

# REDUCING COMMUNITY VULNERABILITY IN PACIFIC ISLANDS FORUM COUNTRIES: LESSONS FROM A PANDEMIC

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## ABSTRACT

The Oceania region is frequently under threat to natural disasters. In the event of a category 5 cyclone, under the FRANZ Agreement, France, Australia and New Zealand stand ready to coordinate disaster reconnaissance and provide relief assistance when requested by Pacific Islands Forum countries. Australia and New Zealand also provide financial assistance to Pacific nations to support their economic development. In 2020, the declaration of a pandemic by the World Health Organization prompted immediate border closures in Pacific countries. As a result, the relentless spread of the COVID-19 virus, evidenced in other parts of the world, has not been replicated as yet among these countries. Some Islands are still entirely free of infections. The remoteness of the many islands and atolls that characterise this region does afford some protection from COVID-19. Nevertheless, these developing, mostly small, island nations have not escaped the pandemic unscathed. Border closures and travel restrictions have affected tourism, supply chains, the agricultural sector, and food security. Pacific Islanders are resilient and ready to face these new challenges. However, the vulnerabilities underlined by the emergence of this new threat have revealed a continued need for assistance from Australia and New Zealand. This discourse examines community-based solutions drawing from secondary data sources, academic literature and practical examples, especially from the rural communities of Pacific nations. The paper addresses enduring vulnerabilities emphasised by the pandemic with reference to Nobel Laureate Amartya Sen's concepts of "capabilities", "functionings" and "freedom". The study seeks to demonstrate that developing "capabilities" that build or strengthen existing social capital, strongly aligned to traditional roots in Pacific Islands Forum nations, could lead to reducing vulnerabilities by building resilience that increases coping and adaptive capacities

*Keywords: capabilities, freedom, functionings, PIF nations, resilience, social capital, traditional roots, vulnerability.*

## 1 INTRODUCTION

An unrestricted lethal flu, disseminated by global travel, was predicted in 2006 and became a reality in 2020 [1]. In that same year, the World Economic Forum (WEF), with its global risk perception survey, identified that extreme weather and other environmental risks would dominate the world over the next ten years, in terms of likelihood and impact [2]. Among the world's regions, Oceania, which includes the Pacific Islands Forum (PIF) nations, is the most vulnerable to extreme weather events such as cyclones, earthquakes, volcanic eruptions and other environmental hazards [3], [4]. When COVID-19 was declared a pandemic in 2020 during the cyclone season, this new threat added to the vulnerability of the PIF countries [5]. The leaders of the PIF nations as signatories invoked the Biketawa Declaration, a framework in place for mounting a coordinated response to any regional crisis [6]. This declaration, issued in 2000 at the Kiribati forum, emphasises the Pacific way of co-operation [7], [8]. Since COVID-19 was unknown prior to 2020, there was no pre-prepared plan on how to respond to a fast-spreading virus [6]. The measles epidemic with its tragic consequences led to a hard-line approach to COVID-19, in Samoa. Perhaps, Samoa's experience prompted other PIF nations to respond similarly, imposing border closures, travel restrictions and social distancing measures swiftly [9].



The first cases of COVID-19 infections were detected in Fiji and Papua New Guinea (PNG) in March 2020. On 2 April, category 1 tropical cyclone (TC) Harold struck the Solomon Islands (SI), then gained strength to move on to strike Vanuatu as a category 5 cyclone on 5 April. Fiji was next in its pathway, at category 4 level of severity on 7 April, and finally Tonga as a category 5 cyclone on 9 April. This was the tail end of the cyclone season in the Southwestern Pacific. In the aftermath of the cyclone, there was a trail of death and an enormous amount of destruction, especially in Fiji and Vanuatu [5]. Under the FRANZ agreement, the four PIF nations requested the assistance of Australia, New Zealand and France who have, in circumstances of extreme weather conditions, coordinated disaster reconnaissance and relief assistance in the Pacific, since 1992 [10]. Due to the severe restrictions that had been placed to stem the spread of the virus, foreign humanitarian workers had been asked to return to their countries. In the wake of the cyclone, to manage the recovery process, Fiji, had little choice but to recall the humanitarian aid workers who now had to undergo a process of adequate quarantining, while in Vanuatu and Tonga, the borders remained shut [5]. The introduction of the strict restrictions was successful in containing the COVID-19 spread in most of the PIF nations. However, in the aftermath of the cyclone, timely humanitarian assistance was not forthcoming for all those affected [5]. Infections in Fiji increased to 18 after the cyclone and since then, in 1.5 years, cumulative infections recorded number approximately 49,500 with 544 deaths reported. PNG has currently recorded approximately 18,100 infections and 207 deaths. Both countries are still reporting new cases [11].

