The 21st Century Maritime Silk Road

Islands Economic Cooperation Forum

ANNUAL REPORT ON GLOBAL ISLANDS 2020

Foreign Affairs Office of Hainan Province, P.R. China
Institute of Island Studies at the University of Prince Edward Island, Canada

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Preface

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The year 2021 marks the 20th anniversary of the Boao Forum for Asia and the fifth anniversary of the 21st Century Maritime Silk Road: Islands Economic Cooperation Forum ("the Forum"). At such a historic moment, I am delighted to see that through the hard work of my old friend Prof. James Randall, Dr. Laurie Brinklow, and colleagues from the Institute of Island Studies at the University of Prince Edward Island, the *Annual Report on Global Islands 2020* will soon be unveiled at the Boao Forum for Asia Annual Conference 2021 to share firsthand the research results on island studies over the past year with all those interested in island development.

The year 2020, which is thankfully just behind us, has been truly hard and eventful for everyone. Countries and regions around the world, including island economies and societies, have actively responded to the challenges posed by COVID-19. Due to epidemic control measures, neither I nor so many others were able to see our friends and colleagues from other islands over the past year, and the 5th Islands Economic Cooperation Forum, which was scheduled to be held in 2020, had to be postponed. However, just like islands that have been sources of resilience to external crises over much of their histories, this has not deterred our friendship. Hainan Province and its sister provinces on over 30 island jurisdictions around the world, including Jeju Province of South Korea, have joined hands in writing a heroic chapter of fighting the coronavirus. This is a vivid example of Hainan's vision to promote extensive consultation, joint development, and shared benefits through the establishment of the Forum.

Over the past five years, in addition to the annual Forum, we have also consistently published the *Annual Report on Global Islands*, making an important public and professional contribution to island economic studies. We are delighted to see that these research results are gaining influence and sparking greater debate in the academic community. As is pointed out in this year's report, strengthening cooperation across our world of islands and building closer networks among islands and islanders remain the overarching theme for island development in our times. In what we hope will soon become the post-COVID-19 era, only by enhancing cooperation and improving

resilience to international public health hazards can island economies achieve better and more sustainable development. It can be said that the *Annual Report on Global Islands 2020* is the best gift that I and all of my colleagues engaged in island studies can offer for the fifth anniversary of the Forum. It crystallizes our unremitting efforts over the past five years to promote island cooperation. It also represents the best wishes for the continuation of this international team to the Forum for the next five years.

As Hainan redoubles its effort to build the world's largest free trade port, we sincerely hope to forge friendships and share development opportunities with more islands, so as to jointly contribute to the establishment of a community that experiences a shared future for global islands.

March 5, 2021

PART I

A background to island economies

Introduction

JAMES RANDALL, *University of Prince Edward Island, Canada*

When the possible themes for this year's Annual Report on Global Islands were being discussed with stakeholders, it was only natural for the outcome of the discussion to reflect the principal concern facing islands, as well as all other jurisdictions, at the time — the COVID-19 pandemic. After all, it had just forced the postponement of the 2020 Islands Economic Cooperation Forum and was adversely affecting the public health of so many islanders and the economies of so many islands. However, this volume is not just about this specific pandemic and islands. Although several chapters speak directly to the way islands have experienced and overcome the COVID-19 pandemic, this fifth volume in the series of Annual Reports takes a broader, more holistic interpretation of public health as it relates to small islands. It suggests that, sooner or later, most island states and subnational jurisdictions will enter a post-pandemic reality. That reality may create even greater economic challenges for some islands, especially for those that depend on international tourism. There are already signs that some islands are taking a path of least resistance, opting to rebuild the same economies and the same structures that existed pre-pandemic. However, for others the pandemic points to a "call to action" as reflected in slogans such as "building back better", a "new normal", and a "greening of the economy". In some cases, the aspiration to meet the Sustainable Development Goals (SDGs), a global initiative that preceded the COVID-19 pandemic, has taken on greater significance.

There are two other themes that emerge from this collection of research. One is best reflected by the word "islandness"; a term that Island Studies scholars often use to describe and explain the unique contributions that this interdisciplinary field brings to the conceptual and applied debates on island issues. Are there characteristics of islands and islanders that set them apart from mainlands? Does relative isolation in space and the boundedness of islands bestow on islands and their inhabitants an innate advantage — a resilience — to meet and overcome this external public health threat in much the same way they have overcome external economic, cultural, and natural threats in the past? Evidence is already emerging that, despite economic devastation to their economies, island governments may have been more successful than many mainland jurisdictions in fending off the worst public health outcomes of the COVID-19 pandemic, despite relatively poorer health care systems and less access to equipment and health care providers. One indicator of this success is the current ranking of states on how they have fared during the pandemic, as determined by the Lowy Institute, an

Australian-based think tank. According to this organization, of the top twenty countries deemed to have been successful in dealing with the public health outcomes of the pandemic, seven are islands (Lowy Institute, 2021). Of these seven islands, New Zealand is said to have been the best nation in the world in combatting COVID-19.

In most jurisdictions, governments alone cannot guarantee public health success. It requires a collective effort to act in the best interest of the common good, even if those actions curtail personal freedoms. It could be that the collective actions of islanders are being influenced to a degree by their islandness. After all, on small islands social networks are often strong, there is a sense of physical and social separation from the rest of the world, and it is not uncommon to find an "us versus them" or "islander versus outsider" mentality. All of these islandness characteristics may be providing some islands with relative advantages in responding to COVID-19.

The other theme that connects the topics in this volume is cooperation and collaboration. Although islands may have developed a degree of protection by shielding themselves from external threats, there are many examples in the literature and on these pages where "building back better" occurs by forging partnerships with other islands. In some cases, these might be simple bilateral relationships. In other cases, networks of island jurisdictions have come together to exchange ideas, people, capital, and best practices. If conducted respectfully, cooperation in economic investments can lead to greater resilience in achieving public health goals.

SUMMARY OF CHAPTERS

The first chapter, by Randall and Chapman, continues the tradition in this series of tracking the economic and social changes taking place on a group of 48 island states and 13 subnational island jurisdictions (SNIJs). Although the coverage of island states in this section consists of almost all independent island nations, the small number of SNIJs barely scratches the surface of the total number of these semi-autonomous islands. However, the availability, reliability, and comparability of data for this latter group continues to make these comparisons challenging.

Drawn from various government and supra-government sources, by bringing together island-specific data in one place, it allows the reader to better understand the state of islands and the changes, albeit sometimes small, taking place from year-to-year. As in previous years, certain variables make their appearance to reflect the themes of each volume. This year we have added a greater number of variables that are linked directly to public health on islands, including government spending in the health sector, the number of hospital beds per 1,000 people, the levels of adult and child obesity, and the prevalence of diabetes, this latter being one of the unfortunate consequences of obesity. Perhaps as evidence of its usefulness, several of the chapters in this volume reference the data from previous Annual Reports in their analyses.

During this global pandemic, most attention has rightly focused on the immediate need to limit adverse health outcomes and support those who have lost their livelihoods. However, it is not too early to start uncovering patterns and trying to decipher how those patterns might help jurisdictions as they emerge from the pandemic. Based on an analysis of a comprehensive data set contributed by islanders around the world, the chapter by Sindico starts to build those patterns. Interestingly, Sindico goes beyond the obvious impacts on the tourist sector to discuss food security. Even though many islands have the capacity to be almost self-sustaining in meeting their own food needs, globalization has led to an evolution of food production on many islands, such that producing for the tourist sector and emphasizing export-oriented, monoculture production has made these islands vulnerable to food insecurity during the pandemic. Sindico calls for a more robust policy-relevant research agenda that recognizes traditional policies that may have contributed to island vulnerability. A recognition that governance and government is at the heart of many of the current vulnerabilities is the first step in making islands more resilient to the next pandemic.

In Chapter 3, Huish uses the examples of historic and current pandemic experiences faced by islands to better understand their failures and successes. The subtitle of the chapter, "Neither gift, nor luck", suggests that pandemic outcomes have not occurred by either fate or chance. Rather, good governance practices and coordination within and across islands have contributed to the positive outcomes. As an example of external cooperation, Huish outlines in some detail the medical internationalism role taken by Cuba preceding and during the COVID-19 pandemic. For a small island state that is beset by economic and social challenges not entirely of its own making (e.g., American trade restrictions and blockades), they have made a conscious effort to assist the public health efforts in other jurisdictions.

Kelman (Chapter 4) uses the concept of islandness, raised earlier in this Introduction, to better understand the pandemic outcomes on small islands. Kelman's interpretation of islandness takes two forms; the physical connectedness and barriers implemented to prevent the spread of the virus, and the virtual connectedness experienced during the COVID-19 pandemic. Ultimately, Kelman concludes that islandness can be both beneficial and detrimental to islands facing crises. The key to a more resilient post-pandemic world is to recognize these elements and be nimble enough to react quickly when circumstances change.

In the midst of this global pandemic, we tend to forget the longer-term issues facing humanity. In Chapter 5, Telesford reminds us that all nations are still supposed to be working toward to meeting their obligations under the United Nations-approved 2030 Sustainable Development Goals (SDGs). Given the theme of this volume and current public health challenges, Telesford focuses on SDG3 — good health and well-being — and how this is integrated with all the other SDGs. He does this by analyzing the progress reviews conducted by ten island states and two island territories. The COVID-19

pandemic will negatively affect progress in achieving the SDGs. What is not clear is how many jurisdictions have even begun to articulate the magnitude of this impact.

Lin and Deng (Chapter 6) describe examples of the many types of island networks that currently exist but ultimately conclude that there is still a considerable amount of fragmentation among islands and island organizations. They make the case that there is still significant opportunity to build more cohesive island-centric networks around the broad concepts of the marine economy and the Blue Economy. They call for the collaborative establishment of Blue Economy demonstration areas and global central island cities to truly achieve the goals of sustainable development.

In Chapter 7, Wong reminds readers of the main theoretical frameworks underpinning state-to-state cooperation and conflict, and then applies these to a series of case studies involving islands, including their relationships with other islands and with mainland jurisdictions. He suggests that islands have been underrepresented in the literature on conflict and cooperation. By using these cases, Wong presents a preliminary unified framework of island-to-island and island-to-mainland cooperation and conflict.

The final chapter in this volume, by Huang and Wang, is a "call to action" regarding the role that Hainan can play in a rapidly changing network of islands. It documents the advances Hainan has made and intends to make soon as a global island. It also contends that Hainan is well-positioned to serve as a living laboratory for both China and the region to engage in some innovative economic development practices. Interestingly, many of the suggestions given in the chapter, including Hainan expanding its role in modern producer services, high-technology and/or digital sectors, and building the island's intellectual capacity, are drawn from the research presented by Island Studies scholars in earlier iterations of these Annual Reports. This serves as evidence that the knowledge gained from these events is making a difference to local policy and practice.

Finally, on this fifth anniversary of the Island Economic Cooperation Forums, I want to thank our colleagues in Hainan for allowing this scholarship to flourish. A body of work is now being built that represents an important contribution to island economic development. This would not have been possible without the ongoing commitment by the Foreign Affairs Office of Hainan Province.

The share of the island populations that are urban versus rural varies significantly. As a city-state, Singapore, pictured here, is 100 percent urban.

1

The state of island economies and development in 2020

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and

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This chapter presents and describes the fourth iteration of data for a select group of island states and territories. As has been the case with the three earlier volumes, the variables have been selected to reflect various aspects of island economies and development. Since the theme of this volume is development and resilience in the context of island public health, several new variables have been added. These include causes of death and hospital beds per 1,000 people (Table 1.13), as well as government spending on health and the prevalence of obesity and diabetes (Table 1.12). Ideally, we would have liked to provide data on the COVID-19 pandemic for these islands. Unfortunately, at the time of this writing, COVID-related data are either unavailable or not standardized.

As has been the case in previous years, this chapter is divided into two broad sections, each addressing politically distinct groups of islands. The first group, island states, is described below, followed by a discussion of subnational island jurisdictions (SNIJs).

SECTION 1: ISLAND STATES

The aggregate changes in population depicted in Table 1.1 consist of natural population change (i.e., births minus deaths) as well as net migration (i.e., immigration minus emigration), variables that we will be looking at in more detail later in this chapter. Many of the population trends that have been taking place over the past four years have continued this year. The Japanese population continues to decline. Other islands in the European and Caribbean regions have also seen their populations remain about the same as in previous years. Perhaps surprisingly, several of the islands in Oceania, such as the Cook Islands, the Federated States of Micronesia, and Tonga, also continue to experience population declines. Those islands seeing the greatest population increases are generally also in the lower income categories, such as Timor-Leste and Madagascar. Higher population growth also occurs in places that have a less equal distribution of income, such as in Bahrain.

TABLE 1.1: Population, Population Density, and Average Annual Population Growth Rate, 2010 to 2020

Continent	Island Country	Population (people) July 2020	Population density (people/km²) 2018	Growth Rate % 2019- 2020
Asia	Japan	125,507,472	347	-0.27
	Singapore	6,209,660	7953	1.73
	Indonesia	267,026,366	148	0.79
	Timor-Leste	1,383,723	85	2.27
	Brunei Darussalam	464,478	81	1.51
	Philippines	109,180,815	358	1.52
	Sri Lanka	22,889,201	346	0.67
	Maldives	391,904	1719	-0.06
	Bahrain	1,505,003	2017	2.08
Europe	Cyprus	1,266,676	129	1.15
	Iceland	350,734	4	1.02
	United Kingdom	65,761,117	275	0.51
	Ireland	5,176,569	70	1.04
	Malta	457,267	1511	0.87
Africa	Cabo Verde	583,255	135	1.32
	Madagascar	26,955,737	45	2.39
	Seychelles	95,981	210	0.74
	Mauritius	1,379,365	623	0.54
	Comoros	846,281	447	1.47
	São Tomé and Príncipe	211,122	220	1.58
Oceania	New Zealand	4,925,477	19	1.44
	Papua New Guinea	7,259,456	19	1.6

Continent	Island Country	Population (people) July 2020	Population density (people/km²) 2018	Growth Rate % 2019- 2020
	Solomon Islands	685,097	23	1.84
	Vanuatu	298,333	24	1.73
	Fiji	935,974	48	0.5
	Tonga	106,095	143	-0.16
	Samoa	203,774	69	0.61
	Nauru	11,000	635	0.46
	Micronesia, Fed. States	102,436	161	-0.55
	Marshall Islands	77,917	325	1.43
	Kiribati	111,796	143	1.12
	Tuvalu	11,342	384	0.86
	Palau	21,685	39	0.4
	Cook Islands	8,574	–	-2.59
	Niue	2,000 (2019)	–	-0.03 (2014)
Caribbean/	Cuba	11,059,062	109	-0.27
Americas	Haiti	11,067,777	404	1.31
	Dominican Republic	10,499,707	220	0.99
	Jamaica	2,808,570	271	-0.07
	Bahamas, The	337,721	39	0.79
	St. Kitts and Nevis	53,821	202	0.7
	Antigua and Barbuda	98,179	219	1.2
	St. Vincent and the Grenadines	101,390	283	-0.23
	St. Lucia	166,487	298	0.31
	Grenada	113,094	328	0.42
	Barbados	294,560	667	0.2
	Trinidad and Tobago	1,208,789	271	-0.3
	Dominica	74,243	96	0.13

Table 1.2 (next page) provides more detailed birth and death rates for the islands highlighted in this report, as well as average life expectancies. At first glance, it may be somewhat surprising to find that developed island countries such as the United Kingdom and Japan have relatively high death rates, at 9.5/1,000 and 10.2/1,000 respectively, compared to lesser developed islands such as Haiti (7.4), the Solomon Islands (3.8), and Bahrain (2.8). Part of the explanation for this result is the age profile of these places. The median population age in Japan and the UK is 48.6 and 40.6 respectively, while in Haiti it is 24.1 and in the Solomon Islands it is 23.5 years of age. All other things being equal, an older population will have a higher death rate. The more important feature for population change is the gap between the birth and death rates. In the UK, the gap is only 2.4/1,000 (births over deaths), while in the Solomon Islands, that gap is 19.8/1,000, suggesting that the population is continuing to grow rapidly. Despite these

higher population growth rates, there are signs that the rate of growth in places such as the Solomon Islands is slowing (McMurray, 2019). In almost all of the islands in Table 1.2, birth rates are declining when compared to the birth rates in the 2019 Annual Report (Randall & Brimacombe, 2020), and are declining at a faster rate than the death rates. Unfortunately, these population changes are very uneven, with higher levels of population growth most apparent in the outlying areas of archipelagos where a subsistence lifestyle is more common and where there are fewer employment opportunities (McMurray, 2018). The demographic transition suggests that other related indicators of well-being will improve as places move to lower birth and death rates. However, negative natural rates of population growth and aging populations come with their own challenges, including difficulty in filling jobs in the labour market and a loss of productivity (Murray et al., 2020).

