-hit Kiribati. https://www.worldbank.org/en/news/feature/2017/03/21/adapting-to-life-in-climate-change-hit-kiribati
[39] WHO (2016). Sanitation, Drinking-Water and Health in Pacific Island Countries: 2015 Update and Future Outlook.

	Average Monthly Settlement Household Income (USD)	Water Tariff for 7,500 Liters (USD)	Sewage Tariff for 7,500 Liters (USD)	Water Tariffs as Percentage of Household Income[a]	Water and Sewerage Tariffs as a Percentage of Household Income[b]
Honiara, SI (Solomon Water)	$83	$21.70[c]	$12.24[d]	27%	41%
Suva, Fiji (WAF)	$293 to $456	$2.45[e]	$1.50[f]	<1%	1%
Port Vila, Vanuatu (UNELCO)	$103[g]	$24.13[h]	N/A	23%	23%
Port Moresby, PNG (Eda Ranu)	$455	$7.78[i]	$2.84[j]	<2%	2%

Regarding sanitation, 71 percent of the region's urban population have improved sanitation facilities, with 48 percent using toilets flushing to conventional sewerage systems[40]. Kiribati has the highest rate of open defecation among the PICs at 22 percent. Many informal settlements rely on septic tanks or pit latrines which are commonly shared with other households (up to 20 people per toilet in the Solomon Islands for example) and can be difficult to access. In addition, many are shallow, improperly sited and poorly maintained, with overflow and saturation of topsoil's by black water creating additional public health hazards as it can easily contaminate freshwater supplies and pollute rivers leading to a higher prevalence of water-borne diseases such as typhoid fever.

Utility companies routinely under provide services either because they have no clear obligation to serve informal settlements or they lack the authority to do so, with formal land tenure often being a precondition for accessing services. In many cases the provision of basic services is not financially feasible either from the perspective of a cost-covering utility. **Given the disruption to incomes and livelihoods brought about by COVID-19, many will have challenges meeting monthly payments for utilities** (see Table 4 for typical tariffs), creating the risk of disconnection at a time when these are needed the most. Some utility companies have pro-poor initiatives and schemes to help pay for services such as payment plans or instalment options as well as block tariffs (Table 5), but these can disadvantage settlers who share a water tap by pricing them at the highest tier, along with allowing payments to build up that cannot be repaid in the future.

Table 5: Utilities settlement access and pro-poor policies for a selection of PICs[41]

[40] WHO (2016). Sanitation, Drinking-Water and Health in Pacific Island Countries: 2015 Update and Future Outlook.
[41] Source: WHO (2016). Sanitation, Drinking-Water and Health in Pacific Island Countries: 2015 Update and Future Outlook.

	Do utilities require legal land tenure to provide a connection?	Are there pro-poor initiatives to help pay for services?[a]	Regularly-funded subsidies for the poor?
Solomon Islands (Solomon Water)	Yes	Over-due bill payment plan in lieu of automatic disconnections	None
Fiji (WAF)	No. Department of Housing and/ or landowners can approve temporary water connections	Over-due bill payment plan Low-income customers qualify for a bill waiver Connection fees can be paid by instalments	Subsidized tariffs 50L of free water per person per day if household income <US$15,000
Vanuatu (UNELCO)	Yes	Over-due bill payment plan	Article 29 Water Special Fund, though currently unused
PNG (Eda Ranu)	Yes, but Government has obligated some services to settlements by CSO	Over-due bill payment plan Bulk tariffs at community standpipes, case-by-case	Government subsidies on a case-by-case basis

[a] All the utilities offer increasing block tariffs. This tariff structure is often considered a way to protect the poor because it charges lower rates to users who use less water (who are often low-income). However, this tariff structure actually disadvantages settlers because they usually share water taps, quickly pricing them to the most expensive tier.

Source: Utility websites and interviews

Gaps in service delivery have also increased due to lockdown measures, particularly the reduced availability and capacity of public transport which makes it hard for those who cannot work from home and who live further from their work due to the reduced availability of affordable housing close to centres of employment. With limited revenue generation and operating costs not decreasing in line with revenue, an increase in transport fares is likely.

Changing consumption patterns in most PICs have led to the proliferation of imported products that are increasingly wasteful. In Palau for instance, in the main urban areas of Koror and Babeldaob the total waste generated by households is 11.4 ton/day (0.67 kg/person/day)[42]. By 2025, the waste generation for the entire Pacific urban population is projected to be more than 1.59 million tonnes per year (1.6 kg/person/day)[43]. As governments face the challenge of dealing with growing solid waste generation rates, they are constrained by many factors, such as **limited land space for disposal, limited resources and inadequate institutional and human capacities, among others**. Waste management services within urban areas only collect a small amount of solid waste generated, the lowest in countries such as the Solomon Islands and Vanuatu[44](see Table 6 for a summary). Unclear municipal service boundaries and inadequate roads mean the informal settlement population is

[42] Government of Palau (2017). Palau National Solid Waste Management Strategy 2017 to 2026.
[43] SPREP (2016). Cleaner Pacific 2025: Pacific Regional Waste and Pollution Management Strategy
[44] ADB (2014). Solid Waste Management in the Pacific. https://think-asia.org/bitstream/handle/11540/411/solid-waste-management-appropriate-technologies.pdf

frequently overlooked and underserved. Open dumpsites and illegal dumping are key challenges that worsen problems of flooding, landslides, contamination to land, groundwaters and the breeding of disease vectors. **Many landfill facilities do not have proper incinerators for medical and hazardous waste**, which can release damaging substances into the environment and pose occupational and public health risks if improperly managed. Modern, sanitary landfill facilities and controlled dumps financed through external development assistance are in place in several PICs including Fiji, Tonga, Vanuatu, Palau, and Samoa, providing significant improvements over open dumping. They have also made increasing steps towards the adoption of waste and environment legislation to stimulate circular economy approaches, and to finance improved waste recovery systems and distribute the costs of managing end-of-life materials. These include bans on imports of plastic bags and other plastic products, extended producer responsibility, container deposit schemes such as *Kaoki Maange* in Kiribati, advance disposal fees, environmental taxes and levies on plastic bags to discourage consumer demand.