The cumulative total of infections for the SI is at 20, all related to returning passengers from the Philippines [5]. The Republic of Marshall Islands reported four infections, Palau five, the Independent State of Samoa one, and Vanuatu three infections, while no deaths have been recorded so far from any of these nations. Currently there are no new cases reporting either. Apart from the restrictions and the generally smaller populations than in Fiji or PNG, the remoteness of the many islands and atolls that characterise this region do afford some protection from COVID-19. The Kingdom of Tonga, the Republic of Kiribati, the Federated States of Micronesia and the much smaller nations, the Republic of Nauru and the island of Tuvalu have reported no cases at all [11]. Nevertheless, these developing and mostly rural island nations, engaged in subsistence living have not escaped the pandemic unscathed [12]. Meanwhile, the threat of extreme weather events continues to intensify and increase with inadequate attention being paid to climate policy by the rest of the world, while affected nations continue to become increasingly vulnerable [13]. In 2019, at the Tuvalu Forum, the collective voice of the PIF was strongest when the Kainaki II Declaration for Urgent Climate Change Action was issued as its key advocacy instrument [14].

The majority of the Pacific nations' population are located in rural areas. They have coped for centuries with severe cyclones that are now increasingly ferocious [4]. Their vulnerability and resilience addressing the damage from these storms will continue to be a challenge. However, the weaknesses within these economies, which have been underlined by the emergence of this new threat COVID-19, have revealed a continued and perhaps increased need for assistance from Australia and New Zealand in the immediate future. This analysis will focus on seven independent PIF nations, namely Vanuatu, Tonga, SI, PNG, Fiji, Kiribati and Samoa, four of which were struck by Tropical Cyclone Harold while dealing with border closures and severe social distancing restrictions to combat the spread of COVID-19. The aim of this paper is to address the enduring vulnerabilities emphasised by the pandemic and consider a new approach on how to build resilience within this new context of dealing with a health crisis of this nature in the midst of an extreme weather event. This discussion will explore community-based solutions drawing from various data sources, academic literature



and practical examples, especially from the rural communities of PIF nations. Referring to Nobel Laureate Amartya Sen's concepts of *capabilities*, *functionings* and *freedom*, the study seeks to demonstrate that strengthening or adding to "*capabilities*" that underlie existing social capital, which is strongly aligned to traditional roots, could lead to reducing the vulnerability of PIF nations during extreme weather events and other crises.

## 2 THE IMPACT OF COVID-19 ON SELECTED PIF COUNTRIES

Despite continuously facing extreme events, almost all of the PIF countries were underprepared. Their health systems are grossly underfunded and inadequate to cope with a transmission rate the magnitude of COVID-19. The expected goal of 4.5 health workers per 1,000 population is met by only 12 of the PIF nations. The global average per capita of health expenditure is US\$ 1,000 per annum, with 10 of the PIF countries spending less than US\$ 500 per annum [15]. Historically, influenza pandemics have had a devastating impact on the mortality rate in the Pacific Islands [16]. Thus, there was no alternative other than to shut down the borders to global air travel and prevent transmission of the virus to vulnerable populations [17]. However, keeping the virus at bay has come at a huge cost to these nations and the overall economic impact is likely to have a long-lasting impact, not just on individual nations but also on the region, and could result in a structural change for better or for worse.

### 2.1 International tourism and global air travel

Tourism is seen as a viable alternative livelihood in these Pacific nations and its collapse is having a devastating impact from which the industry may never recover. In Fiji, tourism accounts for 39% of GDP, and a third of the workforce either had their hours reduced or were laid off [18]. In Samoa and Vanuatu, with both nations heavily dependent on tourism, there have been no cruise ships from 2020, perhaps signalling the end of cruise ship tourism. In Samoa, 33 hotels and 131 of the 141 handicraft businesses were closed due to the restrictions [19]–[21]. In Tonga, tourism accounts for 25% of GDP and 21% of employment. As flight restrictions affected tourism, the Tongan Government established a national carrier to service its outer islands following the cessation of a private domestic carrier [22].

The national carriers of most PIF nations have been affected or will be affected due to the lack of traffic or restrictions in air travel. Air Niugini, after three years of losses, was just moving into profitable territory. Air Kiribati has invested heavily in two aircraft costing approximately half of the country's GDP. The carriers of Vanuatu and the SI are in a similar situation. The Samoan Government has cancelled the operating lease of its airline and Fiji Airways flights to Samoa [23]. Due to the remoteness of the islands and atolls, national carriers, heavily subsidised by the respective governments, are a necessity. Perhaps the most affected is Samoa, with no way out except with Air New Zealand and an underutilised newly rebuilt international airport. The region's most vulnerable and smallest nations are located in the Pacific. The mortality rate in Oceania during the 1918 influenza pandemic was 22% [24]. Thus, from a regional perspective given Oceania's vulnerability to global disease threats, the future of the airline industry in these nations seems grim.