TABLE 1.2: **Crude Birth Rate, Crude Death Rate, and Life Expectancy at Birth, 2020**

Continent	Island Country	Crude Birth Rate/1000	Crude Death Rate/1000	Life Expectancy at Birth
Asia	Japan	7.3	10.2	86.0
	Singapore	8.9	3.6	86.0
	Indonesia	15.4	6.6	73.7
	Timor-Leste	32.0	5.7	69.3
	Philippines	22.9	6.0	70.0
	Sri Lanka	14.2	6.5	77.5
	Maldives	16.0	4.1	76.4
	Bahrain	12.7	2.8	79.4
Europe	Cyprus	10.9	7.0	79.3
	Iceland	13.3	6.6	83.3
	United Kingdom	11.9	9.5	81.1
	Ireland	13.0	6.8	81.2
	Malta	9.9	8.3	82.8
Africa	Cabo Verde	19.1	5.9	73.2
	Madagascar	29.9	6.2	67.3
	Seychelles	12.8	7.1	75.6
	Mauritius	12.6	7.3	76.5
	Comoros	23.6	6.9	65.7
	São Tomé and Príncipe	29.7	6.3	66.3
Oceania	New Zealand	12.8	6.9	82.1
	Papua New Guinea	22.5	6.7	67.8
	Solomon Islands	23.6	3.8	76.2
	Vanuatu	22.4	4.0	74.6
	Fiji	17.4	6.3	73.7

Continent	Island Country	Crude Birth Rate/1000	Crude Death Rate/1000	Life Expectancy at Birth
	Tonga	21.0	4.9	77.0
	Samoa	19.6	5.4	74.7
	Nauru	21.9	6.0	68.4
	Micronesia, Fed. States	18.9	4.3	73.9
	Marshall Islands	22.8	4.3	74.1
	Kiribati	20.5	6.9	67.5
	Tuvalu	23.4	8.2	67.9
	Palau	11.3	8.3	74.1
	Cook Islands	13.3	9.0	76.6
	Niue	–	–	–
Caribbean/	Cuba	10.4	9.1	79.2
Americas	Haiti	21.7	7.4	65.3
	Dominican Republic	18.5	6.3	72.0
	Jamaica	16.1	7.5	75.2
	Bahamas, The	14.8	7.4	73.3
	St. Kitts and Nevis	12.6	7.3	76.6
	Antigua and Barbuda	15.4	5.8	77.3
	St. Vincent and the Grenadines	12.6	7.6	76.2
	St. Lucia	12.5	8.1	78.5
	Grenada	14.6	8.3	75.2
	Barbados	11.3	8.8	76.0
	Trinidad and Tobago	11.4	9.1	73.9
	Dominica	14.5	8.0	77.7

Average life expectancy is a good surrogate measure of the state of development of a jurisdiction, in that it often corresponds closely with economic, social, and environmental health. In comparing the life expectancy column in Table 1.2 to the same values presented in last year's Annual Report (Randall & Brimacombe, 2020, pp. 18-19), life expectancy increased in all 47 island states profiled. In most cases these gains were marginal, as one might expect given the short time period. However, it is the consistency of the direction of change that is striking and hopeful. Despite overall increases, wide variations in life expectancy persist across the 47 island states, even among those islands within the same region (The Lancet, 2019). For example, residents of Kiribati and Papua New Guinea (PNG) have life expectancies of less than 68 years while those in Tonga and the Solomon Islands live an average of 76 years. A hopeful sign may be suggested from the work of Wang et al. (2020) who, in a global longitudinal study of various health indicators over almost seventy years (1950-2019), showed that countries in Oceania and the Caribbean saw consistent convergence in life expectancy in relation to the high-income countries of the world.

TABLE 1.3: Percentage of Rural and Urban Populations, 2015 and 2020

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2020	2015	2020
Asia	Japan	6.5	8.2	93.5	91.8
	Singapore	0.0	0.0	100.0	100.0
	Indonesia	46.3	43.4	53.7	56.6
	Timor-Leste	67.2	68.7	32.8	31.3
	Brunei Darussalam	22.8	21.7	77.2	78.3
	Philippines	55.6	52.6	44.4	47.4
	Sri Lanka	81.6	81.3	18.4	18.7
	Maldives	54.5	59.3	45.5	40.7
	Bahrain	11.2	10.5	88.8	89.5
Europe	Cyprus	33.1	33.2	66.9	66.8
	Iceland	5.9	6.1	94.1	93.9
	United Kingdom	17.4	16.1	82.6	83.9
	Ireland	36.8	36.3	63.2	63.7
	Malta	4.6	5.3	95.4	94.7
Africa	Cabo Verde	34.5	33.3	65.5	66.7
	Madagascar	64.9	61.5	35.1	38.5
	Seychelles	46.1	42.5	53.9	57.5
	Mauritius	60.3	59.2	39.7	40.8
	Comoros	71.7	70.6	28.3	29.4
	São Tomé and Príncipe	34.9	25.6	65.1	74.4
Oceania	New Zealand	13.7	13.3	86.3	86.7
	Papua New Guinea	87.0	86.7	13.0	13.3
	Solomon Islands	77.7	75.3	22.3	24.7
	Vanuatu	73.9	74.5	26.1	25.5
	Fiji	46.3	42.8	53.7	57.2
	Tonga	76.3	76.9	23.7	23.1
	Samoa	80.9	82.1	19.1	17.9
	Nauru	0.0	0.0	100.0	100.0
	Micronesia, Fed. Sts.	77.6	77.1	22.4	22.9
	Marshall Islands	27.3	22.2	72.7	77.8
	Kiribati	55.7	44.4	44.3	55.6
	Tuvalu	40.3	36.0	59.7	64.0
	Palau	12.9	19.0	87.1	81.0
	Cook Islands	25.0 (2014)	24.5	75.0 (2014)	75.5
	Niue	62.0 (2014)	53.8	38.0 (2014)	46.2

Continent	Island Country	RURAL POPULATION (%)		URBAN POPULATION (%)	
		2015	2020	2015	2020
Caribbean/	Cuba	22.9	22.8	77.1	77.2
Americas	Haiti	41.3	42.9	58.7	57.1
	Dominican Republic	21.1	17.5	78.9	82.5
	Jamaica	45.2	43.7	54.8	56.3
	Bahamas, The	17.1	16.8	82.9	83.2
	St. Kitts and Nevis	67.9	69.2	32.1	30.8
	Antigua and Barbuda	76.2	75.6	23.8	24.4
	St. Vincent and Grenadines	49.4	47.0	50.6	53.0
	St. Lucia	81.5	81.2	18.5	18.8
	Grenada	64.4	63.5	35.6	36.5
	Barbados	68.4	68.8	31.6	31.2
	Trinidad and Tobago	91.5	46.8	8.5	53.2
	Dominica	30.5	28.9	69.5	71.1

The share of the island populations that are urban versus rural varies significantly (see Table 1.3). As a city-state, Singapore is 100 percent urban. The same holds true for Nauru (100%), followed closely by Malta (94.7%), Iceland (93.9%), and Japan (91.8%). At the other extreme, only 13.3% of PNG's population lives in urban areas. Almost all of the island states have seen a small increase compared to 2019 in the share of their populations living in urban places. The traditional model of development suggests that the level of urbanization is linked closely to development. As the level of urbanization increases, average income also increases, as does access to social amenities such as education and health services. Infrastructure providing clean water and waste disposal also improves. The example of the Solomon Islands with respect to water is useful in showing these differences. According to Anthonj et al. (2020), 92% of urban residents have access to basic drinking water service, as compared to only 55% of rural households. However, we should be cautious in the degree to which we generalize this relationship. A subsistence lifestyle in rural areas or outlying islands has many advantages for the well-being of their residents. Likewise, rapid urban growth may overwhelm the ability of cities to provide basic services and employment opportunities to rural immigrants. For example, despite a gradual process of urbanization, the region that includes the small islands of Oceania has among the greatest challenges in terms of water scarcity (McNabb, 2019).

TABLE 1.4: Gross Domestic Product (GDP) and Change in GDP; Per Capita GDP and Change in GDP/capita, 2019

Continent	Island Country	GDP 2019 In millions of USD (World Bank)	Growth Rate of GDP % 2018- 2019 (World Bank)	GDP per capita 2019 in USD (World Bank)	Growth Rate of GDP per capita % 2018- 2019 (World Bank)
Asia	Japan	5,081,770	0.7	40,247	0.9
	Singapore	372,063	1.0	65,233	-0.4
	Indonesia	1,119,191	5.0	4,136	3.9
	Timor-Leste	1,674	3.4	1,294	1.4
	Brunei Darussalam	13,469	3.9	31,087	2.8
	Philippines	376,796	6.0	3,485	4.6
	Sri Lanka	84,009	2.3	3,853	1.7
	Maldives	5,729	5.2	10,791	2.2
	Bahrain	38,574	1.8	23,504	-2.6
Europe	Cyprus	24,565	3.2	27,858	1.9
	Iceland	24188	1.9	66,945	-0.5
	United Kingdom	2,827,113	1.4	42,300	0.8
	Ireland	388,699	5.5	78,661	4.0
	Malta	14,786	4.4	29,416	0.6
Africa	Cabo Verde	1,982	5.7	3,604	4.5
	Madagascar	14,084	4.8	522	2.1
	Seychelles	1,699	4.7	17,402	3.8
	Mauritius	14,180	3.6	11,204	3.5
	Comoros	1186	2.7	1,394	0.5
	São Tomé and Príncipe	429	2.4	1,995	0.5
Oceania	New Zealand	206,929	2.2	42,084	0.9
	Papua New Guinea	24,970	5.6	2,845	3.6
	Solomon Islands	1,425	2.7	2,128	0.1
	Vanuatu	917	2.9	3,058	0.4
	Fiji	5,536	1.1	6,220	0.3
	Tonga	450 (2018)	0.3 (2017-18)	4,364 (2018)	0.9 (2017-18)
	Samoa	851	3.5	4,316	3.0
	Nauru	118	6.1 (2017-18)	9,397	1.0
	Micronesia, Fed. Sts.	402 (2018)	0.2 (2017-18)	3,568	-0.8 (2017-18)
	Marshall Islands	221 (2018)	3.6 (2017-18)	3,788 (2018)	3.0 (2017-18)

Continent	Island Country	GDP 2019 in millions of USD (World Bank)	Growth Rate of GDP % 2018- 2019 (World Bank)	GDP per capita 2019 in USD (World Bank)	Growth Rate of GDP per capita % 2018- 2019 (World Bank)
	Kiribati	195	2.2	1,655	0.7
	Tuvalu	47.27	9.8	4,059	8.5
	Palau	284 (2018)	1.7 (2017-18)	15,859 (2018)	1.1 (2017-18)
	Cook Islands	300 (2016, CIA)	–	16,700 (2016, CIA)	–
	Niue	–	–	–	–
Caribbean/	Cuba	100,023 (2018)	2.2 (2017-18)	8,821 (2018)	2.3 (2017-18)
Americas	Haiti	8,499	-0.9	755	-2.2
	Dominican Republic	88,941	5.1	8,282	4
	Jamaica	16,458	0.7	5,582	0.2
	Bahamas, The	12,827	1.8	23,504	0.8
	St. Kitts and Nevis	1,051	2.5	19,897	1.8
	Antigua and Barbuda	1,728	4.7	17,790	3.8
	St. Vincent and the Grenadines	825	0.3	7,464	0.0
	St. Lucia	2,122	1.7	11,611	1.2
	Grenada	1,228	3.1	10,966	2.6
	Barbados	5,209	-0.1	18,148	-0.2
	Trinidad and Tobago	24,100	0.0	17,277	-0.4
	Dominica	596	5.7	8,300	5.4

As Table 1.4 shows, almost all of the economies of small island states represented in this section grew consistently from 2018 to 2019, at least as reflected in the change in their Gross Domestic Product (GDP). Not surprisingly, smaller islands experience greater variability in their growth rates. For example, even within the same region of the Caribbean, the Dominican Republic and Dominica grew by more than five percent, while the economies of Haiti and the Barbados actually contracted over this time period. Unfortunately, growth rates may not necessarily reflect a true measure of the change in well-being of islanders. This table does allow us to take a cursory look at whether the average person is better off in terms of GDP. If the change in GDP per capita (the far right-hand column in Table 1.4) exceeds the change in GDP column, it implies that greater production is not being eaten up by greater population growth. Unfortunately, in almost every case in Table 1.4 (with the only two exceptions being

Despite being known as the "world's happiest nation," daily life on Vanuatu has become more difficult, with large amounts of land being sold and controlled by expatriates. BBC News photo

Japan and Cuba), the change in the GDP growth rate per capita was less than the general GDP per capita change.

Although these GDP figures are mostly positive, they do not necessarily tell us the complete story. First, for many reasons, GDP may not be the best indicator of quality-of-life, especially on small islands. A case in point is Vanuatu. Despite consistent increases in GDP and a label as the "world's happiest nation," (Wittersheim, 2011, p. 323) the daily life of Vanuatuans has become more difficult, with large amounts of land in this agrarian society being sold and controlled by expatriates (Wittersheim, 2011). In other places, such as on Papua New Guinea, the informal economy is a major source of economic well-being for households and communities (Conroy, 2010). Official economic measures such as the GDP do not account for this informal production and trade.

Since these economic statistics extend only to 2019, they also do not reflect the current COVID-19 pandemic reality facing all nations at this time. Although it is too early to provide a comprehensive analysis of the impacts of this pandemic on island economies, peer-reviewed research is already emerging on the impacts on individual islands. Based on an analysis of the dependence on international tourism, Gaffney and Eeckels (2020) predict that all of the countries in the Caribbean, except for Haiti and

Fresh bread out of the traditional oven in Castara, Tobago. Trinidad and Tobago are less dependent on international tourism than other Caribbean countries.
VisitTobago tourism photo

Trinidad & Tobago, and most of the countries in the Pacific are in the highest risk category. Economic risk is even greater if the island's tourism industry was more dependent on cruise ships. Maritime trade has also been adversely affected. Verschuur, Koks, and Hall (2020) suggest that in the first eight months of 2020, total global maritime trade declined by between 7.0 and 9.6 percent, or 225-412 billion USD in value losses. Small islands suffered some of the greatest losses in maritime trade.

TABLE 1.5: Gross National Income (GNI) per Capita, 2019

Continent	Island Country	Gross National Income per capita, Purchasing Power Parity (international $) (World Bank)
Asia	Japan	44,780
	Singapore	92,020
	Indonesia	11,930
	Timor-Leste	4,730
	Brunei Darussalam	66,410
	Philippines	10,200
	Sri Lanka	13,230
	Maldives	17,880
	Bahrain	44,140
Europe	Cyprus	39,830
	Iceland	61,170
	United Kingdom	48,040
	Ireland	68,050
	Malta	41,690
Africa	Cabo Verde	7,310
	Madagascar	1,660
	Seychelles	29,300
	Mauritius	26,410
	Comoros	3,220
	São Tomé and Príncipe	4,090
Oceania	New Zealand	42,710
	Papua New Guinea	4,470
	Solomon Islands	2,350
	Vanuatu	3,310
	Fiji	13,260
	Tonga	6,510
	Samoa	6,490
	Nauru	17,790
	Micronesia, Fed. Sts.	3,640
	Marshall Islands	5,090 (2018)
	Kiribati	4,650
	Tuvalu	6,170
	Palau	19,500 (2018)
	Cook Islands	not available
	Niue	not available

Continent	Island Country	Gross National Income per capita, Purchasing Power Parity (international $) (World Bank)
Caribbean/ Americas	Cuba	not available
	Haiti	1,790
	Dominican Republic	18,280
	Jamaica	9,770
	Bahamas, The	35,760
	St. Kitts and Nevis	25,920
	Antigua and Barbuda	21,500
	St. Vincent and the Grenadines	12,880
	St. Lucia	15,140
	Grenada	16,250
	Barbados	15,730
	Trinidad and Tobago	26,950
	Dominica	12,460

Gross national income (GNI) per capita is another useful indicator of the economic health of islands. Table 1.5 shows that this varies from a high of over Int$92,000 (International dollar) in Singapore to a low of less than Int$2,000 in Madagascar and Haiti. Although the GNI per capita has increased for most islands surveyed, the absolute gap between the wealthiest and the poorest islands has remained the same. The GNI is often regarded as one of the better measures of a jurisdiction's standard of living (Capelli & Vaggi, 2013). Unfortunately, it does not include revenue such as remittances, something that is very important to the economy of many islands.

TABLE 1.6: Labour Force, Participation Rate, and Unemployment Rate, 2019-2020

Continent	Island Country	Labour Force est. (2020)	Labour Force Participation Rate % (2019) (World Bank)	Unemployment Rate % est. (2019)
Asia	Japan	67,802,080	62	2.4
	Singapore	3,549,470	68	3.1
	Indonesia	136,694,230	68	3.6
	Timor-Leste	560,220	67	4.7 (2016)
	Philippines	45,731,520	59	2.2
	Sri Lanka	8,971,000	52	4.8
	Maldives	306,070	58 (2016)	6.1 (2016)
	Bahrain	1,022,530	72 (2015)	1.2 (2012)
Europe	Cyprus	632,970	63	7.1
	Iceland	219,020	81	3.5
	United Kingdom	34,699,630	63	3.7
	Ireland	2,440,260	62	4.9
	Malta	242,770	62	3.4
Africa	Cabo Verde	242,400	57	11.3
	Madagascar	14,307,140	86 (2015)	1.8 (2015)
	Seychelles	52,700	67	3.0
	Mauritius	613,290	59 (2018)	6.4 (2018)
	Comoros	230,000	45 (2014)	8.1 (2014)
	São Tomé and Príncipe	73,410	35 (2006)	13.6 (2012)
Oceania	New Zealand	2,786,380	70	4.1
	Papua New Guinea	2,727,000	48 (2010)	2.6 (2011)
	Solomon Islands	345,280	86 (2013)	0.7 (2013)
	Vanuatu	131,940	64 (2010)	1.8 (2010)
	Fiji	366,200	58 (2016)	4.3 (2016)
	Tonga	41,410	47 (2018)	3.1 (2018)
	Samoa	54,360	43 (2017)	14.5 (2017)
	Cook Islands	7,554 (2011)	71 (2011)	8.2 (2011)
	Niue	785 (2017)	69 (2017)	1.0 (2017)
	Nauru	no data available	–	–
	Micronesia, Fed. Sts.	no data available	–	–
	Marshall Islands	no data available	–	–
	Kiribati	no data available	–	–
	Tuvalu	no data available	–	–
	Palau	no data available	–	–

Continent	Island Country	Labour Force est. (2020)	Labour Force Participation Rate % (2019) (World Bank)	Unemployment Rate % est. (2019)
Caribbean	Cuba	5,087,760	73 (2013)	1.7 (2018)
Americas	Haiti	5,186,570	57 (2012)	14.1 (2012)
	Dominican Republic	5,067,910	65	6.4
	Jamaica	1,502,400	65	7.7
	Bahamas, The	229,390	73 (2013)	10.0 (2018)
	St. Kitts and Nevis	–	69 (2001)	5.1 (2001)
	Antigua and Barbuda	71,993 (2018)	72.1 (2018)	8.7 (2018)
	St. Vincent and the Grenadines	57,280	64.7 (2008)	18.8 (2008)
	St. Lucia	101,400	69	15.6
	Grenada	–	71 (2015)	22.9 (2015)
	Barbados	155,110	66 (2016)	9.7 (2016)
	Trinidad and Tobago	666,100	59 (2016)	3.2 (2016)
	Dominica	31,222 (2011)	58.6 (2011)	11.1 (2011

Generally, the unemployment rate on these islands has decreased from the previous year. For example, Jamaica's unemployment rate has decreased from 12.2 to 7.7 percent and Cyprus's unemployment has declined from 11.1 to 7.1 percent (see Table 1.6). Unfortunately, the data for many of the smallest islands is not current. In some cases, we are still forced to rely on data that is more than ten years old, making it virtually meaningless as an indicator of the current health of these islands. As was pointed out in last year's Annual Report (Randall & Brimacombe, 2020), labour force participation and unemployment in the Caribbean islands is especially problematic and remains so in 2019. Although some of this is attributable to the impact of episodic events such as hurricanes, the collapse of the plantation economy, and the global financial crisis, James et al. (2019) suggest that these higher unemployment rates have persisted for decades and are explained at least partly by broader structural characteristics such as a rigid wage setting that is inherent in the labour force institutions of many of the Eastern Caribbean countries they studied. As has been pointed out previously, one should be cautious about the relevance of these official labour force statistics to the well-being of some households. The informal economy is particularly important in the developing world, including on Small Island Developing States (SIDS), and the value of informal production and exchange is not captured in official labour force data (Baldacchino, 2020). Although it also has a tendency to be vulnerable to external events, informal economic production can be especially important in aiding recovery after natural disasters (Le Dé et al., 2018).