Table 6: Municipal Solid Waste (MSW) Management Systems in the Pacific Island Countries

Pacific Island Country (PIC)	Urban Area	Household waste (kg/p/day)	Est. access to waste collection service	Waste collection frequency (times/week)	Type of MSW site	Recycling initiatives					
						Organic waste	Metals	Paper	Plastic	Glass	Others
Cook Islands	Rarotonga		High (100% urban)	6	Engineered Disposal	X	X	X	X	X	X
Fiji	Suva	0.4	High	3-6	Engineered Disposal	X	X	X	X		X
FSM	Kosrae	0.1	Low (35% urban)	0-2	Engineered Disposal		X		X	X	X
	Pohnpei	0.1	Low	1	Open Dumpsites	X	X				
Kiribati	Tarawa	0.3	High (100% urban)	1-2	Engineered Disposal	X	X		X		X
Marshall Islands	Majuro	0.4	Low (66% urban)	1	Open Dumpsites	X	X		X		X
Nauru	Yaren		High (100% national)	1	Open Dumpsites						
Niue	Alofi	0.3	High (100% national)	1-3	Open Dumpsites	X	X				
Palau	Koror	0.7	High (100% urban)	1	Engineered Disposal	X	X	X	X	X	X
Samoa	Upolu (Apia)	0.4	High (100% national)	1-2	Engineered Disposal	X	X	X	X		X
Solomon Islands	Honiara	0.9	Low (60% urban)	1	Open Dumpsites	X	X				
Tonga	Tongatapu	0.5	High (100% urban)	1	Engineered Disposal		X	X	X		X
Tuvalu	Funafuti	0.4	High (100% urban)	1-2	Open Dumpsites	X	X	X	X		X
Vanuatu	Port Vila	0.4	Low (50% urban)	3	Engineered Disposal	X	X	X	X		X

Engineered Disposal = landfills (sanitary and controlled dumps), **Open Dumpsites** = unregulated without any engineered environmental protection systems.

Data source: SPREP (2016). Cleaner Pacific 2025: Pacific Regional Waste and Pollution Management Strategy and ADB (2014). Solid Waste Management in the Pacific.

Some informal settlements receive healthcare services through programmes such as the Wellness Programme of the Ministry of Health in Fiji, but generally the number of local authority and state clinics and hospital beds is limited, with poor road infrastructure hindering quick and easy access. **A rising number of people within informal settlements suffer from non-communicable diseases (NCDs) such as diabetes and tuberculosis, that are responsible for most deaths before the age of 60, along with chronic conditions such as HIV/AIDS**. Climate-related disasters such as drought, floods and cyclones are also increasing cases of leptospirosis, typhoid fever, dengue and diarrhoea (LTDD). **This constitutes a triple health burden and co-morbidity that can increase vulnerability to COVID-19**, while individuals can also face stigmatisation and discrimination in attempting to access healthcare services that are being placed under increasing strain. Box 3 below provides a selection of results from UN-Habitat's COVID-19 Rapid Assessment Survey of COVID-19 in Fiji on access to healthcare and associated COVID-19 awareness.

Box 3: Access to healthcare and COVID-19 awareness in Fiji

Results from the **UN-Habitat COVID-19 SEIA Household Survey and Focus Group Discussions** undertaken in 14 informal settlements in Fiji indicated that:

- **Youth groups and community health volunteers spread awareness** and provided support for vulnerable groups such as the elderly, yet the size of some settlements made it challenging to reach all households.
- **66 percent of respondents were able to access their nearest healthcare facility in 15 minutes or less**, with limited money to access services and lack of transport impacting the ability of households to access the healthcare needed.
- **Knowledge and awareness of the main COVID-19 symptoms was limited**, with only 4 percent able to name the three most common symptoms, with TV and radio being the most common sources of information.
- **Prevention measures included handwashing, physical distancing and isolation**, but a large percentage of respondents only follow them sometimes, and women are more likely to follow recommendations on handwashing than men. A lack of money to buy soap and access to clean water were the main barriers to following recommendations, but over half reported no barriers, suggesting **poor awareness is a critical issue.**

Results of the CAPIS project in Fiji (Credit: UN-Habitat).

Based on these findings, the **COVID-19 Community Awareness and Preparedness in Informal Settlements project in Fiji (CAPIS)** implemented in partnership with UN-Habitat the Ministry of Housing and Community Development, helped to raise awareness and provide hygiene materials to households in 70 communities representing over 40,000 people. This involved strong and innovative engagement with youth, many of them unemployed, to share their experiences of COVID-19 through art. Establishing focal points within the community also helped to boost capacity for self-monitoring and communication between informal settlements and the government.

Regarding education, the majority of PICs have near universal enrolment at the primary school level, but this drops for secondary school, with disparities between urban and rural areas and larger class sizes in urban centres. In the Federated States of Micronesia, Yap, Pohnpei and Kosrae account for 2 percent of the population aged 6 who have never attended school, while in Chuuk (containing FSM's largest city) the figure is over 14 percent[45]. The frequently cramped and overcrowded conditions of those living in informal settlements with poor access to electricity and a reliable internet supply (the digital divide) makes it hard to perform home learning, compounded by the closure of schools for many months during COVID-19 State of Emergency measures. The additional burdens of domestic tasks and subsistence activities such as farming and fishing meant that many children, especially girls, had less time to continue their studies at home, along with less support from parents and carers who continued working to provide household income. **This will have significant long-term consequences for the achievement of education outcomes if children are unable to complete the curriculum.** A further concern is the nutrition status of those most exposed and vulnerable to the COVID-19 crisis such as children living in informal settlements. As schools closed due to the pandemic, school meal programs were suspended, significantly affecting low-income children's access to healthy and balanced diets[46].

D. Livelihoods and access to markets

Economic activity in the urban areas of many PICs represents over half of national GDP. Many of those living in informal settlements work in the informal sector, retaining their rural-urban linkages through subsistence agriculture and local produce, manufacturing and handicrafts. Even households reliant on wage-based salaries are often unable to meet their basic needs and so supplement their income with the direct production of goods. **In countries such as Fiji, the informal sector is estimated to constitute approximately 20 percent of the national economy and 60 percent of the working age population**, even greater in Samoa (68 percent) and Solomon Islands (85 percent)[47]. A large proportion of women working in the informal sector are farmers,

[45] SPC (2015). Federated States of Micronesia 2013-14 HIES: education.
[46] ADB (2020). Navigating Covid-19 in Asia and the Pacific.
[47] ILO (2017). Improving labour market outcomes in the Pacific: Policy challenges and priorities.

playing a significant role in land-based food production. They may be assisted by male relatives, but women usually have prime responsibility for selling produce that they raise. In urban areas, most women are involved in the informal economy, and they comprise the largest proportion of traders, often 75 percent or more. While many can operate from home, food vendors depend on access to urban markets to sell their produce for cash. These provide more than just food and a source of income for vendors, with a **strong multiplier effect** for other support work including transportation and processing. For example, Honiara's Central Market is estimated to provide livelihoods and household incomes for around 20 percent of the population[48].

With already poor local trade between the outer islands and urban areas in some PICs such as Tonga and Tuvalu due to insufficient market outlets and high transport costs, the mobility and social distancing restrictions imposed by COVID-19 led to significantly reduced earnings. This will affect the wider urban and rural economies and ability of informal dwellers to buy food and other necessities for themselves and their families. UN-Habitat household survey results from Fiji indicate that 45 percent of households had one member that lost their job, with 84 percent of households reporting a loss of income. **This was almost 50 percent of the pre-COVID level for almost half of the households, representing a 26 percent increase in households falling below the poverty line.** The results from the Solomon Islands show that **women are disproportionately affected**, with a 52 percent drop experienced by female headed households versus 39 percent for male headed. In Samoa, restrictions on the number of passengers and reduced public transport services in addition to the ban on street vending in Apia meant that informal and casual workers lost income and are not covered by social protection measures such as the Samoa National Provident Fund (SNPF)[49].