### 2.2 Labour mobility, seasonal worker programs and remittances

Australia and New Zealand as PIF members have long supported the weaker economies of the PIF with mutually beneficial bilateral arrangements, allowing Pacific Islanders access to higher paying work opportunities in their more dynamic labour markets. Migrant and seasonal workers from the Pacific, through the Seasonal Workers Program (SWP) and the



Pacific Labour Scheme (PLS) in Australia, and the Recognised Seasonal Employer (RSE) scheme in New Zealand, generally find low-skilled but better paid employment in the agriculture sector. When COVID-19 emerged, many workers were stranded in Australia and New Zealand while others could not access their regular seasonal employment. These migrant and seasonal workers from the Pacific number around 25,000 in Australia and New Zealand, and remittances to the Pacific nations are an important source of income support [25] to their families.

In Fiji, remittances form the second largest source of foreign exchange [18] next to tourism and are expected to fall, whereas in Samoa, remittances [19] had already fallen to a low of 16% in 2019 and was expected to fall further in 2020. Tonga [22] is also extremely reliant on remittances, which account for 38% of GDP, while for the past 15 years, remittances were approximately 10% of GDP in Kiribati [26]. In PNG, the population was able to rely more on subsistence agriculture in comparison to other nations and thus it was possible to rely less on remittances after COVID-19 materialised [25]. PNG also has a large informal sector and, given its land mass, most urban householders maintain a “home garden” for cultivating staple food and “greens”. There are many Papua New Guineans resident in Australia under the Pacific Labour Scheme. Of the migrant workers and families in Australia, the highest rate of unemployment for those aged 15 and over is among those from PNG, the SI, Tonga and Samoa [25], [27]. Both SI and Vanuatu experienced reduced remittances and rising unemployment [28], [29].

### 2.3 The agricultural sector supply chains and food security

Pacific countries were dependent on food imports prior to the onset of COVID-19. Additionally, rural production of staple foods looked to the urban areas and larger islands as sources of revenue. As markets closed in urban areas, the availability of fresh fruit, vegetables and other staples from rural areas decreased. Further, as international agricultural trade was blocked, flows of imported staples to urban areas were no longer available. With dwindling or no supplies of locally grown or imported staple foods in urban areas, most residents either returned of their own will or were encouraged to return to rural areas. In Vanuatu and in the Solomon Islands, urban residents, especially those working in the informal sector, were encouraged to move closer to food sources [30]. The increased demand for food in rural areas has led to increased production of staples and vegetables in home gardens. In Fiji and the Solomon Islands, the return of urban dwellers has increased agricultural production, but at the same time complaints have arisen regarding theft of land and unsustainable farming practices [31]. In Samoa and Tonga there are labour shortages as not all migrant workers were able to return home due to the border closures. The increase in home gardening is a positive impact in PNG and especially in the SI with favourable conditions for growth and the majority engaged in some form of agricultural production [25], [32]. Where migrants have returned, there is reduced access to limited resources like water, food and planting material. In Kiribati, although 42% is agricultural land, this nation is more dependent on fisheries, which make up approximately 10% of GDP [30].

### 2.4 The overall economic impact of COVID-19 and TC Harold in 2020

Fig. 1 [33] illustrates year-on-year changes in real GDP growth rates in 2019, and 2020 and GDP per capita PPP in international dollars in 2020, for the seven PIF nations. Real GDP growth rates increased in 2019 in all the PIF nations except Fiji, where the economy shrank by 1.3%, due to declining business confidence after an election in 2018 [34].



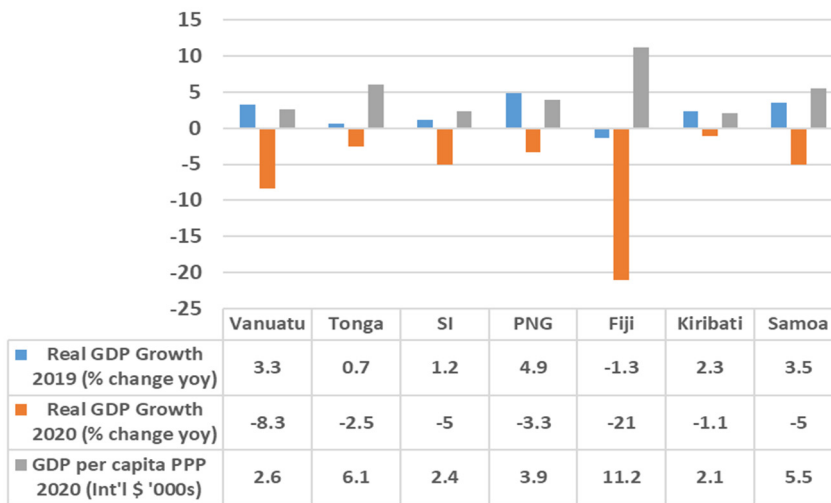


Figure 1: Real GDP growth percentage change year on year and GDP per capita PPP International \$ [33].