TABLE 1.7: **Human Development Index, 2019**

Island Country	Island Ranking	World Ranking	HDI
Ireland	1	2	0.955
Iceland	2	6	0.949
Singapore	3	11	0.938
United Kingdom	4	13	0.932
New Zealand	5	14	0.931
Japan	6	19	0.919
Malta	7	28	0.895
Cyprus	8	33	0.887
Bahrain	9	42	0.852
Brunei Darussalam	10	47	0.838
Palau	11	50	0.826
Barbados	12/13 (tied)	58 (tied)	0.814
Bahamas	12/13 (tied)	58 (tied)	0.814
Mauritius	14	66	0.804
Seychelles	15/16 (tied)	67 (tied)	0.796
Trinidad and Tobago	15/16 (tied)	67 (tied)	0.796
Cuba	17	70	0.783
Sri Lanka	18	72	0.782
Grenada	19/20 (tied)	74 (tied)	0.779
St. Kitts and Nevis	19/20 (tied)	74 (tied)	0.779
Antigua and Barbuda	21	78	0.778
St. Lucia	22	86	0.759
Dominican Republic	23	88	0.756
Fiji	24	93	0.743
Dominica	25	94	0.742
Maldives	26	95	0.740
St. Vincent and the Grenadines	27	97	0.738
Jamaica	28	101	0.734
Tonga	29	104	0.725
Philippines	30/31 (tied)	107 (tied)	0.718
Indonesia	30/31 (tied)	107 (tied)	0.718
Samoa	32	111	0.715
Marshall Islands	33	117	0.704

Island Country	Island Ranking	World Ranking	HDI
Cabo Verde	34	126	0.665
Kiribati	35	134	0.630
São Tomé and Príncipe	36	135	0.625
Micronesia, Fed. States	37	136	0.620
Vanuatu	38	140	0.609
Timor-Leste	39	141	0.606
Solomon Islands	40	151	0.567
Papua New Guinea	41	155	0.555
Comoros	42	156	0.554
Madagascar	43	164	0.528
Haiti	44	170	0.510

In comparison to last year's values, islands have performed relatively better according to the Human Development Index (HDI). Table 1.7 shows that only 2 of the 46 islands in this analysis (Madagascar and Haiti) are in the Low HDI category, a group where the 2019 HDI values are less than 0.550. Ireland has the highest HDI of this group and also has the second highest HDI of all world countries. This has been consistent for as long as the HDI has been used. For example, using the 2003 HDI data, McGillivray, Noorbakhsh, and Gwynne (2008) found that 20 of the 32 SIDS in their study had HDI values above the world average.

As expected, there is a strong relationship between development and HDI rank. Democratic, capitalist, developed island countries occupy the top ten ranked positions in Table 1.7. In an analysis of all SIDS, Fosu and Gafa (2020) show that despite the inherent vulnerabilities associated with small islands — including insularity, geographical location, small population size, and remoteness — many of them have performed quite well in terms of their economic and overall development, defying predictions. The diversity of SIDS might mean that a "one size fits all" development approach is not warranted. However, fundamentals such as openness to trade and export diversity, foreign direct investment, strong institutional capabilities and social cohesion, using physical and human capabilities to advantage, and a balance of public-private partnerships are often synonymous with positive economic and social development. McGillivray et al. (2008) also suggest that to overcome some of the methodological problems associated with the HDI, it should be accompanied by more subjective indicators of well-being.

TABLE 1.8: Consumer Price Index, Compared to Base Year of 2010

Continent	Island Country	2010	2015	2016	2017	2018	2019
Asia	Japan	100	104	104	104	105	106
	Singapore	100	113	113	113	114	114
	Indonesia	100	132	137	142	147	151
	Timor-Leste	100	143	141	142	142	146
	Brunei Darussalam	100	100	102	99	99	99
	Philippines	100	116	120	120	127	130
	Sri Lanka	100	131	134	147	150	156
	Maldives	100	132	135	136	136	136
	Bahrain	100	111	114	115	118	118
Europe	Cyprus	100	102	100	101	102	103
	Iceland	100	118	120	122	125	129
	United Kingdom	100	112	113	116	118	120
	Ireland	100	105	105	105	106	107
	Malta	100	108	109	110	112	114
Africa	Cabo Verde	100	109	107	108	109	111
	Madagascar	100	140	–	–	–	184
	Seychelles	100	121	120	123	128	130
	Mauritius	100	120	121	125	129	130
	Comoros	100	98	–	–	–	–
	São Tomé and Príncipe	100	154	162	172	185	-
Oceania	New Zealand	100	108	109	111	112	114
	Papua New Guinea	100	128	136	144	–	156
	Solomon Islands	100	125	126	127	–	133
	Vanuatu	100	107	108	111	–	117
	Fiji	100	116	121	125	130	132
	Tonga	100	110	113	121	–	–
	Samoa	100	108	110	112	116	118
	Nauru	–	–	–	–	–	–
	Micronesia, Fed. Sts.	–	–	–	112	–	–
	Marshall Islands	–	–	–	–	–	–
	Kiribati	–	99.5	–	–	–	–
	Tuvalu	–	–	–	–	–	–
	Palau	–	–	–	118	–	–
	Cook Islands	–	–	–	–	–	–
	Niue	–	–	–	–	–	–

Continent	Island Country	2010	2015	2016	2017	2018	2019
Caribbean/	Haiti	100	139	158	181	179	213
Americas	Dominican Republic	100	123	124	129	133	136
	Jamaica	100	141	144	151	156	163
	Bahamas, The	100	110	109	111	113	116
	St. Kitts and Nevis	100	106	105	106	105	–
	Antigua and Barbuda	100	110	110	112	114	–
	St. Vincent and the Grenadines	100	105	105	107	110	–
	St. Lucia	100	111	108	108	110	–
	Grenada	100	104	106	107	107	–
	Barbados	100	117	119	124	–	134
	Trinidad and Tobago	100	134	138	140	142	–
	Dominica	100	103	103	103	104	–

There remains a distinct divide between those islands facing low inflationary pressures and those that continue to experience substantial increases in the price of goods and services. As shown in the Consumer Price Index (CPI) on Table 1.8, most of the more developed islands have seen a modest (less than two percent) increase in their CPI from the previous year. Others, such as Indonesia, Timor-Leste, and Sri Lanka, have experienced about four to five percent inflation between 2018 and 2019. As is often the case with these economic development statistics, Haiti is once again an unfortunate outlier. The cost of a typical basket of goods and services in Haiti increased by almost 19 percent (from a base value of 179 to 213) in only one year. Extreme poverty, corruption, and the long-term consequences of earthquakes and hurricanes continue to plague Haiti. It has been estimated that one-third of Haiti's GDP is from remittances (Goonatilake & Reyes, 2019; United States Congressional Research Service, 2020). Haiti is among the lowest ranked states across a range of indicators, including governance, the perception of corruption, the HDI, gross domestic product per capita, and environmental performance, and most of this poor performance is attributable to ill-governance and corruption (Mombeuil, 2020).

TABLE 1.9: Foreign Direct Investment, Net Current, 2019 (in 100 million USD)

Continent	Island Country	2019 FDI Inflows	2019 FDI Outflows	Total FDI
Asia	Japan	14,552	226,648	241,200
	Singapore	92,081	33,283	125,364
	Indonesia	23,429	3,380	26,809
	Timor-Leste	75	–	–
	Philippines	4,996	658	5,654
	Sri Lanka	758	77	836
	Bahrain	942	-197	745
Europe	Cyprus	24,248	14,053	38,301
	Iceland	-241	513	272
	United Kingdom	59,137	31,480	90,617
	Ireland	78,234	18,103	96,337
	Malta	3,573	-7,163	-3,590
Africa	Cabo Verde	104	-21	83
	Madagascar	227	215	442
	Seychelles	126	8	134
	Mauritius	274	59	333
	Comoros	8	–	–
	São Tomé and Príncipe	57	-1	56
Oceania	New Zealand	5,427	-183	5,244
	Papua New Guinea	334	-484	-150
	Solomon Islands	30	5	35
	Vanuatu	41	1	42
	Fiji	321	-36	285
	Tonga	13	1	14
	Samoa	1	5	6
	Micronesia, Fed. Sts.	–	–	–
	Marshall Islands	4	0	4
	Kiribati	0	0	1
	Tuvalu	0.3	–	–
	Palau	22	–	–
	Cook Islands	8	0	8
Caribbean/	Haiti	75	0	75
Americas	Dominican Republic	2,825	-188	2,636
	Jamaica	665	446	1111
	Bahamas, The	637	148	785
	St. Kitts and Nevis	92	0	92

Continent	Island Country	2019 FDI Inflows	2019 FDI Outflows	Total FDI
	Antigua and Barbuda	139	11	151
	St. Vincent and Grenadines	113	-6	107
	St. Lucia	31	8	39
	Grenada	131	10	141
	Barbados	215	28	243
	Trinidad and Tobago	230	306	536
	Dominica	33	–	–

Foreign Direct Investment (FDI) is often used as an indicator of the economic health of a jurisdiction. However, it can be interpreted in many different ways. For instance, if the net FDI outflows are large, it implies that there are significant monies being generated internally and invested abroad, something that is an asset to that place. A large net inflow of capital implies that there may not be sufficient funds available within the jurisdiction to invest in projects, so capital has to be acquired from abroad, and is therefore a liability to that place. This is often the case in small islands heavily dependent on mass tourism. At the same time, a place that is able to attract FDI from abroad, for example to build up the tourist infrastructure, shows others that there is much less risk associated with investing in that place. Unlike previous versions of the Annual Reports on Global Islands, the Total FDI in this version of the Report is calculated differently (see Table 1.9). Since FDI Inflows are being treated as a liability, they are subtracted from the FDI Outflows (assets) to produce a Total FDI column. Therefore, in places like Japan, there is much more money leaving the island than coming into the island, while in Singapore there is much more foreign investment arriving than there is Singaporean money being invested abroad.

It is not surprising to see that in many of the tourism-dependent Caribbean islands listed in Table 1.9, FDI Inflows greatly exceed FDI Outflows. Looking at 17 islands between 1995 and 2018, Fauzel (2020) found that there was a strong correlation between the rate of FDI and tourist arrivals. This speaks to the importance of FDI for the economic development of islands. Indeed, in general the net inflows of FDI as a percentage of GDP are higher in SIDS than in other jurisdictions (Madhoo, 2021). This finding is consistent across other analyses of the positive impact of tourist-related FDI on small island economies (Roudi et al., 2019). At the same time, we need to be cautious about the long-term consequences of FDI on small island economies. For example, Minnis, Rolle, and Bethel-Bennett (2020) note that the Bahamas has always assumed that a model of FDI would answer all of the needs of the local communities, only to

TABLE 1.10: Rankings and Scores of Globalization Index, 2016

Island Country	Globalization Index				Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score	Change in World ranking 2015-16			
United Kingdom	1	5	89.84	3	81.47	90.15	97.90
Ireland	2	17	84.47	-4	87.97	88.50	76.94
Singapore	3	20	83.62	3	94.00	88.42	68.43
Cyprus	4	35	79.14	3	84.28	86.45	66.69
Japan	5	37	78.59	-2	66.65	80.39	88.73
New Zealand	6	38	78.34	-6	70.28	86.89	77.85
Malta	7	39	77.79	-5	86.50	84.71	62.15
Mauritius	8	50	72.47	2	82.16	79.17	56.09
Iceland	9	53	72.34	-5	69.20	86.12	61.68
Bahrain	10	63	69.30	4	82.54	73.51	52.03
Philippines	11	72	67.41	2	57.48	61.79	82.96
Dominican Republic	12	73	67.35	13	56.91	71.76	73.37
Jamaica	13	77	66.21	-5	62.92	70.05	65.67
Trinidad and Tobago	14	79	65.69	-4	66.47	72.90	57.70
Brunei Darussalam	15	90	62.55	-8	66.80	71.22	50.30
Seychelles	16	91	62.50	-14	74.82	74.58	39.45
Indonesia	17	92	62.47	-9	48.10	52.02	87.28
Barbados	18	93	62.35	0	61.11	79.29	46.63
Cuba	19	94	62.15	4	–	49.25	79.43
Antigua and Barbuda	20	100	60.56	5	68.57	80.91	35.33
Sri Lanka	21	102	59.51	10	42.43	58.00	78.03
Fiji	22	107	58.13	-5	53.56	68.57	52.80
St. Lucia	23	108	57.16	7	65.29	74.37	37.58
Dominica	24	111	56.90	16	63.38	76.53	34.36
Cape Verde	25	112	56.78	25	57.43	66.71	47.52
Grenada	26	117	55.59	2	64.39	71.47	33.89
Bahamas	27	118	55.51	27	51.26	84.93	32.01
Samoa	28	134	52.98	-2	53.14	73.30	35.02
St. Vincent and the Grenadines	29	138	52.19	3	59.26	70.74	31.62
Papua New Guinea	30	140	51.94	-24	56.24	42.01	56.89
St. Kitts and Nevis	31	141	51.88	20	60.80	82.16	20.37
Vanuatu	32	148	50.70	-9	63.69	62.32	31.02
Tonga	33	149	50.52	2	59.38	71.85	25.85
Maldives	34	151	50.19	-13	62.25	70.25	21.90

Island Country	Globalization Index				Economic globalization	Social globalization	Political globalization
	Island country ranking	World ranking	Score	Change in World ranking 2015-16			
Madagascar	35	152	50.03	1	49.42	38.26	62.40
Micronesia, Fed. Sts.	36	157	47.73	-4	72.25	66,45	14.14
Timor-Leste	37	162	47.50	-37	56.27	52.41	35.74
Kiribati	38	167	46.57	-2	69.24	61.77	15.43
Palau	39	168	46.35	-19	57.52	80.00	12.61
Haiti	40	169	46.24	-19	49.22	41.37	48.30
Marshall Islands	41	173	45.53	-17	66.33	72.84	13.29
Solomon Islands	42	178	44.60	-1	52.20	53.01	31.25
São Tomé and Príncipe	43	184	41.99	21	49.78	54.32	24.38
Comoros	44	193	36.91	-14	29.55	45.21	35.03

see large companies take advantage of tax incentives and then leave once those tax holidays had ended. Moreover, and especially when recovering from natural disasters, Zhang and Managi (2020) found that internal financial investment policies were actually much more important in rebuilding Pacific small island economies than financial investment from external sources. In an analysis of the importance of tourism in assessing quality-of-life in the Caribbean islands, Puig-Cabrera and Foronda-Robles (2019) suggest that government investment in the tourism sector was four times more important than private investment.

Unfortunately, the data on globalization scores in Table 1.10 have not been updated since last year's version of the Annual Report. The description of these results (Randall & Brimacombe, 2020) and the longer discussion of the complexity associated with the impacts of globalization and innovation for islands need not be repeated here. Beyond that which is presented in the data and in last year's narrative description, there is growing evidence that globalization is leading to increased environmental degradation, something not addressed in this table (Didorally & Fauzel, 2020; Seetanah et al., 2019). For example, using a sample of 12 SIDS, Seetanah et al. (2019) found that increasing GDP per capita, something often associated with economic development and an open, global economy, has a significant negative impact on the level of CO_2 emissions. Globalization is also cited as a culprit in the growing problem of small island food insecurity, as urbanization, migration, and changes in trading patterns have distanced islanders from their self-sustaining agricultural systems and decreased the nutritional value of their food (Connell et al., 2019).