As noted previously in Section 2i, the formal economy of many PICs is dominated by the trade and tourism industry which have been severely impacted by the border closures since March 2020. Hotels and catering firms have laid off or are planning to lay off workers, while those that sell to tourists in the craft industry, vendors and agricultural workers that supply food for hotels and restaurants have also been affected. In this context, the importance of informal incomes becomes even greater while generating greater pressure for a limited number of jobs.

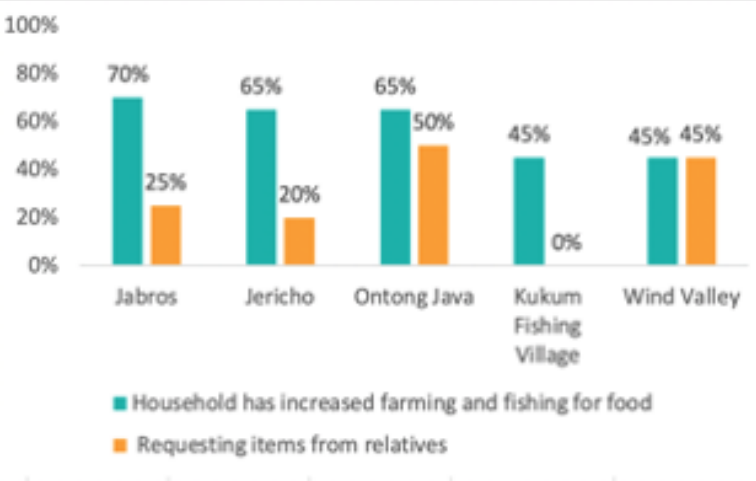
The closure of schools and education facilities due to COVID-19 State of Emergencies has further impacted women, many of whom are informal traders and conduct the bulk of unpaid care work and so have less time to participate in economic activities. If a health emergency requires long term social distancing in markets, this will severely impact on the earnings of women traders as they will be displaced or rostered off to reduce the density of market activity. **Youth unemployment, already high in the PICs, is expected to double from 2019 figures**,

[48] Keen, M. and Ride, A. (2018). Markets Matter: ANU-UN Women Project on Honiara's Informal Markets in Solomon Islands. http://dpa.bellschool.anu.edu.au/sites/default/files/publications/attachments/2018-04/ib2018_9_keen_and_ride.pdf

[49] COVID-19 Socioeconomic Response Plan, United Nations in Samoa, August 2020.

especially as many are self-employed or work in the informal sector with less protections[50].

Box 4: The *wantok* system during COVID-19



Traditional forms of social protection by settlement in the Solomon Islands survey.

In the Solomon Islands and Vanuatu, traditional and community-based social support systems provided by churches and the *wantok* system have been essential for many vulnerable groups facing job losses and a lack of income to buy essential goods and services. **The UN-Habitat Solomon Islands SEIA Household Survey reveals that this varies significantly between informal settlements**. Whereas in some settlements up to half of households relied on receiving items from relatives (Wind Valley, Ontong Java), in others it is not practiced at all (Kukum Fishing Village). This suggests some either have resources such as food easily available and can practice subsistence farming and fishing or have sought independence from village-based systems through alternative support measures such as remittances, which are growing in significance as a form of informal social protection in other countries[51]. **In either case, there remains a risk that with increased poverty and unemployment due to COVID-19, families will be increasingly unable to reciprocate their social obligations** and so lose access to the traditional social and economic benefits of extended relations with the village.

The loss of income and employment has in some cases led to a return to locally produced goods and services through informal mechanisms that have stepped in to fill the gap left by the closure of formal services. In Fiji, almost 20 percent of citizens have joined the online group Barter for Better Fiji, exchanging goods such as fresh produce for construction, legal and medical services. In other activities, financial support has been provided or activities shifted to where there is greater demand such as the production of protective equipment.

[50] ILO and ADB (2020). Tackling the COVID-19 youth unemployment crisis in Asia and the Pacific.
[51] Richard P. C. Brown, John Connell, Eliana V. Jimenez-Soto (2013). Migrants' Remittances, Poverty and Social Protection in the South Pacific: Fiji and Tonga.

Formal fiscal and policy measures introduced by governments to help mitigate the impacts of the crisis include economic stimulus packages, targeted social protection and cash transfer programs, tax reductions and loan support. In Fiji, the government introduced two major stimulus packages including unemployment assistance, tax and tariff cuts and a holiday program for loan repayment, with several countries including Tonga, Vanuatu and Samoa announcing a moratorium on loan payments to help businesses avert bankruptcy. **Importantly most of these formal social protection measures and stimulus packages do not cover those working in the informal sector**, risking a reversal of a decade of hard-won progress in reducing poverty in the region[52]. Less than 5 percent of the poorest population are covered by social assistance programmes in the Federated States of Micronesia, Kiribati and the Solomon Islands[53]. 69 percent of respondents in the Solomon Islands SEIA HHS reported receiving no form of government financial relief to support reduced income as a result of COVID-19. **In this context, kinship networks and strong community structures (known as *veiwekani* in Fiji, *fa'a Samoa* in Samoa, or *wantok* in Vanuatu and the Solomon Islands) within informal settlements provide a limited safety net in times of hardship**. As demonstrated by the examples from Vanuatu and the Solomon Islands in Box 4, they provide reciprocal benefits in terms of personal security, property protection or childcare, where many retain strong cultural links to the outer islands and rural homes. Strong engagement working with and through these community organisations is critical for boosting community resilience, solidarity and recovery.

E. Food security

Overall, food security has worsened over the last half century in the Pacific. Agriculture, fisheries and local food production have declined, except in the most remote islands[54]. **Increased urbanisation and the associated shifts away from traditional and subsistence food production systems has led to greater dependency on commercial markets and imported food in most PICs, with some better able to meet basic diet and nutritional requirements than others (see Table 7).** In the Solomon Islands, subsistence production and sales of food contribute only 7 percent to household income in Honiara for instance but 71 percent in Isabel Province, a similar trend for many other PICs such as Kiribati, Samoa, Tonga and Tuvalu[55], suggesting that urban areas are more reliant on purchasing food.

[52] ADB (2020). Navigating Covid-19 in Asia and the Pacific.
[53] UNESCAP (2020). Asia and the Pacific SDG Progress Report 2020.
[54] Connell, J. (2015). Food security in the island Pacific: Is Micronesia as far away as ever?
[55] ADB (2011). Food Security and Climate Change in the Pacific.
https://www.adb.org/sites/default/files/publication/29078/climate-change-food-security.pdf

Table 7: Proportion of own production in food consumption (households in lowest income/expenditure decile) for a selection of PICs.