The Fijian economy shrank by 21%, the highest decline in 2020. Falling business confidence was exacerbated by spiralling infections, deaths, a lockdown stifling economic activity, and TC Harold. Economic activity declined by 8.3% in Vanuatu, and by 5% each in SI and Samoa. With no deaths and negligible infections in these three economies, the lockdown and TC Harold affected Vanuatu. Similarly, the lockdown combined with extensive floods damaging agricultural land, accounts for the decline in SI. In 2019, unlike in SI where the increase was marginal, the economies of both Vanuatu and Samoa expanded by 3.3% and 3.5% (Fig. 1). However, in 2019 the measles epidemic [9] caused a 6-week lockdown in November in Samoa. In 2020, Samoa was affected only by the border closures and restrictions that, by disrupting links to global value chains, caused job losses in the business sector as well as labour shortages in the agricultural sector [35]. The Tongan economy, though affected by the lockdown as well as by TC Harold at category 5 level of intensity, shrank by only 2.5% (Fig. 1).

PNG performed best in 2019, expanding by 4.9%. Further, the economic impact of the lockdown and cumulative infections and deaths are lower than in Fiji. The economy shrank by only 3.3%, in 2020, performing better than Fiji, Vanuatu, SI and Samoa. PNG has the advantage of both rural and urban residents having access to land and engaging in home gardening. Considering the size of PNG's population, the spread of the virus is not extensive (Fig. 1) [25]. In Kiribati, a remote small island nation, despite border closures, flights for humanitarian purposes have been allowed [26]. As a result of the lockdown, the Kiribati economy shrank by 1.1% (Fig. 1), but subsistence farmers have required assistance, which was provided as training to improve vegetable and fruit production, and local fruit tree cuttings to expand home gardens and produce for sale [36]. PPP in international dollars for all seven nations, reflects a comparison of the standards of living. Not surprisingly, the standard of living is highest in Fiji, the most developed among the seven. In Samoa and Tonga, the higher standards reflect the support received through remittances from kinfolk, which was experiencing a boom prior to 2020 [37].

### 3 VULNERABILITY, SOCIAL CAPITAL AND RESILIENCE

The Kainaki II declaration emphasises the vulnerability of PIF nations to climate change, which is high on their agenda for action. Except for Samoa, six of the selected nations rank among the top 20 countries in the world with the highest overall risk of experiencing extreme weather conditions (Table 1). From these six, except for Kiribati ranked at 22, the other five rank among the top 20 with highest exposure to risk. Overall risk, as defined [3], is the interaction of vulnerability and exposure to risk. Vulnerability is assessed as the mean of susceptibility, coping and adaptive capacity. Examples of susceptibility are the lack of infrastructure, food supply or other economic framework conditions, with a likelihood of suffering. Coping capacity indicates the ability to address the negative consequences of weak governance, poor health care systems and the lack of material security, while adaptive capacity refers to competence in initiating long term strategies for societal change, addressing challenges such as future natural hazards or climate change [3].

Table 1: Environmental risk, population distribution and land [3], [33].

Country	Risk ranking			2019 rural population % of total	2019 total population '000	Agri land '000 km <sup>2</sup>	Total land '000 km <sup>2</sup>
	Overall	Exposure	Vulnerability				
Vanuatu	1	1	46	74.6	299.9	1.9	12.2
Tonga	2	4	69	76.9	104.5	0.4	0.7
SI	5	9	38	75.6	669.8	1.2	28.0
PNG	8	18	13	86.8	8776.1	11.9	452.9
Fiji	15	14	88	43.3	890.0	4.3	18.3
Kiribati	18	22	44	45.2	117.6	0.3	0.8
Samoa	98	109	72	81.9	161.5	0.8	2.8

PNG, ranked 13 in the world for vulnerability, is at very high risk of susceptibility and lack of coping and adaptive capacity. Table 1 also displays specific characteristics of PNG that underlie its vulnerability as well as its capacity for resilience during the COVID-19 crisis. PNG is a large country in terms of land area with roughly 8.8 million population, 87% of whom reside in rural areas mainly engaged in subsistence farming. Village economies are slow due to poorly maintained infrastructure and transport networks lacking effective access to markets. Communication has improved enormously due to mobile phones, though many areas are affected by poor connectivity. Health care and other economic framework services are grossly underfunded. PNG's capacity for agricultural production is underutilised. SI, Kiribati and Vanuatu are among the top 50 nations in terms of vulnerability. 75% of the total population in SI and Vanuatu and 45% of the population in Kiribati are rural, mostly engaged in subsistence farming or fisheries (Table 1). SI is considered at very high risk for susceptibility and lack of coping capacity and at high risk for adaptive capacity. Both Vanuatu and Kiribati are considered at high risk for all three categories.

Kiribati is at high risk to sea level rise (SLR) and is likely to be one of the first islands to disappear. Fiji is considered at medium risk for vulnerability as a whole, with its comparatively higher standard of living (PPP\$) almost twice that of Tonga and Samoa (Fig. 1). Tonga is at high risk for susceptibility and medium risk for lack of coping capacity, while Samoa is at medium risk for both. Both nations are categorised as high risk in terms of adaptive capacity and initiating policies addressing future environmental challenges [3].