TABLE 1.11: Global Innovation Index, 2020

Island Country	Global Innovation Index				Innovation output Sub-Index		Innovation Input Sub-Index		Efficiency Ratio (2020)	
	Island Country Ranking	World Ranking	Score	Change in World Ranking, 2019-2020	World Ranking	Score	World Ranking	Score	World ranking	Score
United Kingdom	1	4	59.80	1	3	53.60	6	66.00	4	0.80
Singapore	2	8	56.6	0	15	43.00	1	70.20	44	0.60
Ireland	3	15	53.00	-3	11	46.40	20	59.70	9	0.80
Japan	4	16	52.70	-1	18	41.80	12	63.60	33	0.70
Iceland	5	21	49.20	-1	19	41.2	23	57.30	24	0.70
New Zealand	6	26	47	-1	33	33.1	19	61	58	0.5
Malta	7	27	46.4	-1	21	40.10	31	52.60	12	0.80
Cyprus	8	29	45.70	-1	26	38.20	30	53.20	25	0.70
Philippines	9	50	35.20	4	41	29.60	70	40.80	20	0.70
Mauritius	10	52	34.40	30	60	22.90	47	45.80	70	0.50
Brunei Darussalam	11	71	29.80	–	113	11.50	39	48.20	130	0.20
Jamaica	12	72	29.1	9	62	21	86	37.2	56	0.6
Bahrain	13	79	28.40	-1	89	14.70	63	42.10	112	0.30
Indonesia	14	85	26.5	–	76	17.80	91	35.10	69	0.50
Dominican Republic	15	90	25.10	-3	85	15.4	94	34.70	86	0.40
Sri Lanka	16	101	23.80	-12	83	16.30	107	31.30	64	0.50
Madagascar	17	115	20.40	6	100	13.40	125	27.40	72	0.50

Islands have traditionally been viewed as innovation deficient, largely because of their small size and isolation. However, as has been conveyed frequently over the past decade, the ability of island companies and entrepreneurs to be flexible or nimble, as well as being well-connected with the rest of the world, has allowed for a fairly high quality-of-life on many islands as measured by a range of indicators. For example, Sammut et al. (2020) found that on Malta there was a weak understanding of the concepts of social innovation and corporate social responsibility. However, when these concepts were explained, it became clear that most of those interviewed were already incorporating many aspects of these practices into their businesses. Social innovation is also apparent in the evolution of the tourism sector on small islands. Given the importance of this sector on many small islands, it should not be surprising to find that most of the research contributions on innovation as they pertain to small islands are focused on this sector. This innovation centres around the increasing role of local communities in leading the development of tourism and focusing on sustainability as both product and process to appeal to international tourists (Hampton & Jeyacheya, 2020).

Several islands in this group have made considerable improvements in their world Global Innovation ranking between 2019 and 2020. For example, Mauritius improved its ranking by 30 places, from 82nd to 52nd. Jamaica also improved compared to other world states, climbing nine places from 81st to 72nd place. Mauritius is an interesting example of an island that

has transformed itself over the past half century from being largely an exporter of raw materials to being a more diversified, trade-based economy with contributions from agriculture, manufacturing, financial services, tourism, and information technology (Seetanah et al., 2020; Sithanen, 2020; Tang et al., 2018). Looking forward, many researchers are using the framework of the Blue or Oceans Economy to encourage future sustainable development of Mauritius (Cervigni & Scandizzo, 2017; Mukhopadhyay et al., 2020; Scandizzo et al., 2018). That being said, the recent cargo ship oil spill off the southeastern tip of the island represents yet another example of the vulnerability of small islands to unanticipated events and their best intentions to manage the marine ecosystem to become more sustainable.

Tables 1.12 and 1.13 have been added to this year's version of the Annual Report to reflect the theme of public health on small islands. It is too early to assess the long-term ramifications of the COVID-19 pandemic on the development futures of small islands, although several of the chapters in this volume do address this topic specifically as well as the health of islanders more broadly. I would encourage the reader to explore the *COVID-19 Island Insights Series* page on the University of Prince Edward Island's Institute of Island Studies website (islandstudies.com/island-insights-series) to get a better picture of how islands have experienced the pandemic, and how governments have responded to the crisis given their islands' unique contexts.

The proportion of spending by governments on health services may be a surrogate indicator of the importance they place on public health. Table 1.12 (next page) shows that, for this subgroup, this figure ranges from highs of 23.6% in Japan and 20.0% in Ireland to a low of 3.4% in the Comoros Islands. As with other indicators of social and economic health, developed countries tend to spend a higher share of expenditures on health services while the least developed countries spend relatively less on health. However, this is not always the case. For example, Singapore spends only 12.6% on health services, while Palau and the Dominican Republic spend 17.4% and 15.6% respectively. One of the challenges of providing and accessing health services on small island states is the inability to take advantage of economies of scale. In effect, small populations and relative isolation mean that it is cost-prohibitive to offer higher level, more expensive health infrastructure, as measured in terms of facilities and skilled health professionals (Suzana et al., 2018). They also have limited absolute resources to respond to health crises, including those caused by pandemics (Murphy et al., 2020) and hurricanes (Shultz et al., 2019). Gratzer (2019) suggests that Pacific Island SIDS face a triple public health threat: the continuing persistence of high levels of communicable diseases, rising rates of non-communicable diseases, and health problems brought on by climate change. Where government health expenditures do take place, it is not uncommon for these extra resources to be oriented more towards curative care and less so on primary care such as immunization programs and efforts to decrease infant mortality rates (Purohit, 2021).

Pacific island countries have long been known to have the highest rates of obesity globally (Davis et al., 2004; Dillinger, 2021; Randall, 2020a). As seen in Table 1.12, adult obesity in this region often afflicts more than half of the population, while childhood obesity is a characteristic shared by between 20 to 30 percent of the youth in most Pacific

TABLE 1.12: Indicators of Public Health, various years

Continent	Island Country	Government Health Expenditures as % of Total Government Expenditures (%), 2017	Prevalence of Obesity among Children 5-19 yrs. (%) 2016	Prevalence of Obesity among Adults (%) 2016	Diabetes Prevalence (%) of Popn. aged 20-79 yrs. 2019
Asia	Japan	23.6	3.3	4.3	5.6
	Singapore	12.6	6.8	6.1	5.5
	Indonesia	8.7	6.1	6.9	6.3
	Timor-Leste	5.2	4.2	3.8	6.7
	Brunei Darussalam	6.2	14.1	14.1	13.3
	Phillippines	7.1	4.3	6.4	7.1
	Sri Lanka	8.5	4.8	5.2	10.7
	Maldives	21.8	7.4	8.6	–
	Bahrain	8.5	17.2	29.8	15.6
Europe	Cyprus	7.6	12.2	21.8	9.0
	Iceland	15.7	9.9	21.9	5.8
	United Kingdom	18.7	10.2	27.8	3.9
	Ireland	20.0	9.8	25.3	3.2
	Malta	16.5	13.4	28.9	8.3
Africa	Cape Verde	9.9	3.1	11.8	2.4
	Madagascar	15.0	1.8	5.3	4.5
	Seychelles	10.1	10.8	14.0	–
	Mauritius	10.0	4.4	10.8	22.0
	Comoros	3.4	2.8	7.8	12.3
	São Tomé and Príncipe	10.8	3.5	12.4	–
Oceania	New Zealand	19.3	13.6	30.8	6.2
	Papua New Guinea	9.2	9.8	21.3	–
	Solomon Islands	7.2	4.3	22.5	19
	Vanuatu	5.3	8.3	25.2	–
	Fiji	7.2	11.5	30.2	14.7
	Tonga	7.4	26.7	48.2	15.7
	Samoa	11.6	21.7	47.3	9.2
	Nauru	5.6	33.2	61.0	12
	Micronesia, Fed. Sts.	4.9	20.7	45.8	11.9
	Marshall Islands	9.5	26.6	52.9	30.5
	Kiribati	6.9	23.0	46.0	–
	Tuvalu	10	27.2	51.6	–
	Palau	17.4	31.4	55.3	–
	Cook Islands	5.7	32.2	55.9	–

Continent	Island Country	Government Health Expenditures as % of Total Government Expenditures (%), 2017	Prevalence of Obesity among Children 5-19 yrs. (%) 2016	Prevalence of Obesity among Adults (%) 2016	Diabetes Prevalence (%) of Popn. aged 20-79 yrs. 2019
	Niue	5.2	29.5	50.0	–
Caribbean/	Haiti	5.2	10.9	22.7	–
Americas	Dominican Republic	15.6	15.0	27.6	8.6
	Jamaica	13.3	13	24.7	11.3
	Bahamas, The	11.3	17.3	31.6	8.8
	St. Kitts and Nevis	8.2	12.3	22.9	13.3
	Antigua and Barbuda	9.5	11.5	18.9	13.1
	St. Vincent and the Grenadines	9.5	12.4	23.7	11.6
	St. Lucia	8.9	8.8	19.7	–
	Grenada	9	10.7	21.3	10.7
	Barbados	9.1	12.3	23.1	13.4
	Trinidad and Tobago	11.2	11.1	18.6	11.0
	Dominica	7.3	15.0	27.9	11.6

islands. Obesity leads directly and indirectly to many other health problems, including diabetes, cardiovascular problems, and hypertension (Hawley & McGarvey, 2015; World Health Organization, Regional Office for South-East Asia, 2008). It has been estimated that more than 138 million people in the western Pacific are living with diabetes (Nanditha et al., 2016) and, although the data are not complete, Table 1.12 shows that almost one-third of all adults in the Marshall Islands have diabetes. Although not all health problems are related to obesity, adverse health outcomes from obesity are particularly severe in children and pregnant women suffering from iodine deficiencies and anemia, an iron deficiency that leads to fatigue and higher levels of maternal death and cognitive problems in children. Hughes and Marks (2009) and the World Health Organization (WHO; World Health Organization, Regional Office for South-East Asia, 2008) found higher levels of vitamin A deficiencies on many of these islands, leading to higher rates of death from malaria, measles, and diarrhea, as well as maternal deaths.

The high level of obesity among islanders is the result of a complex set of factors. In the past century, the lifestyles of islanders, and especially those in the Pacific, have evolved from subsistence farming and fishing and a diet consisting largely of traditional root crops, vegetables, fruits, and seafood. Following greater contact after World War II, islanders in the Pacific adopted diets of refined or processed foods that were high in fats and sodium, such as rice, sugar, flour, soda, beer, and fast-food, initially brought to the islands by the military (Cassels, 2006; Cheng, 2010; Davis et al., 2004).

TABLE 1.13: Health Indicators (various dates) and Net Migration (2017)

Continent	Island Country	Cause of Death by Communicable Diseases, Maternal, Prenatal, or Nutrition Conditions (% of total deaths) 2016	Net Migration 2017	Hospital Beds (per 1,000 people)
Asia	Japan	13	357,800	13.4 (2012)
	Singapore	23	135,142	2.4 (2015)
	Indonesia	21	-494,777	1.2 (2015)
	Timor-Leste	46	-26,924	5.9 (2010)
	Brunei Darussalam	8	-901	2.7 (2015)
	Philippines	25	-335,758	1.0 (2011)
	Sri Lanka	8	-489,932	3.6 (2012)
	Maldives	8	56,851	4.3 (2009)
	Bahrain	7	239,000	2.0 (2014)
Europe	Cyprus	4	25,000	3.4 (2013)
	Iceland	4	1,900	3.2 (2014)
	United Kingdom	8	1,303,250	2.8 (2013)
	Ireland	5	118,020	2.8 (2013)
	Malta	6	4,501	4.7 (2014)
Africa	Cape Verde	20	-6,709	2.1 (2010)
	Madagascar	46	-7,500	0.2 (2010)
	Seychelles	12	-1,000	3.6 (2011)
	Mauritius	7	-12,079 (2012)	3.4 (2011)
	Comoros	47	-10,000	2.2 (2010)
	São Tomé and Príncipe	34	-8,401	2.9 (2011)
Oceania	New Zealand	5	74,403	2.8 (2013)
	Papua New Guinea	36	-3,999	4.0 (1990)
	Solomon Islands	22	-7,998	1.4 (2012)
	Vanuatu	19	600	1.7 (2008)
	Fiji	10	-31,008	2.3 (2011)
	Tonga	12	-3,999	2.6 (2010)
	Samoa	12	-14,013	1.0 (2005)
	Palau	–	–	4.8 (2010)
	Kiribati	29	-3,999	1.9 (2015)
	Nauru	–	–	5.0 (2010)

Continent	Island Country	Cause of Death by Communicable Diseases, Maternal, Prenatal, or Nutrition Conditions (% of total deaths) 2016	Net Migration 2017	Hospital Beds (per 1,000 people)
	Micronesia, Fed. Sts.	19	-2,999	3.2 (2009)
	Marshall Islands	–	–	2.7 (2010)
	Tuvalu	–	–	5.6 (2001)
	Cook Islands	–	–	–
	Niue	–	–	–
Caribbean/	Haiti	30	-175,000	0.7 (2013)
Americas	Dominican Republic	16	-150,000	1.6 (2014)
	Jamaica	11	-56,658	1.7 (2013)
	Bahamas, The	17	4,999	2.9 (2013)
	St. Kitts and Nevis	–	–	2.3 (2012)
	Antigua and Barbuda	12	943 (2012)	3.8 (2014)
	St. Vincent and the Grenadines	13	-1,000	2.6 (2016)
	St. Lucia	10	4,360	1.3 (2013)
	Grenada	12	-1,000	3.7 (2014)
	Barbados	13	-397	5.8 (2014)
	Trinidad and Tobago	9	-3,999 (2016)	3.0 (2014)
	Dominica	–	–	3.8 (2012)

As shown in Table 1.13, several of the smaller and least developed islands have the highest rates of death by communicable disease and poor nutrition. Almost one-half of the deaths in Madagascar, Timor-Leste, and the Comoros are as a result of these causes, while the rate in European islands never exceeds 10 percent of all deaths. Infectious diseases such as cholera, tuberculosis, and gastroenteritis represent substantial problems for many small islands (Roberts et al., 2021). As a result of their relative isolation and manageable access points, some of these islands may initially be protected from infectious diseases, including from SARS-CoV-2, the virus that causes the disease we know as COVID-19. However, once communicable diseases do reach the islands, outbreaks may be more severe because of an absence of trained health professionals and facilities (WHO, 2017). In other words, these underlying health problems

Atauro Island in Timor-Leste. Smaller and less developed islands have the highest rates of death by communicable disease and poor nutrition. Almost one half of the deaths in Timor-Leste are a result of these causes. Atauro Island tourism photo

combined with poorer access to respiratory health care means that the potential outcomes may eventually be bleaker than elsewhere.

It has also been noted that health outcomes are closely linked to climate change and extreme weather events. For example, saltwater intrusion in the water table affects the local food supply, and the damage to public infrastructure from hurricanes and earthquakes increases the likelihood of contracting communicable and non-communicable diseases (Savage et al., 2020; Shultz et al., 2019). Given what we have just discussed, we should expect to find that the number of hospital beds, standardized by population, tends to be lower on the smallest, most vulnerable, islands (see Table 1.13). However, this is not the case. Although Japan stands out from all of the other islands here as having the highest number of hospital beds per 1,000 people, there is no clear pattern linked to development or size among the other islands on this list. In fact, Timor-Leste, a country that often has among the poorest health outcomes across a range of indicators, has the second greatest number of hospital beds per 1,000 people.

Although not directly related to public health, net migration is another indicator of the structural changes taking place on islands. Some countries, such as Japan, the United Kingdom, and New Zealand, are facing an aging labour force and the need to replace this labour through international immigration. Those countries that have a rapidly growing younger population, including Indonesia, the Philippines, and Sri

Japan stands out from all of the other islands as having the highest number of hospital beds per 1,000 people. However, the majority of hospitals in Japan are private hospitals, and most do not have the staff and equipment to treat COVID-19 patients. Reuters

Lanka, use emigration as a labour market and political "safety valve". The absence of employment opportunities in these countries forces young people to seek jobs elsewhere. Additionally, in 2017, several island countries on this list faced extreme weather events that have prompted out-migration. Several Caribbean islands in particular (e.g., Haiti, Dominican Republic), experiencing significant damage from hurricanes, saw a mass exodus of people.

THOSE COUNTRIES THAT HAVE a rapidly growing younger population, including Indonesia, the Philippines, and Sri Lanka, use emigration as a labour market and political "safety valve". The absence of employment opportunities in these countries forces young people to seek jobs elsewhere.

TABLE 1.14: **Trade (% of GDP) in 2010, 2019**

Continent	Island Country	2010	2019
Asia	Japan	28.6	37.0 (2018)
	Singapore	369.7	319.0
	Indonesia	46.7	37.0
	Timor Leste	150.9	63.0 (2018)
	Brunei Darussalam	95.4	109.0
	Philippines	71.4	69.0
	Sri Lanka	46.4	52.0
	Maldives	143.0	136.0
	Bahrain	120.5	151.0 (2018)
Europe	Cyprus	109.1	143.0
	Iceland	94.1	86.0
	United Kingdom	58.6	64.0
	Ireland	189.4	239.0
	Malta	307.4	231.0
Africa	Cape Verde	94.4	-
	Madagascar	57.9	60.0
	Seychelles	201.9	155.0
	Mauritius	113.5	93.0
	Comoros	39.6	43.0 (2018)
	São Tomé and Príncipe	–	-
Oceania	New Zealand	58.2	56.0 (2018)
	Papua New Guinea	–	-
	Solomon Islands	130.5	98.0 (2015)
	Vanuatu	99.4	98.0 (2014)
	Fiji	121.7	-
	Tonga	72.7	98.0 (2018)
	Samoa	80.6	91.0
	Palau	127.1	123.0 (2018)
	Kiribati	91.5	98.0 (2018)
	Nauru	99.0	123.0 (2018)
	Micronesia, Fed. Sts.	-	101 (2018)
	Marshall Islands	-	126 (2018)

Continent	Island Country	2010	2019
	Tuvalu	-	-
	Cook Islands	-	-
	Niue	-	-
Caribbean/	Haiti	–	74.0
Americas	Dominican Republic	56.0	53.0
	Jamaica	80.9	89.0
	Bahamas, The	78.7	77.0 (2018)
	St. Kitts and Nevis	76.2	123.0
	Antigua and Barbuda	104.7	90.0 (2016)
	St. Vincent and the Grenadines	84.0	85.0 (2012)
	St. Lucia	99.8	-
	Grenada	73.1	110.0
	Barbados	95.9	84.0
	Trinidad and Tobago	85.8	-
	Dominica	88.1	140.0

Last year's Annual Report (Randall, 2020b) articulated the significance of trade in goods, services, and people (e.g., tourism) to the economy of island nations. All other things being equal, smaller political jurisdictions tend to rely on trade to a greater degree than larger entities. This is primarily a result of the greater degree of economic specialization and truncation of domestic supply linkages. In other words, on smaller islands, producers and consumers are more likely to import goods and services because they are not able to find them locally. So, for example, the value of imports and exports in Singapore is more than three times (319%) the total Gross Domestic Product of this city state that specializes in financial services, while Japan's trade is only 37% of its GDP. In fact, despite its reputation as a major world exporter of electronics, automobiles, and services, Japan is the most closed economy — at least according to this indicator — from among the group of islands listed in Table 1.14.