Samoa	2002	2008	% Change
National average	45.8	48.3	5
Apia urban area	15.9	17.6	11
North-West Upolu	49.3	47.7	–3
Rest of Upolu	57.6	57.2	–1
Savai'i	57.4	56.9	–1
Tonga	**2001**	**2009**	**% Change**
National average	20.2	32.7	62
Nuku'alofa	5.55	9.2	65
Rest of Tongatapu	16.9	28.3	68
Other islands	33.6	46.5	38
Tuvalu	**2004–2005**	**2010**	**% Change**
National average	50.9	46.2	–11
Funafuti	16.2	9.1	–44
Outer islands	64.4	67.3	4
Vanuatu	**2006**	**2010**	**% Change**
National average	51.8	62.4	20
Port Vila (urban)	10.2	15.8	55
Luganville (urban)	29.7	26.4	–11
Rural	66.9	70.9	6

Source: UNDP. 2014. *The State of Human Development in the Pacific - A Report on Vulnerability and Exclusion in a Time of Rapid Change.* Suva (p. 13).

Lower quality and greater processed food over higher-priced, better-quality foods and limited cultivable land for food production has worsened nutrition, creating an increase in NCDs such as obesity, heart disease and diabetes. **In at least 10 of the PICs, more than 50 percent of the population is classed as overweight** (the highest in Nauru where 72 percent of men and 77 percent of women are classified as obese[56]), making people more vulnerable to COVID-19 due to such underlying health conditions and comorbidities.

The effect of COVID-19 on reduced accessibility and affordability of commercial markets and imported food due to fluctuations in prices are expected to significantly impact the food security of these populations, especially as the urban poor often spend up to 70 percent of their income on food. For instance, average food prices

[56] UNICEF (2017) Situation Analysis of Children in Nauru. https://www.unicef.org/pacificislands/media/1161/file/Situation-Analysis-of-Children-Nauru.pdf

increased up to 12 percent in March 2020 compared to the year before in Samoa[57]. A similar pattern was observed in the surveys conducted in Micronesia, where respondents noted an increase in the price of rice and tinned fish[58]. **In Fiji, 37 percent of informal settlement households were worried the basic food items they had would run out before they could purchase more**[59]. 24 percent said they had skipped meals, even greater in the Solomon Islands at 54 percent, with reports of people stealing food from urban kitchen gardens. **This places many more at risk of food insecurity and undernourishment, especially with growing vulnerability to climate-related hazards such as droughts, water shortages, erosion and salinisation**. For example, 90 percent of the land in Nauru has been left uncultivable, with the remaining land available for agriculture being in the coastal flat vulnerable to coastal erosion and sea level rise[60].

Box 5: The role of urban and peri-urban agriculture for food security during COVID-19

The Home Gardening Program in Fiji (Credit: Ministry of Agriculture and Livestock).

In Tuvalu, limited access to land, poor soil conditions and climate-related hazards has impacted the ability to grow crops and so the country is highly reliant on imports for fresh and processed foods. As part of contingency plans and the COVID-19 blueprint for action **(*Talaaliki* Plan)**, the government has encouraged urban agriculture to boost food security through the distribution of seedlings to plant on available land by the side of houses, in addition to the rationing and sharing of food supplies and training in food preservation. A similar scheme **(Home Gardening Program)** in Fiji distributed over 11,000 seed packages as of April 2020, while in Vanuatu the **COVID-19 Food Security Response Plan** has promoted backyard

[57] Samoa Bureau of Statistics, Local Market Survey, March 2020 https://www.sbs.gov.ws/images/sbs-documents/Economics/local-market-survey/2020/Local_Market_March-2020.pdf

[58] SPREP PROE (2020). COVID-19 impacts on Fishing and Coastal Communities, 3rd update, 15 June 2020 https://pipap.sprep.org/content/covid19-impacts-fishing-and-coastal-communitiesupdate-3-federated-states-micronesia

[59] UN-Habitat (2020). Rapid Assessment of COVID-19 in Informal Settlements in Fiji.

[60] Government of the Republic of Nauru (2019). Voluntary Review on the Implementation of the 2030 Agenda.

gardening with seedlings of root crops and vegetables. Bush gardens are also an important supplementary food source for 70 percent of households in the greater Port Vila area, Vanuatu. While these initiatives and investments to boost local food security and healthier diets are welcome, **access to land remains a major barrier with continued city growth and new developments limiting the accessibility and ability to grow crops.** The additional implications of increased pressure on natural resources such as water and the land also need to be managed to prevent over-extraction, along with climate sensitivity to ensure the continuation of food supplies in the event of storms and flooding.

For some PICs however, (peri)urban populations with better access to land and the ocean can supplement their diets with kitchen gardening and fishing. For this reason, they are better able to cope with decreases in cash income and poorer access to markets. For example, in South Tarawa, Kiribati, subsistence contributes to one third of food consumed by poorer urban households[61] . Urban farming and agriculture have been encouraged in many countries with the distribution of seedlings for short-term crops to promote greater self-sufficiency. Additionally, the systems of reciprocity and community structures mentioned earlier have been essential in complementing government work, such as the Kastom Garden Association in the Solomon Islands which supports *sup sup* gardens (backyard plots) in Honiara settlements, with over 3000 members of its Planting Material Network for seeds and fertilisers[62]. **Combined with mobile markets this can also support rural and peri-urban livelihoods to reduce per capita rates of resource use and disparities between rural-urban and inner-outer islands, leading to increased resilience and sustainability (see Box 5).**

F. Climate Change and Urban Areas

F.1 Urban Climate Vulnerabilities

The PICs are among the most vulnerable countries in the world to the risks of climate change and natural disasters, often exposed to multiple hazards such as tropical cyclones, droughts, floods, sea level rise, heat, and ocean acidification among others. The prosperity, stability, and security of Pacific countries will be compromised by the impacts of changing climate, even more given the fact that in some cases sea-level rise could lead to the complete submersion of low-lying islands[63]. Thus, many governments consider climate change as a priority issue[64].

[61] ADB (2016). The Emergence of Pacific Urban Villages: Urbanization trends in the Pacific Islands.
[62] Inside Story (2020). Smart Harvest. https://insidestory.org.au/smart-harvest/
[63] Mimura, N., Nurse, L., Mclean, R.F., Agard, J., Briguglio, L., Lefale, P., Payet, R. and Sem, G. (2007) Small islands. Climate Change 2007: Impacts, Adaptation and Vulnerability, Chapter 16. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.
[64] ADB (2011). Food Security and Climate Change in the Pacific.

The underlying vulnerabilities to COVID-19 and these hazards are similar as they range from non-sustainable livelihoods, lack of access to infrastructure and basic services, crowding in informal settlements and lack of open spaces. Some key climate challenges facing Pacific communities are driven by[65]:

Climate variability and extremes: variations in El Niño-Southern Oscillation (ENSO) pattern and seasonality of annual rainfall creating drought, the increased incidence of severe storms and cyclones.

Longer-term climatic change such as:

- **Increases in temperature:** impacting biodiversity, water resources and crop yields.
- **Sea-level rise:** contributing to salinisation of agricultural lands and water resources, accelerated erosion and increased storm surges and floods.
- **Ocean acidification:** impacting coral reefs, fish stocks and marine ecosystems.