Pacific countries are inhabited by traditional societies. Polynesians (Tonga and Samoa), Melanesians (Fiji, PNG, SI and Vanuatu) and Micronesians (Kiribati) depend on community and extended kinship and community-based networks that operate on trust, when exposed to situations that endanger life or cause vulnerabilities to surface. The dependence, and resulting collective action, increases social cohesion, leadership, decision-making and equal access to services that over time builds or enhances social capital. Social capital increases the ability of such communities to pursue resilient strategies that reduce vulnerability [39], [40]. Pacific nations, due to their low incomes, lack of technical skills and financial know-how, are often viewed as vulnerable when disaster strikes. Despite the presence of local community organisations, churches and NGOs, the international community has always rushed to provide humanitarian aid and technical assistance. Border closures prevented such offers of assistance, and each PIF nation has had to manage their crisis themselves. In the process, there have been many displays of resilience and changes in aspirations that indicate the possibility of a change in the status quo to the benefit of the region [41].

In SI and Fiji, a study of 13 communities indicates a resurgence of root crops vegetables and fruit production in home gardens, a return to traditional food systems, cultural values and safety networks such as the barter system, and what appears to be a move towards revitalising the agricultural sector [31]. The Fijian Government seems to validate this strategy of local food production, targeting urban residents with a home gardening package to move them away from imported primary products and towards growing their own food. The other initiative, the Farm support package of one million Fijian dollars, was released with a reminder of pre-colonial days and self-sufficiency in food [42]. The PNG Prime Minister too has indicated the possibility of increasing agricultural production for regional trade. PNG currently utilises only about 5% of its agricultural land [43]. A similar move to increase home gardening and the production of fruit was referred to before in relation to Kiribati, receiving assistance from the Food and Agricultural Organisation (FAO) [36]. Vanuatu has also seen an increase in local fishing in coastal areas for own consumption and sales to neighbouring villages [20].

When TC Harold struck Vanuatu amid the pandemic, due to the border closures and the absence of foreign humanitarian aid workers, ni-Vanuatu emergency workers and local volunteers armed with previous training and local knowledge went into action as first responders, paving the way for locally-led responses in the future [41]. Additionally, in PIF nations, chiefs in the villages are encouraging the organisation of community-based stockpiling and urging traditional means of stockpiling food [43]. These examples are indications of building resilience and strengthening capabilities that appear promising for meeting future challenges.

## 4 DISCUSSION AND CONCLUSION

### 4.1 Development, capabilities and freedom

Social capital is particularly important for nations that lack material security to improve the wellbeing of its population. Instead of focusing on income as a means to development and improvement in wellbeing, Amartya Sen suggests that communities should concentrate first on developing capabilities or the capacity to achieve, with freedom of choice as an important functioning, among others. Capability, is a real opportunity and results in the development of a particular “functioning” or achievement, e.g., food security [44]. The importance of freedom of choice is that individuals would be responsible for their own choices within a society even as they participate in collective action for the wellbeing of the community.



Focusing on capabilities allows for a range of possible choices, though assessing the outcome of wellbeing would require a measurement of the functioning and the capacity to achieve it [44], [45]. The possession of social capital is recognised as an important functioning in a community. Thus, by increasing the ability of closely knit communities to pursue resilient strategies, new capabilities are achieved, which in turn leads to enhancing social capital. Thus, social capital, functionings and capabilities are connected in a dynamic process [46] leading to increased wellbeing and development [44]. The capability approach is well established as a meaningful way of assessing wellbeing and underlies the basic insights of the Human Development Index (HDI). The HDI includes “life expectancy at birth, education (adult literacy and educational enrolment rates) and adjusted GDP per capita”, which serves as a proxy for the material aspects of functionings and wellbeing [45]. The HDI ranks PNG as 7th and Kiribati as 4th among these seven nations. The other five nations follow the same order as for standard of living based on GDP per capita PPP International \$ [48].

## 4.2 Conclusion

When food security was adversely affected by the lockdown, many urban residents turned to traditional food systems and subsistence food production reflecting their achieved capabilities and functionings, and away from dependence on imports. Arguably, subsequent inclusion in community organisations is likely to have directly addressed vulnerabilities and improved wellbeing during engagement in addressing the problem of food insecurity.

Previous discussion includes examples of resilience by PIF communities addressing the combined impact of COVID-19 and TC Harold. Such actions point to a generation of new capabilities and functionings in the process of addressing enduring vulnerabilities from the past, and strengthening coping and adaptive capacities. PIF nations are rich in terms of access to land governed by customary tenure, which is approximately 80% of total land, a huge advantage to PIF nations if they choose to pursue a strategy for regional food security, harnessing the majority’s capabilities and functionings in agriculture. The government could provide marketing opportunities as a public good for income generation in rural areas. Further, cyclones are the most frequent natural disaster in this region [4] and Vanuatu has shown the way for the other nations to follow suit as first responders. There is still need for international humanitarian assistance but this example augurs well for the future.