SECTION 2: SUBNATIONAL ISLAND JURISDICTIONS

Those who have followed the political dimension of island studies will be well aware of the significance of subnational island jurisdictions (SNIJs) as well as their relative lack of attention in most discussions of international relations and global diplomacy. In international forums, mainland nations rarely speak from the perspective of the needs and interests of their coastal or inland (fresh water) islands. Therefore, the voices of islanders are more difficult to be heard, both domestically and internationally. Contributing to this absence on the international platform, it is extremely difficult to find comparable statistics on SNIJs. Despite these limitations, this section of the chapter shines a light on a small group of thirteen of these islands. I would strongly encourage the reader to explore the work of Stuart (2009) and Watts (2009) as primers to develop a better understanding of the characteristics and diverse nature of the thousands of SNIJs that exist worldwide.

TABLE 1.15: **Area of island, in km² (Subnational)**

Bali, Indonesia	5,780
Gotland, Sweden	3,184
Greenland, Denmark	2,166,086
Hainan Island, China	35,354
Hawai'i, USA	28,311
Java, Indonesia	138,794
Jeju, South Korea	1,826
Luzon, Philippines	104,688
Okinawa, Japan	2,281
Phuket, Thailand	576
Prince Edward Island, Canada	5,660
Taiwan, China	36,197
Tasmania, Australia	68,401

Table 1.15 lists the land areas of these thirteen SNIJs. Unlike island states, the marine jurisdictions of these islands may be subsumed within federal boundaries, especially if these are near the coasts of their mainland political metropoles. The marine jurisdictions of islands and archipelagos that are far from their mainlands may take on greater importance in providing these nations with larger areas of strategic and economic importance. For example, the island archipelago of Hawai'i may only be 28,311 square kilometres in land area but, when the state's marine Exclusive Economic Zone (EEZ) is added, the total area of this American state is almost 1.6 million sq. km., or more than twice the size of the American state of Texas.

TABLE 1.16: Most Recent Population Characteristics (Subnational islands)

	Year	Population	Population Density (people/km²) 2019	Population Growth Rate % over Previous Year
Bali, Indonesia	2020	4,380,800	750	1.21 (2016)
Gotland, Sweden	2019	59,686	19.0	0.99
Greenland, Denmark	2019	56,225	0.14	0.40
Hainan Island, China	2018	9,340,000	270.2 (2017)	1.17
Hawai'i, USA	2019	1,415,872	211.8 (2010)	0.40
Java, Indonesia	2019	136,279,700	1,153	1.24
Jeju, South Korea	2016	661,190	357.6	3.02
Luzon, Philippines	2015	11,218,177	480	1.95
Okinawa, Japan	2019	1,455,799	1,206.2 (2015)	3 (2015)
Phuket, Thailand	2019	540,200	994.8	0.31
Prince Edward Island, Canada	2020	159,625	25.1 (2016)	1.50
Taiwan, China	2020	23,831,767	673	0.18
Tasmania, Australia	2020	524,170	7.24	0.29

The other feature that must be taken into consideration when comparing land areas of jurisdictions is their respective carrying capacities. From an ecological perspective, carrying capacity is "the population of a given species that can be supported indefinitely in a given habitat without permanently damaging the ecosystem upon which it depends" (Rees, 1992, p. 125). When applied to the human environment, this definition becomes messier. Islands that come closest to the ecological definition of carrying capacity would practice a self-sufficient agricultural lifestyle incorporating little trade with the rest of the world. Some small islands, such as Java and Bali in Indonesia, appear to have incredibly high carrying capacities, with large populations densely living in a small land area. However, because they require goods and services that are produced elsewhere and imported to these islands, their true "ecological footprint" is much greater than the small land area of these islands. At the other extreme, Greenland's small population of just over 56,000 depends primarily on the livelihood that can be earned from the nearby fisheries as well as transfer payments from Denmark. Most of the interior of Greenland is not able to support a large, self-sufficient population.

TABLE 1.17: Birth and Death Rates, various dates (Subnational islands)

	Year	Crude Birth X / 1,000 people	Crude Death X / 1,000 people	Fertility Rate X / 1,000 people
Bali, Indonesia	2017	18.42	7.17 (2015)	2.10
Gotland, Sweden	2018	11.00	9.00	1.85 (2017)
Greenland, Denmark	2018	15.00	9.00	2.00
Hainan Island, China	2017	14.73	6.01	1.50
Hawai'i, USA	2019	11.90	9.00	1.8 (2018)
Java, Indonesia	2019	17.75	6.51	2.34 (2017)
Jeju, South Korea	2013	9.10	5.70	1.43
Luzon, Philippines	2018	20.55	5.90	2.58
Okinawa, Japan	2013	–	1.96	1.82 (2019)
Phuket, Thailand	2016	17.38	5.54	–
Prince Edward Island, Canada	2019	8.40	8.90	1.47
Taiwan, China	2018	7.7	7.33	1.15
Tasmania, Australia	2019	10.92	8.71	1.78 (2018)

Compared with last year's Annual Report, the birth and death rates of many of these island territories or states is narrowing (see Table 1.17). Prince Edward Island in Canada is the only island on this list that has a negative natural growth rate (i.e., where the death rate exceeds the birth rate) but several others, including Taiwan and Gotland, Sweden, are approaching that demographic tipping point. Of course, because this does not include migration, the figures in this table should not be used to suggest that the overall populations of these jurisdictions are decreasing or growing more slowly.

As is the case in many parts of the world, life expectancies for both males and females continue to increase, although the trend is slowing and is lower for SIDS than it is for other mainland jurisdictions (WHO, 2017). Table 1.18 suggests that the longest life expectancies are in the most industrialized and urbanized islands. The differences in life expectancies among these islands and those in the more rural, agriculture-oriented islands are striking. For example, there is an approximately ten year difference in life expectancies (for both males and females) between a group which includes Gotland, Okinawa, and Prince Edward Island, and islands such as Java and Luzon, Philippines. According to Day, Pearce, and Dorling (2008), the primary explanations for the variations across country groupings are health spending per capita, the availability of hospital beds, and access to affordable medicines (including measles

TABLE 1.18: **Life Expectancy, by Gender (Subnational islands)**

	Year	Life Expectancy (females, in years)	Life Expectancy (males, in years)
Bali, Indonesia	2019	76.5	74.4
Gotland, Sweden	2018	84.0	81.0
Greenland, Denmark	2020	76.3	70.7
Hainan Island, China	2018	79.0	75.0
Hawai'i, USA	2014	83.9	78.4
Java, Indonesia	2019	74	70.5
Jeju, South Korea	2013	86.6	78.6
Luzon, Philippines	2010	75.4	68.7
Okinawa, Japan	2015	87.4	80.3
Phuket, Thailand	2018	81	73.0
Prince Edward Island, Canada	2018	83.7	79.8
Taiwan, China	2020	83.9	77.5
Tasmania, Australia	2019	83.6	79.5

vaccination for infants). Connell and Aldrich (2020) suggest that interpreting fertility, mortality, and, by extension, life expectancy rates is less important than migration, and overseas island territories that have been experiencing the highest levels of out-migration are doing so because the islanders are seeking better health care, education, and economic opportunities. They also note that across most health indicators, these semi-autonomous states have better health outcomes than independent island states but poorer health outcomes than their mainland metropoles (Connell & Aldrich, 2020).

TABLE 1.19: **Rural and Urban Share of Population, various dates (Subnational islands)**

	Year	Rural %	Urban %
Bali, Indonesia	2020	39.8	70.2
Gotland, Sweden	2019	58.6	41.4
Greenland, Denmark	2019	13.0	87.0
Hainan Island, China	2017	42.0	58.0
Hawai'i, USA	2019	19.4	80.6
Java, Indonesia	2019	44.0	56.0
Jeju, South Korea	2019	0.0	100.0
Luzon, Philippines	2019	53.0	47.0
Okinawa, Japan	2018	12.2	87.8
Phuket, Thailand	2019	67.9	32.1
Prince Edward Island, Canada	2016	60.0	40.0
Taiwan, China	2020	21.5	78.5
Tasmania, Australia	2016	31.9	68.1

It is not uncommon for islands to have very high rates of urbanization. Several islands and archipelagos in this grouping (e.g., Jeju, Okinawa, Greenland, and Hawai'i) have more than eighty percent of their population living in urban areas. Others have experienced rapid urbanization in a short period of time. For example, in 2010, Hainan's population was split almost evenly between urban and rural. By 2017, the urban population was 58% of the total. In the case of Phuket, Thailand, although still a very rural island, rapid growth in tourism has contributed to coastal urbanization over the past decade (Wongsai et al., 2018). In the Malay Peninsula, including Java and Bali in particular, it appears that the islands are more densely populated and urban than the surrounding Indonesian mainland (Rimmer & Dick, 2018). Much of this urbanization can be explained by easier access to the international shipping lines and the gateway role of these centres. Those islands whose economies are more dependent on agricultural activities would naturally have a higher rural population. As with the other data for SNIJs, we need to be cautious in comparing this measure across islands. Some sites define urban centres as including cities and towns, while others have a much higher minimum population threshold level for urban.

TABLE 1.20: Labour Force Characteristics, various dates (Subnational)

	Year	Labour Force	Labour Force Participation Rate %	Unemployment Rate %
Bali, Indonesia	2018	–	98.6	–
Gotland, Sweden	2016	27,000	63.3	6.4
Greenland, Denmark	2015	26,840	74.1	9.1
Hainan Island, China	2016	5,581,400	61.00	2.3 (2018)
Hawai'i, USA	2019	665,000	97.3	2.7
Java, Indonesia	2018	–	94.2	–
Jeju, South Korea	2019	560,000	69.3	2.1
Luzon, Philippines	–	–	–	–
Okinawa, Japan	2015	629,394	93.7	4.4 (2016)
Phuket, Thailand	2013	167,883	99.5	0.5
Prince Edward Island, Canada	2019	85,500	66.5	8.8
Taiwan, China	2019	11,946,000	59.2	3.7
Tasmania, Australia	2019	268,400	56.9	6.7

Labour force statistics, and, in particular, unemployment rates, have become critically important as indicators of the economic well-being of jurisdictions and families. In particular, measures such as the GDP may be simpler to use and more important to gauge macroeconomic change, as well as for business and government, but are less relevant to the day-to-day lives of residents. However, the state of being unemployed directly touches the lives of individuals. Table 1.20 provides two linked labour force characteristics for SNIJs: the participation rate and the unemployment rate. In general, for those places that have provided recent statistics, unemployment rates are relatively low, with the highest rates being on Prince Edward Island and Greenland. Unfortunately, as is the case with many other basic indicators associated with semi-autonomous islands, data are often missing or so outdated as to be irrelevant. Although more recent data may be available within local or regional government offices, differences in how these are calculated makes these exceptionally difficult to compare. In addition, as was noted earlier, the informal economy is often critically important at the level of the household on many islands, and particularly on those that are still developing. Official labour force statistics rarely incorporate those working in the informal economy as part of the officially reported labour force.

TABLE 1.21: **Gross Domestic Product, various dates (Subnational)**

	Year	Gross Domestic Product (GDP) in USD	GDP per capita in USD
Bali, Indonesia	2020 Q3	3,907,600,000	2,650
Gotland, Sweden	2016	2,371,259,730	40,853
Greenland, Denmark	2018	3,051,626,390	54,471
Hainan Island, China	2017	66,801,652,000	7,236
Hawai'i, USA	2019	83,510,000,000	58,981
Java, Indonesia	2010	94,956,634,949	1,149
Jeju, South Korea	2013	11,710,628,500	39,813
Luzon, Philippines	–	–	–
Okinawa, Japan	2011	36,006,697,656	25,700
Phuket, Thailand	2009	591,930,556	1,762
Prince Edward Island, Canada	2019	6,076,800,000	33,719
Taiwan, China	2019	610,690,000,000	25,873
Tasmania, Australia	2019	225,441,647,200	41,979

Despite all of the recognized shortcomings of the use of the Gross Domestic Product (GDP) as an indicator of the developmental health of a place, these values in Table 1.21 are still effective surrogate indicators of the absolute size of island economies. According to the total GDPs in Table 1.21, several of the SNIJs are among the largest economies in the world; often larger than the value of production for the island countries listed in Table 1.4. Perhaps more meaningful in gauging the economic wealth of these islands is their GDP per capita. For example, although Bali produced approximately 3.9 billion USD in goods and services in 2020 compared to just over 3 billion USD in Greenland, the GDP per capita in Bali is only 1/20th of the GDP per capita in Greenland (i.e., $2,650 versus $54,471). Of course, more important than this is the income earned per household and the purchasing power of that income.

If we take this argument even further and are truly interested in pursuing island and global sustainability, we need to critically question the use of GDP. Pursuing limitless economic growth without also understanding the need for meaningful employment and equity in a world of finite resources, a climate crisis, and a global pandemic is short-sighted and unlikely to allow us to meet many of the other economic, social, and environmental ambitions associated with the Sustainable Development Goals (SDGs) (Coscieme et al., 2020).

SOURCES AND NOTES FOR TABLES

Table 1.1:
Population and Population Growth Rates from the CIA World Factbook; Population Density from the World Bank (http://data.worldbank.org/indicator/en.PoP.dnst). A dashed line in a cell (–) indicates missing values.

Table 1.2:
From the CIA World Factbook, various links (www.cia.gov/library/publications/the-world-factbook).
No information was available for Niue.

Table 1.3:
From the CIA World Factbook.

Table 1.4:
From the World Bank (http://data.worldbank.org).

Table 1.5:
From the World Bank (http://data.worldbank.org).

Table 1.6:
Data on the Labour Force and Participation Rate are from the World Bank.
Unemployment rates are from the CIA World Factbook. Note: Values listed may not necessarily correspond to the data from these sources because the latter are updated when new information is available.
Data for Antigua and Barbuda is from the Ministry of Finance and Corporate Governance, Government of Antigua and Barbuda, *2018 Labour Force Survey* (https://statistics.gov.ag/wp-content/uploads/2020/03/2018-Labour-Force-Survey-Bulletin.pdf).
Data for the Cook Islands is from the Ministry of Finance & Economic Management, Government of the Cook Islands, *Economic Activity and Labour Force 2015* (http://www.mfem.gov.ck/statistics/census-and-surveys/economic-activity-and-labour-force).
Data for Dominica is from Central Statistics Office, Government of the Commonwealth of Dominica (https://stats.gov.dm/subjects/labour-force).
Data for Niue is from Statistics and Immigration Office, Ministry of Finance and Planning, Government of Niue, *Household and Population Census 2017* (https://niue.prism.spc.int/download/35/census/1460/2019-niue-pophh-census-2-0.pdf).
Data for Seychelles is from National Bureau of Statistics, Seychelles (https://www.nbs.gov.sc/downloads/economic-statistics/employment-earnings).

Table 1.7:
From the United Nations Development Program (UNDP)
(http://www.hdr.undp.org/en/content/latest-human-development-index-ranking).

Table 1.8:
From the World Bank. A dashed line in a cell (–) indicates that the values have not been updated since 2015.
Data for the Maldives from National Bureau of Statistics, Republic of Maldives, *Consumer Price Index, Annual 2019* (http://statisticsmaldives.gov.mv/nbs/wp-content/uploads/2020/02/CPI-Annual-2019.pdf).

Table 1.9:
From the United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2019* (https://unctad.org/en/PublicationsLibrary/wir2020_en.pdf).
Note: In previous editions of this report, FDI has been calculated as cumulative outflows and inflows. However, in this edition, net current FDI is calculated as the difference between outflows and inflows as per the approach of the of the United Nations (outlined at https://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets/global_econ_partnership/fdi.pdf).

Table 1.10:
From the KOF Swiss Economic Institute (http://globalization.kof.ethz.ch).
Note: No updated data available in 2020.

Table 1.11:
Global Innovation Index and Innovation Efficiency Ratio indicators from http://www.globalinnovationindex.org/analysis-indicator.
Innovation input and output ratios taken from 'Ranking' section of the *Global Innovation Index 2020 Report* (http://www.globalinnovationindex.org/gii-2020-report).

Table 1.12:
Government Health Expenditures, Prevalence of Obesity among Children, and Prevalence of Obesity among Adults from the World Health Organization (WHO) *World Health Statistics 2020* report (http://apps.who.int/iris/bitstream/handle/10665/332070/9789240005105-eng.pdf).
Diabetes Prevalence data from the World Bank (http://data.worldbank.org/indicator/SH.STA.DIAB.ZS).

Table 1.13:
From the World Bank (http://data.worldbank.org/topic/8 and http://data.worldbank.org/indicator/SH.DTH.COMM.ZS).

Table 1.14:
From the World Bank (http://data.worldbank.org/indicator/NE.TRD.GNFS.ZS).

Table 1.15:
From individual island pages in Wikipedia. Note: Table data was not updated in this edition.