In many of the countries, natural barriers against storm surges and cyclones such as mangroves are also being removed to accommodate urban development and agriculture, using "hard measures" that accelerate erosion and increase runoff.

Given existing deficits in urban infrastructure, housing and service provision, informal settlements face the greatest exposure to external shocks and stresses, the majority located in low-lying coastal areas susceptible to sea-level rise and cyclone impacts or along riverbanks. Disruptions to livelihoods (especially those that depend on natural resources, largely performed by women), food security, water supply and sanitation due to climate-related impacts have strong overlaps with those of COVID-19 and other communicable diseases, contributing to the greater incidence of urban poverty.

Temperature variation and changes to rainfall patterns are expected to increase the incidence of waterborne diseases such as cholera, typhoid and dengue fever. The impact of climate change will also be particularly significant for coral reefs[66], with their degradation due to ocean acidification and pollution having direct and indirect impacts on the economy and livelihoods, while reducing the protective role they play for coastal areas[67]. For example, in Palau during the 1998 El Niño event, a massive coral bleaching killed one-third of Palau's coral reef, causing annual tourism revenues to drop by 9 percent and the local economy to lose an estimated $91 million[68].

When both pandemic and climate disaster strike at once, as occurred in April 2020 with Tropical Cyclone Harold and December 2020 with Tropical Cyclone Yasa, these

[65] WHO (2016). Sanitation, Drinking-Water and Health in Pacific Island Countries: 2015 Update and Future Outlook.
[66] Fischlin, A et al. (2007) Ecosystems, their properties, goods and services. Climate Change 2007: Impacts, Adaptation and Vulnerability. Fourth Assessment Report of the IPCC.
[67] Hugues, T.P. et al. (2018) Global warming transforms coral reef assemblages. Nature, vol. 556, p.492–496.
[68] ADB (2011). Food Security and Climate Change in the Pacific.

linkages are thrown into stark relief. Making landfall on the Solomon Islands before hitting Vanuatu, Fiji and Tonga, TC Harold displaced and left homeless many thousands of people who struggled to maintain social distance in evacuation shelters, access safe water and sanitation for proper hygiene. The associated loss of crops has impacted food security and incomes, while creating a recent surge in dengue fever, with around 4,000 cases reported in Fiji and the Marshall Islands[69]. Those that have lost their homes due to the cyclone and employment resulting from the pandemic will be the most affected, particularly women who face the extra burden of care and recovery needs, along with greater gender-based violence due to proximity and lack of lighting in the shelters[70]. **Box 6 provides further evidence of these dual impacts from the perspective of Vanuatu.**

Resilient development, accounting for future risk scenarios and existing deficits in basic infrastructure, resources and human capacity, has made some inroads towards building a more integrated approach. The Republic of the Marshall Islands and Tuvalu are using scientific risk assessments as the basic for infrastructure investments and long-term adaptation plans to protect vulnerable coastlines and communities, while in Kiribati strengthened local capacities for adaptation have helped to better protect and manage mangroves and coral reefs[71]. UN-Habitat's Resilient Informal Settlements project in Fiji and Climate Resilient Honiara project in the Solomon Islands have helped to mainstream and strengthen local awareness and capacity to implement a range of resilience actions at the community, neighbourhood and city levels, with a particular emphasis on the most vulnerable including youths, women, the elderly and those with disabilities.

[69] Global Citizen (2020). The Pacific Is Dealing With a Dengue Fever Outbreak Amid COVID-19 and Tropical Cyclone Harold. https://www.globalcitizen.org/en/content/pacific-dengue-fever-outbreak-covid19/

[70] ReliefWeb (2020). Tropical Cyclone Harold and COVID-19: a double blow to the Pacific Islands https://reliefweb.int/report/fiji/tropical-cyclone-harold-and-covid-19-double-blow-pacific-islands

[71] Pacific Islands Forum Secretariat (2020). The 2020 Biennial Pacific Sustainable Development Report.

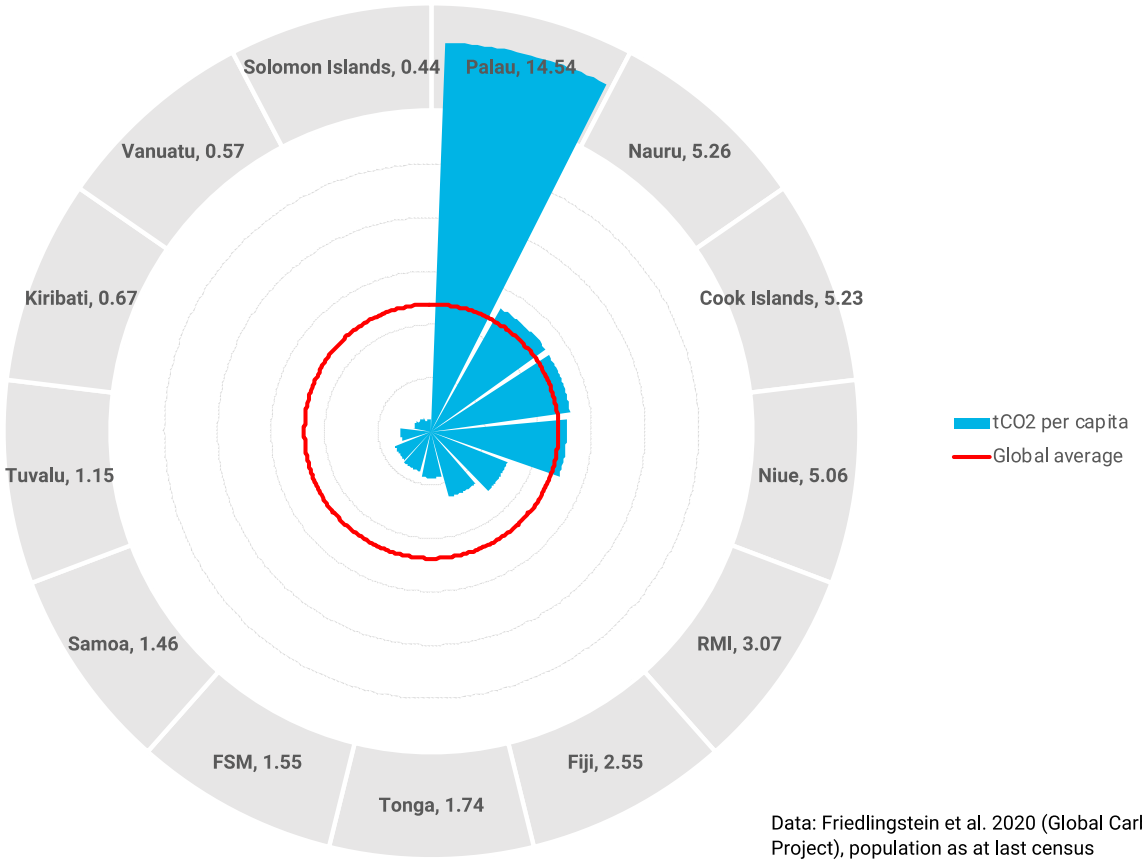
Box 6: Cyclone Harold and COVID-19 in Vanuatu

In April 2020, TC Harold hit Vanuatu at peak intensity with winds up to 183 mph, destroying between 80 and 90 percent of homes on the island of Espiritu Santo where the second city of Luganville is located. This was the largest natural disaster to affect Vanuatu since Cyclone Pam in 2015 and led to the initial displacement of an estimated 80,000 people (over 27 percent of the nation's total population), with over 160,000 people or more than half the total population affected by the disaster[72]. As of June 2020, up to 53 percent of those displaced did not have access to safe drinking water and 37 percent reported a lack of access to food, with damage to more than 175,000 hectares of cropland[73]. Difficulties in maintaining social distancing and access to water and sanitation in the shelters significantly increased the risk of disease spreading and made it difficult for marginalised groups such as people with disabilities to access essential aid.