The GHS Index 2019 [47] “is a comprehensive benchmark of health security and related capabilities” that concentrates on countries “capacities, and existence of functional, tested, proven capabilities for stopping outbreaks” of epidemics and pandemics at the source. Indicators included also assess factors that can hinder or enhance that capability. Scores range from 0 to 100 as best i.e., less risk, and are divided into three tiers, 0.0–33.3 as low, 33.4–66.6 as moderate and 66.7–100 as high scores. The Index is available for 195 countries and being the first of its kind the jury is still out in terms of its limitations.

Finally, Fig. 2 illustrates indicators of resilience, risk and vulnerability in the PIF nations from the GHS Index. Assessment of socio-economic resilience, includes literacy, gender equality, poverty levels, public confidence in governments and local media reporting. Environmental risks involve urbanisation, land use and natural disaster risk. Assessment of public health vulnerabilities are based on access to quality health care, potable water and sanitation, and public health care spending levels.

Except for PNG, with the lowest score for socio-economic resilience, and Kiribati, both of which fall within the moderate tier, the other five PIF nations are in the top tier. Samoa scored the highest, reflecting its success with the measles epidemic. Interestingly, Vanuatu





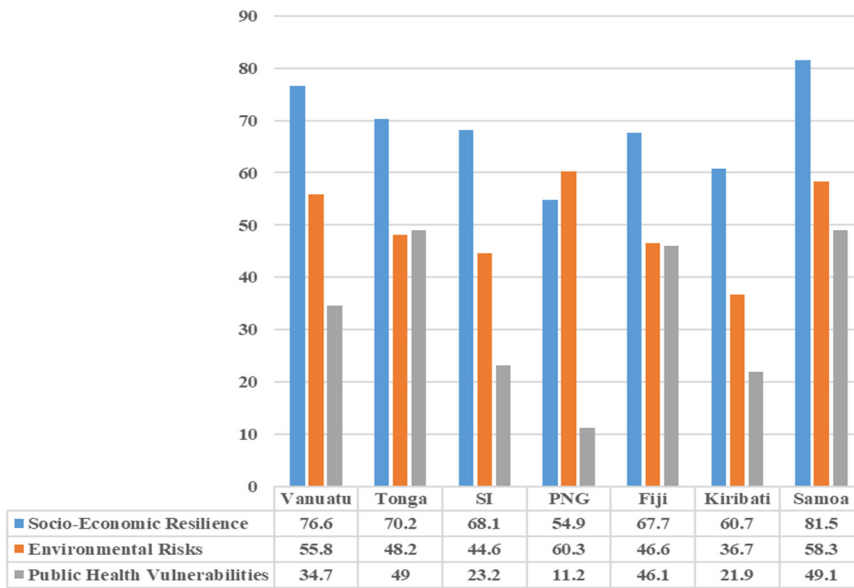


Figure 2: Socio-economic resilience, environmental risk, public health vulnerabilities [47].

was next highest at 76.6, and this was reflected in the handling of the twin disasters in 2020, by the ni-Vanuatu. Only PNG and Kiribati fall below the global average of 66.1 [47].

Environmental risks, for all the PIF nations are classified as of moderate risk. In comparison with the World Risk Report, the GHS Index indicator includes land use and urbanisation in its assessment. Kiribati and Fiji with more than 50% urbanisation may partially explain the differences in ranking. PNG, Samoa and Vanuatu with large rural populations are above the global average of 52.9. Public health is a vulnerability that requires urgent attention and justifies the lockdown in PIF nations. Samoa, Tonga and Fiji are classified as moderate and the rest as low, but only marginally so

To conclude, considering the resilience exhibited by PIF nations during the COVID-19 crisis and their capacity for building social capital, the high levels of socio-economic resilience are not surprising, and achieving aspirations of the Kainaki II declaration on climate change in the future look promising for PIF nations.

#### REFERENCES

- [1] World Economic Forum, The Global Risks Report 2021 Insight Report, 16th ed. [http://www3.weforum.org/docs/WEF\\_The\\_Global\\_Risks\\_Report\\_2021.pdf](http://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf). Accessed on: 6 Aug. 2021.
- [2] World Economic Forum, The Global Risks Report 2020 Insight Report, 15th ed. [http://www3.weforum.org/docs/WEF\\_Global\\_Risk\\_Report\\_2020.pdf](http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf). Accessed on: 6 Aug. 2021.
- [3] World Risk Report, 2020. [WorldRiskReport-2020.pdf](http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf). Accessed on: 6 Aug. 2021.
- [4] Diamond, H.J., Lorrey, A.M. & Renwick, J.A., A southwest Pacific tropical cyclone climatology and linkages to the El Nino-Southern oscillation. *Journal of Climate*, **26**, pp. 3–25, 2013. <http://dx.doi.org/10.1175/JCLI-D-12-00077.1>.