Table 1.16:
Population data in this table are from the following sources:
Bali: http://www.knoema.com
Gotland: http://www.gotland.se/86116 and http://www.citypopulation.de/php/sweden-gotland.php?adm2id=0980
Greenland: http://data.worldbank.org and http://www.tradingeconomics.com/greenland/population-density-people-per-sq-km-wb-data.html
Hainan: http://www.statista.com/statistics/279013/population-in-china-by-region
Hawai'i: http://census.hawaii.gov/home/population-estimate and http://files.hawaii.gov/dbedt/census/popestimate/2018_county_char_hi_file/Pop_char_hi_2018_final.pdf
Java: http://www.citypopulation.de/indonesia-mU.html
Jeju: http://www.knoema.com
Luzon: https://psa.gov.ph/content/population-region-iii-central-luzon-based-2015-census-population
Okinawa: http://www.pref.okinawa.jp/toukeika/estimates/estidata.html#2019
Phuket: http://www.citypopulation.de/php/thailand-prov-admin.php?adm2id=83
Prince Edward Island: http://www.princeedwardisland.ca/sites/default/files/publications/pt_pop_rep_1.pdf and http://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-pr-eng.cfm?Lang=Eng&GK=PR&GC=11&TOPIC=1
Taiwan: http://www.worldometers.info/world-population/taiwan-population
Tasmania: http://stat.abs.gov.au/itt/r.jsp?databyregion and http://www.population.net.au/population-of-tasmania

Table 1.17:
Data for Bali and Phuket from http://www.knoema.com
Data for Greenland from the World Bank.
Data for Gotland (Sweden), Java (Indonesia), and Luzon (Philippines) are national statistics from http://www.knoema.com and the World Bank.
Data for Okinawa from Asahi (Fertility rate: http://www.asahi.com/ajw/articles/13436216) and Knoema (Death rate: http://knoema.com/atlas/Japan/Okinawa/topics/Demography/Population/Live-births).
Data for Jeju was carried forward from previous 2013 data.
Data for Hawai'i from Knoema (Birth and Death rates: http://www.knoema.com) and Centers for Disease Control and Prevention (CDC), USA (Fertility rate: https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_13-508.pdf).
Data for Prince Edward Island from Statistics Canada (http://www.statcan.gc.ca/pub/84f0210x/2009000/t005-eng.htm; Crude Death Rate: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310070801).
Data from Taiwan from Statista (Birth and Death rates: http://www.statista.com) and MacroTrends (Fertility rate: http://www.macrotrends.net/countries/TWN/taiwan/fertility-rate).
Data from Tasmania from Statista (Fertility rate: http://www.statista.com/statistics/612607/australia-tasmania-fertility-rate), and Birth and Death rates were calculated based on data from the Tasmanian Registry of Births, Deaths and Marriages, Government of Tasmania (https://www.justice.tas.gov.au/bdm/statistics).

Table 1.18:
Data in this table are from the following sources:
Bali: http://www.healthdata.org/indonesia-bali
Gotland: Based on country data (Sweden) from the World Bank.
Greenland: CIA World Factbook.
Hainan: Based on country data (China) from the World Bank.
Hawai'i: http://vizhub.healthdata.org/subnational/usa
Java: http://www.healthdata.org/indonesia-west-java
Jeju: http://www.knoema.com

Luzon: Based on country data (Philippines), carried forward from last edition (Randall & Brimacombe, 2020).
Okinawa: http://stats-japan.com/t/tdfk/okinawa
Phuket: Based on country data (Thailand) from the World Bank.
Prince Edward Island: Statistics Canada
(https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310014001&pickMembers%5B0%5D=1.1&pickMembers%5B1%5D=3.3&pickMembers%5B2%5D=4.8&cubeTimeFrame.startYear=2012+%2F+2014&cubeTimeFrame.endYear=2016+%2F+2018&referencePeriods=20120101%2C20160101).
Taiwan: CIA World Factbook.
Tasmania: From the Australian Bureau of Statistics.

Table 1.19:
Data on this table are from the following sources:
Bali: http://www.bps.go.id/statictable/2014/02/18/1276/persentase-penduduk-daerah-perkotaan-hasil-proyeksi-penduduk-menurut-provinsi-2015---2035.html
Gotland: http://www.citypopulation.de/en/sweden/gotland
Greenland: The World Bank.
Hainan: http://www.stats.hainan.gov.cn and http://documents1.worldbank.org/curated/en/611801579691592298/pdf/Revised-Rapid-Poverty-and-Social-Impact-Assessment-Hainan-Health-Sector-Reform-Project-P171064.pdf
Hawai'i: http://data.ers.usda.gov/reports.aspx?StateFIPS=15&StateName=Hawaii&ID=17854
Java: Based on country data (Indonesia) from the World Bank
(http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=ID).
Jeju: http://www.citypopulation.de/en/southkorea/admin/39__jeju_do/
Luzon: Based on country data (Philippines) from the World Bank
(https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=PH).
Okinawa: http://www.citypopulation.de/en/japan/okinawa/
Phuket: Calculated from list of 'urban areas' at http://www.citypopulation.de/en/thailand/southern/83__phuket
Prince Edward Island: http://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-pr-eng.cfm?Lang=Eng&GK=PR&GC=11&TOPIC=1
Taiwan: http://www.worldometers.info/demographics/taiwan-demographics
Tasmania: http://www.citypopulation.de/en/australia/tasmania/

Table 1.20
Data on this table are from the following sources:
Bali: https://www.ceicdata.com/en/indonesia/employment-rate-by-province/employment-rate-bali
Gotland: http://www.gotland.se/104323
Greenland: http://www.indexmundi.com/greenland/labor_force.html
Hainan: http://www.stats.hainan.gov.cn/2017nj/indexeh.htm and http://www.knoema.com
Hawai'i: http://dbedt.hawaii.gov/economic/qser/labor-force/
Java: https://www.ceicdata.com/en/indonesia/employment-rate-by-province/employment-rate-java and
http://www.hiwi.org/gsipub/index.asp?docid=417
Jeju: From Statista: Labor force (http://www.statista.com/statistics/1065262/south-korea-labor-force-participation-rate-by-province), Unemployment (http://www.statista.com/statistics/973984/south-korea-unemployment-by-province), and Working age population (http://www.statista.com/statistics/1065234/south-korea-working-age-population-by-province).
Okinawa: http://knoema.com/atlas/Japan/Okinawa/topics/Labor
Phuket: http://knoema.com/atlas/Thailand/Phuket-Province
Prince Edward Island: http://www.princeedwardisland.ca/sites/default/files/publications/fin_statcan_labo_1.pdf
Taiwan: http://eng.stat.gov.tw
Tasmania: http://www.knoema.com

Table 1.21:
Data for Bali, Gotland, Hainan, Java, Jeju, Luzon, Okinawa, Phuket, and Taiwan are from http://www.knoema.com
Other SNIJ data are from the following sources:
Greenland: https://data.worldbank.org
Hawai'i: https://www.statista.com/statistics/248023/us-gross-domestic-product-gdp-by-state/
Prince Edward Island:
http://www.princeedwardisland.ca/en/information/finance/gross-domestic-product-gdp-income-and-expenditure
Tasmania: http://www.treasury.tas.gov.au/documents/state-accounts.pdf

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PART II

Island development and public health

A view of Nelson's Dockyard from the mountains of Antigua. By facilitating the stay of high-end visitors who could be loosely considered 'digital nomads' — professionals working online who could work from anywhere in the world — Caribbean islands carved a small market to replace their usually high numbers of foreign tourists.

2

Building back better:

COVID-19 and island economies

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ABSTRACT

COVID-19 has been defined as a global pandemic. However, the very few parts of the world that have been spared are islands, especially those in the South Pacific. While the pandemic may have spared many islands the negative health impacts of COVID-19, all countries, islands, and communities have suffered damage to their economies. Against this background, this chapter has two objectives. First, it discusses how tourism and food security have been impacted by the pandemic, building on the duality of island vulnerability and resilience and on the

relationship between resilience and sustainability. Second, the chapter develops a policy relevant research agenda linked to the importance of sound ocean governance as an instrument to promote sustainable tourism and food security. Both chapter objectives are informed by data stemming from a global survey carried out by the Strathclyde Centre for Environmental Law and Governance (SCELG) and Island Innovation between March and June 2020. Overall, the chapter suggests the need to formulate a policy relevant research agenda that ensures post COVID-19 recovery packages build back better and move islands towards a more resilient and sustainable future. The agenda must be inclusive and transparent and align with robust island-specific data.

INTRODUCTION

COVID-19 appears to have spread across the entire planet like a tsunami. From press coverage, it often appears that the entire world has been affected (The Associated Press, 2020). However, a closer look at the data shows that there have been very few places on Earth that have been spared (Orr, 2020). Most of these places are islands and, in particular, islands in the South Pacific. However, after the initial sense of relief and romanticizing of such places as paradises (Royle, 2014) that have not been affected by the global pandemic, the harsh reality kicks in. All places are inter-connected in a globalized world (Ratter, 2018). Hence, even if island nations like Vanuatu or Samoa have not seen cases of COVID-19, their societies and economies have nevertheless been negatively affected (IMF, 2020). The same can be said for islands in the Northern hemisphere, such as the Western Isles in Scotland or Prince Edward Island in Canada (Highlands and Islands Enterprise, 2020; Yarr, 2020). Despite faring much better than the mainland, they too have had to bear the socio-economic brunt of the pandemic.

IT IS CRUCIAL THAT ISLANDS and their communities recover from COVID-19 not by going back to a business-as-usual scenario, but by building back better.

Against this background, the relationship between vulnerability, resilience, and sustainability has taken on a new dimension. Islands are often considered to be vulnerable because of their physical isolation. However, their inherent vulnerability and, in many cases, physical isolation have made them, in a way, more resilient to COVID-19 than their mainland counterparts. At the same time, their resilience is being tested as the global pandemic enters its second — and in some cases even third — wave, keeping islands isolated from the rest of the world. It is crucial that islands and their communities recover from COVID-19 not by going back to a business-as-usual scenario, but by building back better. Post COVID-19 recovery packages need to promote a vision of sustainable island life. This is not only an island where the three dimensions of

sustainable development are present: the economic, environmental, and social aspects. It is also an island where communities take, as much as possible, ownership of the decisions that will drive their future. Rather than looking at all possible aspects of island life that have been disrupted by COVID-19, this chapter focuses on tourism and food security and discusses the extent to which ocean governance is a necessary pre-requisite for building back better from COVID-19 and promoting sustainable island life. The chapter builds on data stemming from a global survey carried out by the Strathclyde Centre for Environmental Law and Governance (SCELG) and Island Innovation between March and June 2020 (Sindico & Ellsmoor, 2020; Sindico et al., 2020) and on the ongoing *COVID-19 Island Insights Series* coordinated by SCELG, the Institute of Island Studies at the University of Prince Edward Island, and Island Innovation (Institute of Island Studies, 2021).

This chapter explores the relationship between and among vulnerability, resilience, and sustainability in island studies literature and how this relationship sits within the context of the COVID-19 pandemic. It discusses how tourism and food security have been impacted by the pandemic, building on the above-mentioned duality of island vulnerability and resilience and on the relationship between resilience and sustainability. The chapter goes on to develop a policy relevant research agenda linked to the importance of sound ocean governance as an instrument to promote sustainable tourism and food security. Ultimately, vulnerability, resilience, and sustainability are all part of islands' unique opportunity to build back better from the COVID-19 crisis.

ISLAND VULNERABILITY, RESILIENCE, AND SUSTAINABILITY

One of the risks in undertaking any study on islands is to lump all of them into one category. During my collaboration with the Scottish Government regarding the consultation leading to the first ever National Islands Plan (Scottish Government, 2019), one of the questions I was most frequently asked by islanders attending the consultation events was, "How are you going to capture the differences between my island and the rest of the Scottish islands?" (Sindico & Crook, 2021). This is not an academic question; it is an extremely important policy relevant question that should always be kept in mind by researchers attempting to explore a topic that may be relevant for islands as a whole. However, once we are aware of the question, we should not dismiss our attempts as futile or arrogant. If done humbly and aware of the inherent limitations, studies like this one that draw on examples from islands around the world can shed light on practices, which can then be explored further by stakeholders and policy-makers on other islands. It is important not to put too much emphasis on identifying "best" practices, or even "good" practices, especially in the absence of objective

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metrics and indicators. However, collating and sharing policy relevant practices is a knowledge exchange activity that has value per se. With this in mind, I now move on to explore how the concepts of vulnerability, resilience, and sustainability have been framed within the island studies literature and how they relate to the COVID-19 crisis.

Vulnerability has often been attributed to islands, especially in the context of Small Island Developing States (SIDS) (Philpot et al., 2015), because of their size and remoteness (Guillaumont, 2010). Exposure, sensitivity, and adaptive capacity are all features that would make SIDS more or less vulnerable in the wake of climate change (McNamara, 2019). Access to and quality of livelihood resources, financial security, and climate-change experiences are three further proxies to determine a SIDS's vulnerability (McNamara, 2019). However, this correlation between SIDS and vulnerability has been criticized by others who value the characteristics that allegedly make islands vulnerable as positive assets (Kelman, 2018). Furthermore, some contest the emphasis on SIDS' vulnerability to climate change (Kelman, 2018; Malatesta & Schmidt di Friedberg, 2017). While climate change negatively affects islands through increased sea level rise, ocean acidification, and damaged ecosystems, islands (and mainlands) will also be more or less vulnerable because of other non-physical characteristics often related to governance and corruption (Baldacchino & Kelman, 2014).

BUILDING ON THE CRITIQUE of island vulnerability opens the door to a better understanding of the more nuanced relationship between vulnerability and resilience.

Building on the critique of island vulnerability opens the door to a better understanding of the more nuanced relationship between vulnerability and resilience (Bertram & Poirine, 2018). As mentioned earlier, the physical location of an island would appear to make it inherently vulnerable. However, "the islandness characteristics which can create vulnerability to climate change can also support SIDS' resilience to climate change" (Kelman, 2018, p. 160). Furthermore, while the concepts of vulnerability and resilience may differ, their conceptions are more easily reconciled (Philpot et al., 2015).

Summing up the discussion so far, an island can be vulnerable to a physical or structural shock, or a combination of the two. For example, an earthquake coupled with poor housing planning makes an island and its community vulnerable. Resilience can be understood as the capacity to overcome such shocks and return to the status quo. This approach to resilience comes from ecology (Townsend et al., 2003), according to which there can be "two nuanced meanings of resilience: (1) how quickly a system might return to stability after being disturbed; and (2) the extent to which a system can be disturbed without breaking down" (Kelman & Randall, 2018, p. 354).

However, in the island studies literature, framing resilience in this way has been criticized because it does not sit comfortably with island realities, since the latter are not static.

> "[I]sland lessons in the context of resilience reveal particular limitations in the ecological definition, in terms of taking 'resilience' to mean that a system has a specific state which it should retain or to which it should return or bounce back after a disturbance. Island societies thrive on openness and change, [...] Embracing change makes island communities able to continue island life; that is, change makes them resilient." (Kelman & Randall, 2018, p. 354)

Later, Kelman and Randall (2018) clarify this tension between resilience and sustainability through the example of migration. If we were to take resilience and sustainability in their static definitions, an islander who cannot migrate because she does not have the necessary financial resources to move would be considered resilient, but "their situation is hardly sustainable in not having enough resources to be able to make choices" (Kelman & Randall, 2018, p. 360). Resilience should not be considered as the capacity of an island and its community to return to an original state after disturbance by a natural or human shock. A resilient island will be an island that is not only able to bounce back from a crisis, but does so in a way that promotes a thriving society (Kelman & Randall, 2018). In other words, an island that builds back better.

IF RESILIENCE IS ABOUT DRIVING an agenda for a better island following a state of vulnerability, the question becomes: what kind of future does that island want?

By looking at resilience in this more dynamic way, it implies change and progression, which brings resilience much closer to the meaning of sustainability. In fact, the latter is about continuity and forward-thinking. If considered from an ecological perspective, resilience and sustainability appear almost irreconcilable. However, resilience and sustainability should not be framed as static concepts, but as multi-faceted and complex, especially within an island setting. If considered in this manner, vulnerability and resilience can only be fully and properly understood if framed together with sustainability. If resilience is about driving an agenda for a better island following a state of vulnerability, the question becomes: what kind of future does that island want?

Depending on your definition of sustainable, a sustainable island may be one that is amenable to the direct involvement and participation of island governments and communities. In fact, conceptualizing sustainability as the action of going forward is too vague and in some cases meaningless. From its first use in the late 1980s, 'sustainability' has become a heavily politically-charged and value-laden term. A business-as-usual societal model that only focuses on economic growth with little attention to the effects on the environment and retaining or, worse, increasing social inequality, is not sustainable. A path will only be sustainable where the three areas are considered together and in an integrated fashion (Bugge & Voigt, 2008; Cordonier Segger & Khalfan, 2004). Sustainable development requires attention to multiple factors and often

is undermined by poor governance structures, lack of finance, and corruption, which can play even more havoc than extreme events exacerbated by climate change (Baldacchino & Kelman, 2014).

Sustainable development has been embraced by islands from an early stage. The 1994 *Barbados Programme of Action for the Sustainable Development of Small Island Developing States* (United Nations General Assembly [UNGA], 1994), followed by the *Mauritius Declaration* and *SAMOA Pathway* in 2005 and 2014, respectively (United Nations, 2005; UNGA, 2014), put sustainable development front and centre of SIDS' political agendas (Baldacchino & Kelman, 2014; Douglas, 2006).

Vulnerability, resilience, and sustainability all play a role in the COVID-19 narrative. In fact, COVID-19 has been a shock to the heart of the entire international community. In a way, the whole world has become vulnerable. However, the features which, according to some, make some islands vulnerable, such as their isolation and small size (Easter, 1999; McGillivray et al., 2010), in fact became their best assets in confronting the pandemic. In other words, island characteristics often seen as vulnerabilities have become strengths. The best way to cope with COVID-19 was, in some cases, to reinforce such characteristics by cutting off geographical ties with the mainland completely. One could go as far as to say that some islands were resilient vis a vis the pandemic because of their isolation and small size.

RATHER THAN JUST BEING resilient according to the narrower and more static conceptualization of simply returning to an original state, the challenge is to become sustainable in the face of current and future crises.