Damage to homes and crops in Vanuatu (Credit: Dan McGarry/The Guardian).

The state of emergency placed restrictions on international and inter-island travel, preventing a typical international humanitarian response. The reduced presence of international actors brought about a shift to a more localised approach through Provincial Emergency Operations Centres established after Cyclone Pam, guided by local needs and leadership, with communities and traditional governance structures such as the National Council of Chiefs raising funds and collecting relief items[74]. A joint report by the Australian Red Cross, Humanitarian Advisory Group and Institute for Human Security and Social Change found that 66 percent of national and local actors in the Pacific report to have received an increase in funding in the wake of COVID-19 in addition to the increased involvement of women and young people. **This represents what they call a 'window of opportunity' to learn from and adopt new practices and locally led approaches[75] with greater capacity building**. The need for fully integrated climate change, disaster and pandemic risk management, however, is still apparent, with restrictions on supplies and travel due to COVID-19 and disinfection measures significantly delaying the distribution of supplies, along with limited availability of local food and non-food items. **The emphasis on emergency response to COVID-19 and TC Harold at the expense of integrating longer-term climate change resilience into these responses e.g., in housing reconstruction, also limits the successful ability to mitigate against future cyclones and pandemics.**

F.2 Urban Energy and Greenhouse Gas Emissions



Data: Friedlingstein et al. 2020 (Global Carbon Project), population as at last census

Figure 2: National 2019 carbon dioxide emissions for the PICs in tonnes per capita.

COVID-19 border closures and lockdowns are estimated to have reduced daily global carbon dioxide (CO2) emissions by 17 percent in early April 2020 compared to 2019 levels[76], with a resulting fall in global energy demand and air pollution levels in many major cities. It is essential to ensure this rate of decline does not remain temporary but accelerates towards achieving climate-resilient and low-carbon economies without sacrificing jobs and livelihoods (many of which already face the growing impacts from climate change), to achieve a just transition.

[72] Reliefweb (2020). Issue Brief: A new vulnerability: COVID-19 and tropical cyclone Harold create the perfect storm in the Pacific. https://reliefweb.int/report/vanuatu/issue-brief-new-vulnerability-covid-19-and-tropical-cyclone-harold-create-perfect

[73] National Disaster Management Office and the International Organization for Migration (2020). Displacement Tracking Report Vanuatu, Tropical Cyclone Harold June 2020. https://reliefweb.int/sites/reliefweb.int/files/resources/Displacement%20Tracking%20Report%20TC%20Harold%20-%20June%202020.pdf

[74] Theinterpreter (2020). Vanuatu: A real test for local emergency response. https://www.lowyinstitute.org/the-interpreter/vanuatu-takes-emergency-response-amid-covid-19

[75] Australian Red Cross, Humanitarian Advisory Group and the Institute for Human Security and Social Change, La Trobe University (2020). A Window of Opportunity: Learning from COVID-19 to progress locally led response and development think piece. https://humanitarianadvisorygroup.org/wp-content/uploads/2020/11/A-Window-of-Opportunity-COVID-think-piece-24-November-2020.pdf

[76] Le Quéré et al. (2020). Temporary reduction in daily global CO2 emissions during the COVID-19 forced confinement. https://www.nature.com/articles/s41558-020-0797-x

Although the PICs contribution to the global carbon budget and therefore climate change is negligible, per capita rates of greenhouse gas emissions remain relatively high due to reliance on fossil fuels for energy generation. **The average carbon dioxide emissions per capita in 2019 for the PICs included in this report was 3.33 tons**, below the global average of 4.75 tons but with some outliers, notably Palau which has among the highest per capita emissions in the world at 14.54 tons. Broadly this corresponds to the level of economic development and living standards, with greater emissions corresponding to countries with among the highest GDPs' per capita.

Since urban areas account for the most economic activity, transport and buildings, they are also the largest emitters, with estimates that suggest cities are responsible for 75 percent of global CO2 emissions[77].

Table 8: Overview of the Energy Sector in the Pacific Island Countries and Associated Renewable Energy Targets.

PIC	Access to electricity (% of population, 2017)	Access to clean cooking (% of population, 2017)	Renewable Electricity generation (2018)	RE target	RE target by year
Cook Islands	100.0%	78%	26%	100%	2020
Fiji	96.0%	28%	60%	100%	2030
FSM	80.8%	9%	5%	>30%	2020
Kiribati	98.6%	<5%	17%	23-40%	2025
Marshall Islands	94.8%	64%	2%	20%	2020
Nauru	99.6%	90%	2%	50%	2020
Niue	100.0%	85%	14%	80%	2025
Palau	100.0%	>95%	2%	45%	2025
Samoa	96.8%	33%	42%	100%	2025
Solomon Islands	62.9%	9%	6%	79%	2030
Tonga	98.0%	51%	10%	50%	2020
Tuvalu	100.0%	42%	23%	100%	2020
Vanuatu	62.8%	8%	22%	100%	2030

Source: International Renewable Energy Agency (IRENA), Energy Profiles (2020). Renewable Energy targets from Nationally Determined Contributions (NDCs) and associated national laws and policies.

All the PICs are dependent on the import of expensive fossil fuels (accounting for 10 percent of PIC GDP[78]) such as diesel for electricity generation, transport and industry. This creates vulnerability to fluctuating market prices and supply disruption, while outdated power infrastructure, small economies of scale and limited generation capacity contribute to high electricity tariffs, transmission and distribution losses and

[77] UNEP. Cities and Climate Change. https://www.unenvironment.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change
[78] ADB (2016). Renewable Energy and Sustainable Development in Pacific Island Countries. https://www.adb.org/sites/default/files/publication/215216/adbi-pb2016-5.pdf

low electrification rates in many of the PICs. Transport (land, sea and air) accounts for the highest proportion of fossil fuel energy demand, primarily inter-island passenger and cargo services and fishing fleets. **Access to clean fuels and technologies for cooking also remains a key challenge**. An average of 46 percent has access to clean cooking (Table 8), with significantly lower access in Vanuatu, Solomon Islands, Kiribati and FSM. The use of biomass (plant-based materials such as wood) for cooking, heating and lighting worsens the effect of indoor air pollution on health and mortality rates. The collection of such material is predominately performed by women, yet they are underrepresented in the energy sector and their contribution to energy needs often goes unrecognised[79]. Although urban areas have comparatively higher access to electricity grid connections and more efficient fuel sources such as liquefied petroleum gas (LPG) than rural areas, **access to affordable, reliable and environmentally friendly energy supplies remain an issue for poor urban households and those living in informal settlements**, many of whom remain off-grid. Improved access is critical for increasing economic opportunities, improving access to communications and information technology, the delivery of health services, education, and is an important catalyst for the achievement of gender equality and women's empowerment.