- [5] Ober, K. & Bakumenko, S., Refugees international: Issue brief – A new vulnerability: COVID-19 and tropical cyclone Harold create the perfect storm. <https://reliefweb.int/report/vanuatu/issue-brief-new-vulnerability-covid-19-and-tropical-cyclone-harold-create-perfect>. Accessed on: 6 Sep. 2021.
- [6] The Permanent Mission of Tuvalu to the UN, PIF agrees to establish a Pacific humanitarian pathway on COVID-19. <https://www.un.int/tuvalu/fr/news/pacific-islands-forum-agrees-establish-pacific-humanitarian-pathway-covid-19>. Accessed on: 6 Sep. 2021.
- [7] Ivarature, H., Regionalism: Performance and promise. *Politics, Development and Security in Oceania*, 7, p. 179, 2013.
- [8] Shibuya, E., The problems and potential of the Pacific Islands forum. *The Asia-Pacific: A Region in Transition*, pp. 102–115, 2004.
- [9] Iosefa, V., Samoa applies lessons from 2019 measles epidemic in response to coronavirus. *The Strategist*, 2020. <https://www.aspistrategist.org.au/samoa-applies-lessons-from-2019-measles-epidemic-in-response-to-coronavirus/>. Accessed on: 3 Sep. 2021.
- [10] The FRANZ arrangement. <https://www.mfat.govt.nz/assets/Aid-Prog-docs/NZDRP-docs/Franz-Arrangement-Brochure.pdf>. Accessed on: 23 Aug. 2021.
- [11] World Health Organization, Coronavirus (COVID-19) dashboard. <https://covid19.who.int/>. Accessed on: 1–30 Sep. 2021.
- [12] Department of Foreign Affairs and Trade (DFAT), Pacific partnerships for recovery: Australian Government Development Response Plan. <https://www.dfat.gov.au/publications/aid/partnerships-recovery-australias-covid-19-development-response>. Accessed on: 20 Sep. 2021.
- [13] Nand, M.M. & Bardsley, D.K., Climate change loss and damage policy implications for Pacific Island countries. *Local Environment*, 25(9), pp. 725–740, 2020.
- [14] Lowy Institute, The Kainakii declaration is a signal of Pacific strength (Dame Meg Taylor). *The Interpreter*. <https://www.lowyinstitute.org/the-interpreter/kainaki-ii-declaration-signal-pacific-strength>. Accessed on: 9 Sep. 2021.
- [15] World Health Organization, Strengthening Pacific health systems. <https://www.who.int/westernpacific/activities/strengthening-pacific-health-systems>. Accessed on: 10 Sep. 2021.
- [16] NZ History, The 1918 influenza pandemic, Influenza in Samoa, p. 10. <https://nzhistory.govt.nz/culture/1918-influenza-pandemic/samoa>. Accessed on: 24 Sep. 2021.
- [17] Leal Filho, W., Lütz, J.M., Sattler, D.N. & Nunn, P.D., Coronavirus: COVID-19 transmission in Pacific small island developing states. *International Journal of Environmental Research and Public Health*, 17(15), p. 5409, 2020.
- [18] Department of Foreign Affairs and Trade (DFAT), Fiji partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-fiji.pdf>. Accessed on: 24 Sep. 2021.
- [19] Department of Foreign Affairs and Trade (DFAT), Samoa partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-samoa.pdf>. Accessed on: 24 Sep. 2021.
- [20] Steenbergen, D.J., Neihapi, P.T., Koran, D., Sami, A., Malverus, V., Ephraim, R. & Andrew, N., COVID-19 restrictions amidst cyclones and volcanoes: A rapid assessment of early impacts on livelihoods and food security in coastal communities in Vanuatu. *Marine Policy*, 121, 104199, 2020.