Overall, some countries have reacted better than others to the COVID-19 shock and return (or attempt to return) to the pre-pandemic reality. These resilient jurisdictions have often been islands, such as New Zealand and Taiwan. However, at the same time, there is a need to move beyond COVID-19 in a way that does not simply revert back to the pre-pandemic status quo. Rather than just being resilient according to the narrower and more static conceptualization of simply returning to an original state, the challenge is to become sustainable in the face of current and future crises. An ideal outcome for countries hit by COVID-19 is to develop packages that drive their socio-economic recovery towards a sustainable path.

TOURISM AND FOOD SECURITY

On some islands, the relationship between vulnerability, resilience, and sustainability can be explained through the prism of tourism and food security during COVID-19. In fact, there are examples of how both sectors have adjusted and moved towards more resilient approaches during the pandemic. This section will draw on both of these aspects before exploring the role of ocean governance in a post COVID-19 world island setting.

Vulnerability, resilience, and sustainability in the tourism and food security sectors during the COVID-19 crisis

The discourse on island vulnerability, resilience, and sustainability has been challenged during COVID-19. I have already mentioned how island features that some would consider to make them vulnerable were in fact some of the best weapons against COVID-19: small size and isolation, for example. At the same time, COVID-19 has very suddenly challenged some islands' strongest socio-economic assets. In other words, what one day was very strong on an island may have become very fragile the next.

Tourism is clearly a stark example in this respect. Islands whose economies relied heavily on tourism became very vulnerable. In fact, many islands are heavily reliant on their tourism sectors (Graci & Maher, 2018) and lockdown measures and travel restrictions turned many of these islands starkly quiet in periods that would otherwise be bustling with foreign visitors (Sindico et al., 2020). Cruise tourism, for example, came to an almost complete halt in the summer of 2020 (Renaud, 2020). Tourism is not only a source of income, but also provides a wide range of direct and indirect jobs to island economies. Island resilience therefore depended on how such islands coped with COVID-19 related tourism vulnerability. On some islands, there have been examples of immediate innovative projects geared towards supporting the workforce in the tourism sector. For example, in Jamaica, a programme called Level Up aimed to give jobs to those from the tourism sector that found themselves unemployed (Sindico et

Cruise ships — like this one docked in St. John's harbour on the island of Antigua in 2019 — became just a memory in 2020 when cruise ship tourism came to an almost complete halt around the world.

al., 2020). Keeping to the Caribbean, other measures included direct financial support, which was particularly important for workforces such as taxi drivers and coach drivers who saw their income reduce substantially from one day to another. On other islands such as Barbados and Jamaica, retraining programmes were developed to upskill people working in the tourism sector (International Labour Organization [ILO], 2020). Finally, Barbados developed a clear link between the recovery of tourism post COVID-19 and enhancing green energy and sustainability:

Ed Bartlett, Jamaica's minister of tourism, describes Jamaica's workforce training program to bolster tourism recovery, June 2020.

"The one exception identified is the Barbados Tourism Facility which offers loans to the tourism sector. Funds provided are expected to support links with local agriculture, and use of renewable energy, in addition to job retention and upskilling of local staff." (ILO, 2020, p. 43)

In addition to tourism, and despite the fact that food supply chains did not break down, COVID-19 has reminded us of the fragility of island food security (Connell & Lowitt, 2020). 'Island food security' refers not only to the possibility for island communities to have enough food, but also for such food to be affordable and conducive to a healthy lifestyle. On some islands, food produce from agriculture and fisheries is already being disrupted by climate change (Barnett, 2020). Furthermore, food security also relies heavily on market forces and on the presence and power of a specific island in international trade (Connell et al., 2020). Their geographic nature and socio-economic aspects can make some islands, like Prince Edward Island in Canada, particularly vulnerable when it comes to dealing with food security. In fact, according to a response from Prince Edward Island to the survey on islands and COVID-19 led by SCELG and Island Innovation, "We [Prince Edward Island] are a very vulnerable island to food insecurity due to the combination of isolation, export economy, and northern climate. Many seed stores are now selling out, as people scramble to begin home gardening" (Sindico et al., 2020, p. 8).

The paradox I wish to highlight relative to food security during the COVID-19 crisis is that, while some islands may possess enough land and the necessary climate to produce enough food to feed their population, a significant proportion of island food production is geared towards the tourism sector. In other words, COVID-19 has revealed on some islands the paradox of high yields of agricultural production geared towards the tourism sector (Sindico et al., 2020). The moment tourism became vulnerable, these food security related paradoxes became apparent and they now require urgent discussion.

Vesey's Seeds in York, Prince Edward Island began selling out in early spring 2020 as people scrambled to begin home gardening in their concern over food security, caused by COVID-19. John Morris, Globe and Mail

Resilient tourism and food security practices during COVID-19

Similar approaches have been taken to deal with the tourism and food security crisis by islands and their communities in response to the global pandemic. Staycations and 'buy local' movements share the same focus on moving away from relying on external markets and rediscovering domestic audiences.

Not necessarily limited to islands, tourist operators made themselves attractive to local islanders as a way of (partly) plugging the gap left by overseas tourists. In regions like Sicily, islands became particularly attractive in the summer of 2020 for mainland domestic residents who replaced foreign visitors (Mariano, 2020). On other islands, such as Prince Edward Island in Canada, tourism was mainly limited to second home-owners and visitors who had a genuine link with the island (Cyr, 2020). Prince Edward Island also agreed to create an "Atlantic Bubble" to allow visitors from neighbouring Canadian provinces to enter the island (Ross, 2020). Similar approaches took place elsewhere, such as with the creation of the "Bailiwick Bubble" between the Channel Islands of Guernsey, Sark, Herm, and Alderney (States of Guernsey, 2020). Another policy, especially on islands in the Caribbean, was to attempt to attract long stay visitors by building a "COVID-19 free" brand. By facilitating the stay of high-end visitors who could be loosely considered as 'digital nomads' — professionals working online who can, hence, work from anywhere in the world — those islands tried to carve a small

"Fill your table in Andalucia" was a campaign by the Andalucian government to encourage its residents to buy local Spanish produce and revive the local economy.

market for themselves to replace the usually high numbers of foreign visitors (Johanson, 2020). Other measures focused on strengthening 'test and trace' schemes to provide an image of a serious and resilient island in the face of the global pandemic (e.g., Iceland; see Hosie, 2020).

Moving to food security, 'buy local' schemes and campaigns became prominent on several islands, like Spain's Canary Islands (Sindico et al., 2020) and several islands in the Caribbean (ILO, 2020). In the post-pandemic future, the driver behind a better food sector should not only be to produce enough domestic produce for the sustenance of the island community. Rather, in addition, it can be used as an opportunity to diversify the economy of those islands that rely heavily on one sector (i.e., tourism). At the same time, more sustainable practices may be fostered by linking the agriculture sector with the tourism sector, through agritourism (Ammirato & Felicetti, 2014) or slow tourism (Andrews, 2008; Özdemir & Çelebi, 2018). Moreover, by promoting 'buy local' policies, not only will island economies be strengthened, but they will also reduce the volume of imports that ultimately contribute to an island economy's carbon footprint.

IN THE POST-PANDEMIC future, the driver behind a better food sector should not only be to produce enough domestic produce for the sustenance of the island community. Rather, in addition, it can be used as an opportunity to diversify the economy of those islands that rely heavily on one sector (i.e., tourism).

Ultimately, islands, their communities, and policy makers have come up with imaginative and immediate actions to deal with COVID-19. By doing so, they have proven to be resilient, but clearly this is not enough going forward. The global pandemic has operated (or should operate) as a wakeup call for islands who rely extensively on tourism, with some suggesting that the move towards sustainable tourism is now not a question of *if* it will happen, but *when* it will happen (Higgins-Desbiolles, 2020). Similarly, the paradoxes apparent in the food systems on some islands call for a rethinking of the sector, making food security a key policy area and one that should strive for greater sustainability.

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OCEAN GOVERNANCE, TOURISM, AND FOOD SECURITY: DEVELOPING A POLICY RELEVANT RESEARCH AGENDA

In many parts of the world, islanders have not looked to the sea for their well-being but to the land for their survival. While this reluctance to rely on the sea can be explained in a number of ways (Kelman & Stojanov, 2021), it is time to reconfigure the relationship between the ocean and the islands and their communities. The need to move beyond COVID-19 presents a unique opportunity. However, rather than focusing on the specifics of how the oceans can become an even greater opportunity for more sustainable tourism and food production, I will frame a policy relevant research agenda based around three more general observations.

First, efforts should be made to fully understand the sectors of the economy that COVID-19 may have made more fragile. Tourism and food security are of course two areas already discussed in this chapter that may be particularly important for islands, but other areas should also be considered, such as digital connectivity (Sindico et al., 2020). Access to reliable and affordable internet can open opportunities to island communities. Improved digital connectivity can attract people and jobs to an island, reversing depopulation. It can also enable critical public health services to function remotely, as well as enhance education opportunities. However, criticism of sectors negatively impacted by COVID-19 will not on its own lead to change, and it will be important to reach out to the key public and private players that feed into or are impacted by those sectors.

Second, efforts should be made to better understand the unsustainable aspects of a pre-COVID-19 island economy. For example, what environmental pressures have been embedded in the 'old normal'? It is only through better understanding the environmental, health, and other challenges faced by islands that they can be looked at in

new and innovative ways in a post COVID-19 world. Similar to the tourism sector, key players and stakeholders in these island dimensions need to be identified and given a seat at the policy table.

Applying these first two general observations to the tourism and food sectors within the context of ocean governance, sound and reliable island-specific data becomes crucial (Zhong & Wu, 2020). What is the relationship between the seas and oceans surrounding an island and its economy? How many direct and indirect jobs in the tourism and food sectors rely on the ocean? How has COVID-19 affected such numbers? And what is the relationship between the ocean-related tourism and food sectors not only with economic indicators, but also with environmental and social considerations? Are ocean-related economic sectors harming the environment? Are people working in these sectors being treated fairly and are their rights being protected? These are all questions that need to be asked and that need to be at the heart of an inclusive process to move beyond the pandemic. However, this leads me to a third general observation.

All stakeholders need to be open and willing to listen to each other's views and, where necessary, work collaboratively to find equitable solutions that provide broadly acceptable outcomes for all interested parties. For example, can islands find ways to adapt from carbon intensive and resource intensive tourism models to more niche, sustainable, and targeted models? Ideally, islands that are heavily reliant on tourism should open up policy and economic conversations capable of uncovering ways to offset the most negative effects of unsustainable practices, while considering different forms of more sustainable tourism practices (Reis & Hayward, 2013). At the same time, they should identify and pursue opportunities to diversify their economy to incorporate other sources of income beyond tourism. All the questions mentioned earlier need to be put on a table around which all relevant island, ocean, tourism, and food stakeholders are seated. Key procedural matters become as important as the substantive questions dealt with in this conversation. Who decides which stakeholders are to be invited to the table? How will such invitations take place? Once they are seated, how will their voice be heard? Finally, and ultimately most importantly, how will the input of all relevant stakeholders help shape future post COVID-19 policies aimed at shaping more sustainable tourism and food island practices? This chapter does not have answers to these questions, but the process of identifying questions and challenges is the beginning of a larger process that needs to be taken forward by island policymakers and stakeholders. However, before adding a few comments specifically on the ocean dimension of tourism and food security, I wish to stress that these procedural matters should be considered in line with access to information, public participation, and access to justice, which have become human rights in most regions of the world (United Nations Economic Commission for Europe, 1998; United Nations Economic Commission for Latin America and the Caribbean, 2018; United Nations Environment Program, 2010).

Of course, any policy relevant research agenda requires the necessary efforts and

Protestors say they are fighting a 'David and Goliath' battle against the world's biggest cruise ship lines, which want to create a deeper, larger port in the Cayman Islands by dredging in an area of coral reefs. BBC News

steps to diagnose the pre-COVID-19 state of play. Island-specific data and a thorough understanding of such data is paramount to building back better. Just as important is the process to build back better on an island's own terms (Graci & Maher, 2018) and not through models dictated by other countries or by the mainland in the case of countries with islands. The suggested policy relevant research agenda should be applied to the relationships between ocean governance and tourism and ocean governance and food security. As argued earlier, in some cases tourism plays a dominant role in island economies. COVID-19 recoveries provide an opportunity to revisit the balance islands are striking between the legitimate benefits of tourism-fuelled economies with other legitimate interests, such as environmental protection. From this perspective, the seas and oceans surrounding islands cannot simply be treated as being for the recreational benefit of foreign tourists alone, but should be treated as socio-environmental and cultural assets over which island communities have a sense of ownership. This is not about abandoning tourism altogether, but about finding ways to diversify and embrace different approaches that continue to be lucrative sources of income, while also preserving the islands' environmental integrity and cultural identities. One of the ways to find such a balance is by deploying the suggested policy-driven research agenda. One example of where it could be piloted to reconcile the difficult tension between ocean conservation and immediate economic profit is in the Cayman Islands, where there has been an ongoing debate about whether to proceed to build a new port in an area of pristine coral reefs (Sindico et al., 2020). Another country where the inclusive policy relevant research agenda could reap positive benefits is in The Bahamas, where

there have been calls to diversify the economy by drawing attention to increased agriculture as a way to ensure food security (Sindico et al., 2020).

In conclusion, developing a policy relevant research agenda does not lead per se to more resilient and sustainable islands. However, it is a first necessary step to ensure that a post COVID-19 recovery package fully takes into account key substantive and procedural elements needed to ensure that islands do not go back to business-as-usual scenarios, but build back better going forward.

CONCLUSIONS

COVID-19 presents a unique opportunity for a new start. Islands and their communities should not consider business-as-usual and the 'old normal' as the goal to return to quickly. Doing so would probably lead to cutting corners undermining environmental protection.

Against this background, the relationships between vulnerability, resilience, and sustainability have taken a new dimension. Islands are often considered vulnerable because of their physical isolation and small size. However, their inherent vulnerability has made them, in a way, more resilient to COVID-19 than mainland counterparts. At the same time, their resilience is being tested as the global pandemic continues its second wave (and, in some cases, even third), keeping islands isolated from the rest of the world. It is crucial that islands and their communities recover from COVID-19 not by going back to a business-as-usual scenario, but by building back better. Post COVID-19 recovery packages need to promote a vision of a sustainable island life. This is not only an island where the three dimensions of sustainable development are present: the economic, environmental, and social aspects. It is also an island where communities take, as much as possible, ownership of the decisions that will drive their future. In order for islands to build back better on their own terms, this chapter has suggested the need to formulate a policy relevant research agenda in order to ensure that post COVID-19 recovery packages align with robust island-specific data and bring all necessary island stakeholders to the table. Tourism and food security are two very relevant areas of island life, society, and economy that will benefit from being part of an inclusive and transparent policy relevant research agenda.

I conclude this chapter by acknowledging several challenges and hurdles when suggesting a policy relevant research agenda to build back better from COVID-19. First, akin to what is mentioned in the first section of this chapter about considering all islands into one category, clearly the policy relevant research agenda will need to be tailored to the characteristics and needs of specific islands. A very important point is, for example, to fully appreciate the different governance structures present on islands and, in particular, the power and normative competences present within sub-national island jurisdictions. The regional dimension of some islands is also significant,

especially when it comes to their adherence to procedural matters related to access to information, public participation, and access to justice in environmental matters, which are particularly prominent in both the European and Caribbean and Latin American contexts. It will also be important to study and understand the localization of the Sustainable Development Goals and how the latter can help (or not) move islands towards a more resilient and sustainable future (Centre for International Sustainable Development Law, 2020). The second challenge is that many countries and regions may have already started and, in some cases, fully developed their post COVID-19 recovery packages. The suggested policy relevant research agenda is not futile in this case, but should be considered to scrutinise the adopted or recommended agenda to ensure that it does indeed build back better and does not just repeat past errors imposed by voices external to the island setting. Unfortunately, we can already see that, in some cases, post COVID-19 recovery packages are not going in the right direction and are contributing to investments in fossil fuels rather than climate friendly projects (Vivid Economics, 2020).

In conclusion, I am fully aware that the policy relevant research agenda suggested in this chapter is just a sketch of what it could and should look like. However, it should be considered as the beginning of a journey that island communities and their policy makers need to decide whether to embark on and how to take forward. What is clear is that COVID-19, despite all the suffering, also comes with a silver lining. It provides us with a moment to interrogate ourselves and to start a process to build back better. Tourism and food security are two of many other areas that need to be included in such a process. Just like seas and oceans surround all islands, wherever they are, it is important that all island-specific processes to build back better are framed around solid efforts to promote sound ocean governance. By embarking on such a journey, islands will build back better and become more resilient and more sustainable.

THE SEAS AND OCEANS surrounding islands cannot simply be treated as being for the recreational benefit of foreign tourists alone, but should be treated as socio-environmental and cultural assets over which island communities have a sense of ownership.

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Cuban doctors hold an image of Fidel Castro during a farewell ceremony before departing Italy to assist with the spread of COVID-19, March 21, 2020. Nearly 40 countries across five continents received Cuban doctors during the pandemic. Reuters

3

Neither gift, nor luck:

Island resilience and the COVID-19 pandemic

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ABSTRACT

Seven of the nine countries that, as of November 2020, reported no COVID-19 cases were islands. Another 13 island nations reported having fewer than 500 cases. Why did island nations fare well during the COVID-19 pandemic? Beyond the isolation of islands, deeper foundations of health cooperation and collaboration may help to explain this resilience. The nature of

public health governance on islands may explain, at least in part, why islands appear to be the safest spaces on Earth during COVID-19, and yet still remain incredibly vulnerable. Islands have a long and painful history of pandemics that dates well back to the earliest days of colonization. Unlike past pandemics when islands were seen as highly vulnerable to viruses, during the COVID-19 pandemic islands have demonstrated resilience. This has emerged as a result of strategic health governance, and coordinated responses to the social and economic challenges of the pandemic. This chapter discusses the place of Cuban medical internationalism and current collaborations between other island nations for longer-term health planning and capacity building. Taken together, this chapter serves as a reminder that health resiliency among islands during the COVID-19 pandemic is the product of resilience and planning, and may indeed speak the very meaning of islandness itself.