The region is rich in renewable energy resources including hydropower, solar, and, to a lesser extent, wind. Renewable energy provides great potential to benefit energy security and self-sufficiency, increasing access to affordable and reliable electricity and supporting climate change mitigation by reducing greenhouse gas emissions in addition to green job creation. Samoa has commissioned its first 750-kilowatt biomass gasification plant,[80] and Fiji has signed an agreement to build a 15MW solar power plant - the biggest in the Pacific Islands - which is expected to transition 14,000 Fijian households to solar energy[81]. As shown in Table 8, all the Pacific islands have relatively ambitious renewable energy targets, from a 20 percent to 100 percent transition to renewables, but current generation in most countries remains significantly below these targets. **Lack of finance and private sector participation, capacity shortages for operation and maintenance, poor sector regulation and the limited ability of local grids to cope with new sources of renewable power are key restrictions limiting uptake**[82].

Notable initiatives that have been established recently in attempts to improve access to finance include the **Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE)**. Launched in 2017 it aims to address existing barriers and strengthen drivers for sustainable energy markets, industries and innovation, especially through the private sector and industry[83]. The **Pacific Blue Shipping Partnership**, announced

[79] UN Women (2017). Gender and Energy in the Pacific. http://www.un-expo.org/wp-content/uploads/2017/05/SIDS_Brief_7_Gender_and_Energy_in_the_Pacific.pdf
[80] Samoa Observer (2020). Samoa commissions first biomass gasification plant. https://www.samoaobserver.ws/category/samoa/74408
[81] Renew Economy (2020). Fiji set to build biggest solar project in Pacific Islands. https://reneweconomy.com.au/fiji-set-to-build-biggest-solar-project-in-pacific-islands-37084/
[82] ADB (2019). Pacific Energy Update 2019. https://www.adb.org/sites/default/files/institutional-document/545686/pacific-energy-update-2019.pdf
[83] SPC (2017). Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE). https://gem.spc.int/projects/pcreee

in 2019 by the governments of Fiji, Marshall Islands, Samoa, Vanuatu, the Solomon Islands and Tuvalu, set an emissions reduction target for shipping in the Pacific of 40 percent by 2030 and full decarbonization by 2050, requiring at least $500m to support implementation[84].

[84] The Guardian (2019). Pacific islands seek $500m to make ocean's shipping zero carbon. https://www.theguardian.com/environment/2019/sep/24/pacific-islands-seek-500m-ocean-shipping-zero-carbon

03 Way forward and recommendations

Addressing the short, medium and long-term response to the socioeconomic impact of the pandemic will require a **multi-sectoral, multi-stakeholder approach** enabling the participation and engagement of every citizen, particularly vulnerable groups such as women, older persons, people with disabilities, and the urban poor. It will be fully aligned with the following global and regional goals and strategies:

1. **UN framework for the immediate socio-economic response to COVID-19**
   - WASH and shelter for the poorest and most vulnerable population groups.
   - Generating and integrating community-data, broader data and monitoring platforms as a basis for advocacy, high-quality analysis and course correction.
   - Empowering and connecting the diversity of community-based organisations and networks into community-led response systems.
   - Engaging communities to advocate, change policies and ensure human rights and transformative gender approaches.
   - Connecting formal and informal governance mechanisms and community-level and urban resilience.
   - Building back better: emergency support on social protection and basic services as a starting point to build more resilient, robust, gender-responsive and inclusive labour markets and economies in the long-term.

2. **UN-Habitat's COVID-19 Policy and Programmatic Framework** and 8 entry points:
   - Adapting response to urban areas.
   - Mapping, use of smart technologies for urban monitoring to support informed coordination and decision-making.
   - Promoting integrated community-driven responses in informal settlements and slums.
   - Mitigating economic impact and initiate recovery as early as possible.
   - Promoting active learning on policy measures and practices.
   - Mitigating the impact on access to adequate housing and promoting alternative solutions where needed.
   - Prioritising WASH interventions.
   - Keeping urban mobility safe and reliable.

3. **UN-Habitat's COVID-19 Response Plan** and action areas:
   - Support local governments and community driven solutions in informal settlements.
   - Provide urban data evidence based, mapping and knowledge for informed decision making.

- Mitigate economic impact and initiate recovery.

4. **IASC guidelines** e.g., Public Health and Social Measures for COVID-19 Preparedness and Response in Low Capacity and Humanitarian Settings.

5. **Pacific Urban Agenda (and by extension the New Urban Agenda)**
   - Enhancing **social equity** through housing and settlement upgrading programmes, building stronger partnerships across sectors especially national and regional housing and WASH programmes.
   - Improving efforts towards addressing **environment, resilience and urbanisation** through integrated climate change vulnerability assessments, actions to mainstream climate adaptation, resilience and low emission urban planning and appropriate infrastructure.
   - Building a stronger understanding of the **urban economy** for national economic development highlighting the importance of urban markets and the informal economy for the rural sector as well as outer islands and regional integration of the Pacific.
   - Strengthening **urban governance** through National Urban or Urbanisation Policies and ensuring towns and cities have an enabling local strategic policy and legislative framework, capacitated institutions, leaders and professionals.

6. **The 2030 Agenda for Sustainable Development** and the **United Nations Pacific Strategy**.

7. **Framework for Resilient Development (FRDP) in the Pacific**, supported by the Pacific Resilience Partnership (PRP). This identifies three interrelated goals to enhance resilience to disasters and climate change in the context of sustainable development and efforts to eradicate poverty:
   - strengthened integrated adaptation and risk reduction to enhance resilience to climate change and disasters
   - low-carbon development
   - strengthened disaster preparedness, response, and recovery.

Policy recommendations

The following policy recommendations are grounded in human rights principles including the **Right to Social Security and the Right to Adequate Housing** composed of seven dimensions, these being; (a) legal security of tenure (b) availability of

services, materials, facilities and infrastructure (c) affordability (d) habitability (includes overcrowding) (e) accessibility (by all groups including people with disabilities) (f) location (includes proximity to jobs and services) and (g) cultural adequacy. Adequate standards of living for all are a **precondition and cornerstone of the public health response**, ensuring that cities are better prepared for future shocks and stresses.