- [21] Connell, J. & Taulealo, T., Island tourism and COVID-19 in Vanuatu and Samoa: An unfolding crisis. [um.edu.mt](https://um.edu.mt). Accessed on: 24 Sep. 2021.
- [22] Department of Foreign Affairs and Trade (DFAT), Tonga partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-tonga.pdf>. Accessed on: 24 Sep. 2021.
- [23] Pryke, J., Can Pacific Airlines pull out of the dive? Lowy Institute. <https://www.lowyinstitute.org/the-interpreter/can-pacific-airlines-pull-out-dive>. Accessed on: 20 Sep. 2021.
- [24] Craig, A.T., Heywood, A.E. & Hall, J., Risk of COVID-19 importation to the Pacific Islands through global air travel. *Epidemiology and Infection*, **148**, 2020.
- [25] World Bank, Pacific labour mobility, migration and remittances in times of COVID-19: Interim Report. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/430961606712129708/pacific-labor-mobility-migration-and-remittances-in-times-of-covid-19-interim-report>. Accessed on: 20 Sep. 2021.
- [26] Department of Foreign Affairs and Trade (DFAT), Kiribati partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-kiribati.pdf>. Accessed on: 20 Sep. 2021.
- [27] Department of Foreign Affairs and Trade (DFAT), PNG partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-papua-new-guinea.pdf>. Accessed on: 20 Sep. 2021.
- [28] Department of Foreign Affairs and Trade (DFAT), Solomon Islands partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-solomon-islands.pdf>. Accessed on: 20 Sep. 2021.
- [29] Department of Foreign Affairs and Trade (DFAT), Vanuatu partnerships for recovery, Australian Government Development Response Plan. <https://www.dfat.gov.au/sites/default/files/covid-response-plan-vanuatu.pdf>. Accessed on: 20 Sep. 2021.
- [30] ACIAR, COVID-19 and food systems in the Indo Pacific: An assessment of vulnerabilities, impacts and opportunities for action, Chapter 5, 2020. <https://www.aciar.gov.au/publication/covid-19-and-food-systems>. Accessed on: 26 Sep. 2021.
- [31] Iese, V., Wairiu, M., Hickey, G.M., Ugalde, D., Salili, D.H., Walenenea Jr, J., Tabe, T., Keremama, M., Teva, C., Navunicagi, O. & Fesaitu, J., Impacts of COVID-19 on agriculture and food systems in Pacific Island countries (PICs): Evidence from communities in Fiji and Solomon Islands. *Agricultural Systems*, **190**, 103099, 2021.
- [32] Farrell, P., Thow, A.M., Wate, J.T., Nonga, N., Vatucawaqa, P., Brewer, T., Sharp, M.K., Farmery, A., Trevena, H., Reeve, E. & Eriksson, H., COVID-19 and Pacific food system resilience: Opportunities to build a robust response. *Food Security*, **12**(4), pp. 783–791, 2020.
- [33] World Bank, World development indicators data bank. <https://databank.worldbank.org/source/world-development-indicators>. Accessed on: 20 Sep. 2021.
- [34] Gounder, N., Fiji economic survey: Low growth the new normal? *Asia and the Pacific Policy Studies*, **7**(2), pp. 145–157, 2020.
- [35] United Nations, COVID-19 socio-economic response plan, 2020. <https://unsdg.un.org/resources/covid-19-socio-economic-response-plan-samoa>. Accessed on: 20 Sep. 2021.
- [36] FAO, Kiribati strengthens agriculture in the face of COVID-19, Asia Pacific Regional Office. <http://www.fao.org/asiapacific/news/detail-events/en/c/1364849/>. Accessed on: 20 Sep. 2021.



- [37] Connell, J. & Brown, R.P., The remittances of migrant Tongan and Samoan nurses from Australia. *Human Resources for Health*, **2**(1), pp. 1–21, 2004.
- [38] Saverimuttu, V. & Cochran, A.K., Addressing rural–urban disparities: A case of government service delivery in Papua New Guinea. *International Journal of Business and Economic Development (IJBED)*, **6**(2), 2018.
- [39] Narayan, D. & Cassidy, M.F., A dimensional approach to measuring social capital: Development and validation of a social capital inventory. *Current Sociology*, **49**(2), pp. 59–102, 2001.
- [40] Malherbe, W., Sauer, W. & Aswani, S., Social capital reduces vulnerability in rural coastal communities of Solomon Islands. *Ocean and Coastal Management*, **15191**, 105186, 2020.
- [41] Kenni, L. & Wijewickrama, E., Vanuatu: A real test for local emergency response. <https://www.lowyinstitute.org/the-interpreter/vanuatu-takes-emergency-response-amid-covid-19>. Accessed on: 2 Oct. 2021.
- [42] Randin, G., COVID-19 and food security in Fiji: The reinforcement of subsistence farming practices in rural and urban areas. *Oceania*, **90**, pp. 89–95, 2020.
- [43] Piesse, M., Covid-19 and food security in the Pacific: Considerable challenges with a 2020 opportunity to “build back better”. <https://www.futuredirections.org.au/topics/global-food-water-crises/>. Accessed on: 1 Oct. 2021.
- [44] Sen, A., The concept of development. *Handbook of Development Economics*, **1**, pp. 9–26, 1988.
- [45] Robeyns, I., The capability approach in practice. *Journal of Political Philosophy*, **14**(3), pp. 351–376, 2006.
- [46] Migheli, M., Capabilities and functionings: The role of social capital for accessing new capabilities. *Review of Political Economy*, **23**(1), pp. 133–142, 2011.
- [47] The Global Health Security (GHS) Index 2019. <https://www.ghsindex.org>. Accessed on: 20 Sep. 2021.
- [48] United Nations Development Program. <http://hdr.undp.org/en/content/latest-human-development-index-ranking>. Accessed on: 9 Oct. 2021.