A one-size fits all approach cannot equally meet everyone's needs and can risk exposing already vulnerable groups to new forms of vulnerabilities. The following recommendations have been aggregated to the regional level and so must be tailored to country and citizen context.

1. Housing and informal settlements

1.1 In the immediate response:

1.1.1 **Make emergency funds**, including cash transfers, rent support measures and micro-insurance based on risk evaluation (and not work status), covering sickness, accidents and loss of earnings for those without social protection.

1.1.2 **Protect all residents, regardless of formality of dwelling, from evictions** and suspend disconnection of essential utilities for defaulting customers. Emergency measures need to account for wider economic drivers such as lack of social protections to ensure eviction and disconnection are not merely delayed into the future.

1.1.3 **Map and produce profiles of all informal settlements** considering movement/migration patterns, hazards, collecting gender-disaggregated data, in order to support informed coordination and decision-making, understand those most vulnerable within settlements to target support distribution, and better predict and mitigate the impact of future hazards.

1.2 In the medium- to long-term recovery:

1.2.1 Make investments in **resilient, affordable and accessible housing programmes and slum upgrading**, providing secure tenure and extending essential service coverage for all.

1.2.2 **Engage informal settlement communities in the socioeconomic recovery**, including through the diversity of community-based organisations, including faith-based organisations, to build a **community-led, green response** that reflects the needs and priorities of the poorest and most vulnerable including women, children, the elderly and disabled. In order to ensure success, formal (local government) and informal (community) governance mechanisms need to be connected.

1.2.3 Consider issues of **density, the protection of open space and resources** such as water as part of informal settlements upgrading, housing and urban design.

1.2.4 Support the creation of more **pro-poor, gender and culturally responsive and participatory land administration** and management including hybrid systems between state and custom so that those who do not have their land rights codified or recent migrants and non-property owners are not further disadvantaged in any urban upgrading schemes. This would also enable improved strategic planning for sustainable urbanisation in the long-term.

1.2.5 Engage formal and informal settlement communities in efforts to **end GBV** and support survivors.

2. Urban Basic Services

2.1 In the immediate response:

2.1.1 **Ensure health awareness raising activities, including those relating to COVID-19 symptoms and responses, reach informal settlements and all social groups** (considering age, gender, disability and education levels) through varied communication channels including TV, radio, social media, community contacts and reflect the role of informal health providers and traditional or religious medicine.

2.1.2 Provide **clear guidelines, protective equipment and remuneration to first responders and community healthcare volunteers** who will be the first to act in the event of any COVID-19 cases and are best to advise on existing facilities that could be repurposed for isolation.

2.1.3 Ensure **sufficient fiscal capacity** at the appropriate level of government e.g., through temporary national government subsidies for local governments to sustain essential public services including public transport.

2.2 In the medium- to long-term recovery:

2.2.1 **Ensure safe, green, accessible and affordable urban mobility and public transport for all**, recognising its essential role for economic activities (especially for market traders), access to health services and for long-term sustainable development.

2.2.2 **Strengthen multilevel governance** (including to the community level) and vertical coordination, providing institutional capacity to sustain critical public services through **National Urban or Urbanisation Policies**.

2.2.3 Provide **consistent engagement with all residents**, particularly marginalised and vulnerable groups such as the elderly, disabled, youth

and expand social protection schemes to ensure human rights and transformative gender approaches are maintained and strengthened.

2.2.4 **Scale-up essential services** including water, sanitation and solid waste collection systems that are affordable to low-income communities, particularly women performing precarious, intermittent and low-paid jobs, and reflect the need for resilience, given the impact of future climate shocks and stresses on the availability of freshwater supplies among other issues.

2.2.5 **Leverage the potential of digitalisation and the data revolution** to improve the delivery and accessibility of information and municipal services along with education while ensuring sufficient investment in digital infrastructure and training to ensure a reduction in the digital divide.

2.2.6 **Develop waste recycling and 3R + Return (Reduce, Reuse, Recycle) schemes** such as composting, behaviour-change programmes and expanded access to waste collection services to reduce backyard burning, illegal dumping and the pressure on landfills and dumps. This can also help to reduce GHG emissions and support agricultural development by improving the nutrition and physical properties of the soil.

3. Livelihoods and food security

3.1 In the immediate response:

3.1.1 **Encourage 'healthy', mobile markets and urban farming** on available land through seed distribution and community education programs to reduce the length of supply chains and reliance on imports, helping those on reduced or low incomes to maintain their food security. Healthier diets will also help to reduce the NCD burden in the longer-term.

3.1.2 Adopt **stimulus measures and social protection programmes** for SMEs and the informal economy such as subsidized capacity development (apprenticeships, business skills, technical skills), cash transfers, tax deferrals, subsidies.

3.1.3 Provide **free or subsidised childcare, care for the elderly, disabled and the ill** to reduce women's load of unpaid domestic and care work.

3.2 In the medium- to long-term recovery:

3.2.1 Build a stronger understanding of the urban economy in national economic development through **rural-urban linkages**, supporting the expansion of **urban markets which are essential for the rural sector** as well as outer islands and regional integration of the Pacific.

3.2.2 Support local innovation and economic development strategies which favour investments in **resilient and green livelihoods** and circular economy development, including women as workers and decision-makers, and which support the development of resilient and green infrastructure and services.

3.2.3 **Protect available space for agricultural production** through improved zoning and urban planning to prevent encroachment of development into these areas.

4. Urban Climate Resilience, Low Emission Development and Green Recovery

4.1 In the immediate response:

4.1.1 **Strengthen adopted disaster preparedness plans** for risks that may be exacerbated by COVID-19 and climate change such as the delivery of aid and humanitarian assistance and invest **in multi-hazard resilience building** that reflects the needs of women, people with disabilities and other marginalised groups.

4.2 In the medium- to long-term recovery:

4.2.1 Prioritise **ecosystem-based adaptation approaches** and decarbonization plans to ensure the reversal of biodiversity loss, using local capacities and labour to support replanting programs and urban clean-up initiatives.

4.2.2 Improve efforts towards addressing environment, resilience and urbanisation through **integrated participatory climate change vulnerability assessments**, actions to mainstream climate adaptation, resilience and low-emission urban planning and development.

4.2.3 **Develop bankable renewable energy projects** (hydropower, solar, wind) with the involvement of industry and the private sector for electricity generation, clean cooking fuels and lower-carbon transport options to increase energy security and affordability, mitigate against climate change and create green jobs.

4.2.4 **Increase government support for innovation and technical training** to enable the development and incubation of low-carbon technologies e.g., battery storage. Successful innovations may be marketed and exported elsewhere, helping to create new high-tech industries.

4.2.5 **Advance marine and coastal ecosystems preservation** by developing sustainable blue economies including sustainable tourism and fishing to create employment opportunities, enhance food security and limit import dependency.

4.2.6 **Anticipate and enable active community participation in plans for relocation** for those areas most at risk from sea-level rise and other climate impacts that cannot otherwise be achieved through adaptation or in-situ upgrading.