INTRODUCTION

As of November 2020, only nine countries reported having no cases of COVID-19 (McCarthy, 2020). Aside from several countries with questionable health reporting, all of the remaining COVID-19-free countries were islands. Furthermore, among the 20 countries reporting fewer than 500 cases of COVID-19, thirteen were island nations (Johns Hopkins University & Medicine, 2021). Although this is just one indicator of public health and we are not yet at a post-pandemic stage, the implied resiliency of islands to COVID-19 should serve as a clarion call to health policy experts and global health researchers to better understand how, and why, islands are faring so well during this pandemic. Some may point to the fortune of physical geography and insularity, as islands only border the ocean, serving as a natural barrier to the spread of the virus (Edwards, 2020; Gunia, 2020). Others may cite the inherent challenges of travel to islands, which restricts the movement of the potentially ill (Horton & Das, 2008). Yet, in the past, water has proven to be, at best, a porous barrier to the transmission of viruses, including the 1918 influenza and the HIV/AIDS virus (Horton & Das, 2008; Shanks et al., 2018). Likewise, many island nations do not enjoy comprehensive customs and immigration services, as they often make do with outdated equipment and ravaged budgets that are a far cry from the rigorous biometric screening seen at many foreign borders. As Shanks and Brundage (2012) point out, island quarantines are not sustainable indefinitely. Nor is the absence of COVID-19 on islands a gift from mainland countries whose lockdowns may have encouraged would-be island tourists to stay at home (Amos, 2020). Rather, many island nations, notably those in the Pacific, structured their COVID-19 responses by taking difficult steps to reduce the spread of the virus by locking down ports and disrupting valuable trade and communication networks (Diarra et al., 2020). How island nations have responded to COVID-19 exposes

the vital place they have in a global society and, in doing so, calls into question the degree of connectedness of islands during a pandemic.

This chapter argues that islands fared best during the COVID-19 pandemic because of pre-existing foundations of health cooperation and collaboration. Island resilience against the pandemic is not an accident of physical geography, nor is it part of an assumption that islands are at the margins of globalization (Firth, 2007). Quite the opposite. Resiliency among islands during the COVID-19 pandemic is grounded in a deep sense of islandness itself (Conkling, 2007) — beyond a sense of place grounded in metaphysical isolation, but rather from social capital that builds good governance in times of crisis (Baldacchino, 2005; Fowles, 1999). It is naive to think that the COVID-19 virus, born and bred through globalization, would simply ignore islands because of the intervening barriers of oceans or entry points. Islands have a long and painful history of pandemics that dates well back to the earliest days of colonization (Cook & Lovell, 2001; Shanks et al., 2008). Knowing the vulnerability associated with viruses, coupled with under-funded and over-stretched health systems, many island nations imposed strict travel restrictions based on internationally recognized best practices, which effectively disrupted global processes of trade and capitalism (Mei & Hu, 2020). As this chapter argues, islands are at the margins of globalization, which makes them more vulnerable to global challenges like pandemics. Unlike past pandemics when islands were seen as highly vulnerable to viruses, during the COVID-19 pandemic islands have demonstrated resilience (De Bevoise, 1995). This has emerged as a result of strategic health governance, and coordinated responses to the social and economic challenges of the pandemic. Health governance can be understood as processes of policy development, resource stewardship, continuous improvement of services, partner engagement, legal authority, and the oversight of a health department (Carlson et al., 2015). The nature of public health governance on islands may explain, at least in part, why islands appear to be the safest spaces on Earth during COVID-19, and yet still remain incredibly vulnerable. What seems to be an important factor is the concept of buy-in from businesses, non-governmental organizations, and civic society institutions to adhere to and maintain public health ordinances. Despite these empirical successes, broader challenges remain in preserving island health as pre-pandemic geo-strategic competition among world powers continues to put islands in a vulnerable position.

THE NATURE OF PUBLIC HEALTH governance on islands may explain, at least in part, why islands appear to be the safest spaces on Earth during COVID-19, and yet still remain incredibly vulnerable.

THE IDEA OF HEALTH AND PLACE

Oceans have rarely served as effective barriers against viruses. Even in the age of oceanic travel by sail, when most international sea voyages outside of Europe were naturally self-isolating by taking longer than the incubation periods of most contagious diseases, illness and pestilence still managed to travel and survive on distant lands (Maglen, 2003). Terrestrial rodent-carried viruses such as smallpox, bubonic plague, or even bovine-based viruses such as measles succeeded in spreading across the oceans with devastating results (Lovell, 1992). During the 19th century, vector-borne illness spread more effectively with the development of canals and railroads in the Americas, Africa, and Asia. The 1918 "Spanish" influenza epidemic knew no borders. Powered by the age of steam, this flu virus was able to reach more destinations in less time than any other virus in the modern era (Mills et al., 2004). While the entire planet was impacted by the spread of the Spanish flu virus, island nations — notably Western Samoa, then governed by New Zealand — were particularly affected (Tomkins, 1992). One in three Samoans lost their lives during that pandemic. In the 1920s, the League of Nations Health Committee felt that the increasing ease of global travel would only exacerbate the spread of more viruses and illness within and between colonial nations, which raised even greater concerns for remote islands (Borowy, 2009). Eighty years later, the concerns and challenges of viruses on islands remained. Toward the beginning of the 21st century, the human immunodeficiency virus (more commonly referred to as HIV) took a heavy toll on islanders around the world, especially in the Caribbean (UNAIDS, 2019).

WHEN DISCUSSING THE health of islands in the time of a pandemic, it is important to challenge the assumption that having no land borders is in itself an advantage against a virus.

When discussing the health of islands in the time of a pandemic, it is important to challenge the assumption that having no land borders is in itself an advantage against a virus. Likewise, understanding the place of island nations in the COVID-19 pandemic requires looking past the belief that they are on the edges of globalization. Islands exist on the front lines of globalization and have often experienced the greatest changes and impacts. From climate change to plastic pollution, to the migration of workers, to the security of the seas, islands are not immune to the consequences of globalization, including the COVID-19 pandemic. As Baldacchino (2005) suggests, such challenges build social capital that can transfer into economic development and good governance. The shared characteristics of island nations arise not just from the physical isolation or site characteristics of islands, but from the dynamics of closed communities (Conkling, 2007).

Campbell (2009) argues that colonialism and development processes have eroded

historic health resilience within island states. Despite this erosion, a common experience of good governance grounded in islandness often arises (Baldacchino, 2005). This phenomenon speaks to the processes of community-minded governance influencing local and national resilience, and island resilience through social capital. The ability for island nations to respond to challenges and crises through co-operation based on "shared norms, values and understandings" (Keeley, 2007, p. 103) speaks to the power of islandness during the pandemic. It is less about the consequentialism of water borders and isolation, and more about the sense of place within island nations that builds a culture of positive and cooperative policy development in addressing global challenges such as pandemics (Helliwell, 2003, p. 9). It is why health policy matters on islands. Those jurisdictions that have structured their COVID-19 responses on best practices that ensure effective health outcomes, rather than haphazard policies that only quell the virus, have fared best. How island nations have successfully achieved this remains to be fully understood, but what can be assured is that strong island pandemic responses are grounded in capacity built from cooperation and collaboration, rather than through the gifts of charity and aid.

Cuban health workers: Cuba is perhaps the one nation where the constitution declares that health is the right of everyone. AP photo

Pandemic management has rarely been about ensuring health. Since biblical times, it has been about combating illness. Today, the World Health Organization (2006) defines health in a broad sense of "a state of complete physical, mental and social well-being." Holistic as it is, few nations have committed to ensuring health in this way, regardless of a pandemic. When it comes to the health of islands, the high-level policy recommendations from the World Health Organization focus on the impacts of climate change to health more so than building social capital for universal health care, let alone pandemic resilience (Ghebreyesus & Espinosa, 2018). Universal health insurance programs are often designed to mitigate the costs of health care or to cover the bills when accidents occur. Cuba is perhaps the one nation where the constitution declares "health" in this broadest interpretation of the word, to be a right for all, and to which the government follows up through rigorous programs of health promotion and disease prevention (Huish, 2014). Few nation states have programs in place explicitly stating that they are working towards ensuring good health for all (Global Health Watch, 2021). A foundation to Cuba's public health forte stems from a centralized national governance model that

relies on wide-spread buy-in and participation of health ordinances at the local level through community groups, government agencies, and unions. The same holds true in times of pandemic planning, where the playbooks focus less on eliminating the virus and more on "flattening the curve" of disease spread so as to avoid overburdening the health care system. In as much as health is often defined as a lack of illness, so too do states approach pandemic management as a pursuit against the illness, rather than as building and maintaining a healthy, robust population.

During the COVID-19 pandemic, many nations have come to rely on ancient methods in order to deal with this modern-day pandemic. Quarantines date back to biblical times, to quote the *Book of Leviticus* (n.d.) in the Old Testament, "as long as they have the disease, they remain unclean. They must live alone; they live outside the camp." Restrictions on mobility and self-isolation accompanied managing the plague in medieval Europe (Gensini et al., 2004). Port quarantines are as old as sea-faring trade itself. With these ancient methods came ancient problems, such as stigma, marginalization, and poverty (Herek & Glunt, 1988; Person et al., 2004). While these methods may prevent or hinder the spread of disease, they cannot ensure the health of individuals or their communities. In order to ensure good health, actions and policies that are preventive in nature and based on a social determinants of health model, i.e., encompassing economic, social, and environmental structures, are required. Stated alternatively, while self-isolation policies may work to slow the transmission of the virus, without some level of assurance of good housing, access to health resources, and financial support systems for those adversely affected, such policies may produce indirect and unintended poor health outcomes. By fully grounding air travel and halting tourism, many island nations are likely to face serious financial and employment hardships from a loss of foreign revenue (Poling & Natalegawa, 2020). Without programs in place to mitigate this loss, longer-term social and economic hardships will become the consequences of the COVID-19 pandemic.

WHILE SELF-ISOLATION policies may work to slow the transmission of the virus, without some level of assurance of good housing, access to health resources, and financial support systems for those adversely affected, such policies may produce indirect and unintended poor health outcomes.

Edwards (2020, para. 2) suggests that many island health systems, notably those in the Pacific, "tend to be fragile and missing." Many island nations face a three-fold challenge during the pandemic. The first is to have, or to have access to, needed health care resources in the event of an outbreak that requires advanced hospitalization of many patients. Since a great deal of global health outreach to island nations focuses on downstream (meaning closer to point of care) reactions to current health challenges, little has been given by donor nations in terms of upstream (meaning concern with the social determinants of health) resiliency resources. The second challenge is to draw resources

together to support citizens whose livelihoods have been disrupted by the pandemic. As many island nations rely heavily on remittance income from able workers abroad, little is in place for ensuring strong social safety nets. Finally, connectivity matters enormously. Rather than viewing isolation as luck during a pandemic, it should be understood that, for isolated island nations, disruptions to limited trade and travel networks can only worsen social problems at home.

For these reasons, it is erroneous to suggest that good health among island nations in a pandemic is a "gift" or the result of good "luck". The assurance of good health within island nations during, and after, the COVID-19 pandemic will come as the result of governance strategies in balancing the ability to guard against the virus, while at the same time mitigating the economic and social consequences from global disruption. In as much as foreign aid and cooperation will be important tools to the economic recovery of island economies, it will be the balance made by island leaders that will ultimately determine their health security. To be clear, not all policy matters are concerned with health as a top priority, but health will also be an outcome from policy decisions.

THE ASSURANCE OF GOOD HEALTH within island nations during, and after, the COVID-19 pandemic will come as the result of governance strategies in balancing the ability to guard against the virus, while at the same time mitigating the economic and social consequences from global disruption.

In as much as border closures and quarantines can counter the ability of the COVID-19 virus to migrate on jet aircraft and long-distance ships, effective policy decisions matter most in handling the consequences in areas where it is rampant, and also areas where it is scarce. The virus itself has no set plan other than to "copy itself in whatever way it does simply because it has copied itself to great effect before" (The Economist: Essay, 2020, para. 5). But it can take advantage of opportunities that societies offer it, such as muddled public health orders, a lack of hygienic equipment, or the inability to practice safe social distancing. As Simpson (2020) correctly states, quarantines are not pure science, and they have always been structured to protect some members of society while leaving others vulnerable.

This is why health governance for island nations must extend beyond quarantine and prohibition of movement, to develop "policies that protect, promote, and improve public health," (Carlson et al., 2015, p. s163) while also managing resource stewardship and partner engagement that allows for inclusive public health education alongside social and economic support for those impacted by health ordinances. As Edwards (2020) notes, health systems in many island nations are fragile, which makes the role of governance all the more important to achieve buy-in from inclusive coordination. Guam is a case in point where the governor's attempts to implement health measures to slow the spread of the virus have had no influence or impact on the large number of U.S. military personnel on the island (Kettl, 2020; Walker, 2020). So, when the U.S.

aircraft carrier *Theodore Roosevelt* arrived in port carrying 4,900 personnel, including 1,000 who had tested positive for COVID-19, they proceeded to quarantine on the island itself (Starr & Nedelman, 2020). From August to December of 2020, Guam recorded an average of 100 new cases of COVID-19 each day, for a total of 8,000 cases by December 8, 2020, within a population of 165,800 (Johns Hopkins University & Medicine, 2021). Likewise, regardless of the sentiments of local government, air traffic has remained steady. These are the consequences of Guam's overseas territory status that prevents the government from having the same level of autonomy, control, and coordination that independent island nations may enjoy. In the end, Guam's inability to quell COVID-19 is in part a consequence of multiple decision-makers acting at cross purposes.

Almost a quarter of the 4,900 sailors aboard the massive US aircraft carrier *Theodore Roosevelt* (above) were infected with COVID-19, causing the carrier to quarantine on the island of Guam in late March 2020. Sailors were moved off the ship in rotation: when they cleared quarantine and tested negative for COVID-19, they would swap places with the sailors who were still aboard the ship. It was months before the carrier resumed sailing. US Navy photo

For island nations such as Fiji, grounding air fleets — banning almost all non-citizen travel — effectively eliminated 'super spreaders', while at the cost to the tourism sector. Locals may still frequent restaurants, or gather at local drinking establishments, but the high capacity gathering places associated with mass tourism are faced with restrictions. Cuba, on the other hand, delayed closing its borders to foreigners, and even accepted a ship with a COVID-19 outbreak on board (Burgis, 2020). However, Cuba mustered its health resources in unusual and creative ways. Even amid the

height of the global pandemic, Cuba welcomed foreigners to particular isolated resorts on smaller island keys, which in itself created a form of quarantine from the rest of the Cuban population. Foreigners, like nationals, would be given care and quarantine if they tested positive for COVID-19. Advanced care facilities were prepped to handle an influx of patients. Smaller countries in the Pacific such as Kiribati require "travelers from countries with ongoing local transmission of novel coronavirus to spend at least 14 days in a country free of the virus before traveling to Kiribati, and to provide a medical clearance to confirm that they are virus-free" (U.S. Embassy in Fiji, Kiribati, Nauru, Tonga, and Tuvalu, 2020). Differing policies indeed, but with one shared element: unlike many developed continental jurisdictions, none of these island nations have a high percentage of senior citizens living in care facilities, as elder care is often handled within multi-generational households (Fernandes et al., 2018). In as much as each of these policies responds to the capabilities and demands of each nation, the question remains as to how Fiji will manage economic recovery, how Cuba will continue to finance its health system, and how Kiribati will manage to acquire much needed trade and resources with such strict travel measures in place.

THE QUESTION REMAINS as to how Fiji will manage economic recovery, how Cuba will continue to finance its health system, and how Kiribati will manage to acquire much needed trade and resources with such strict travel measures in place.

LESSONS FROM HISTORY

Quarantines have a long history as a public health measure, and have been accompanied by challenges. First is that effective quarantines are difficult to impose (Sundwall, 2019). Even on islands with few entry and exit points, the need for people to leave and enter quarantine zones for essential purposes remains. Historically, quarantines have proven ineffective, notably with measures taken during the bubonic plague or with the spread of smallpox, the former being spread by vermin and the latter by airborne human-to-human contact. Until better knowledge of virology and, more recently, the development of vaccines, people relied on quarantine rules, to only limited effect. Until the 1920s, the proof of efficacy of quarantine as a front-line measure against pandemics was debated. Only when the 1918 influenza struck Western Samoa (or what is now Samoa) was there a clear and demonstrative justification to show the efficacy of quarantine measures (Tomkins, 1992).

On November 7, 1918, the steamship S.S. *Talune* arrived at Apia, in New Zealand-controlled Western Samoa. Arriving in dock, a passenger cried out to those on shore that there was sickness on the boat (Radio New Zealand, 2018). Indeed, the 1918 influenza struck those on the ship hard, and when it unloaded, community spread

began to occur across Western Samoa. By the end of January 1919, 8,500 people, or roughly 22% of the population of 38,000, had died from the influenza (Shanks et al., 2018). Meanwhile, on nearby American Samoa, Commander John Martin Poyer enacted a full moratorium on all ships entering its waters (Nishiura et al., 2009). As a result, not a single life was lost from influenza on this American island territory (Tomkins, 1992). This is a good example of the importance of local leadership and has served as a justification for quarantines when combatting pandemics (McLeod et al., 2008). On the surface, it may appear that a simple action, aided by island isolation, showed how a *cordon sanitaire* was able to prevent the influenza outbreak (Patterson & Pyle, 1991). However, as McLane (2013, p. 31) states, "This success was facilitated by isolation, limited trade, a colonial government with absolute power but little oversight, and a working relationship between the US Navy and the traditional Samoan elites." As McLane (2013) points out, the action of closing ports is but one element in the broader successful strategy of avoiding pandemic community spread in American Samoa. While the island isolation certainly complemented efforts, by no means did it ensure success. The nature of governance itself, including the assistance of the U.S. Navy to enforce quarantines, and the working relationship between colonial powers and locals to follow ordinances also played a role in the outcome.

The SS *Talune*.

On the other hand, the story of New Zealand-governed Western Samoa tells a tale of a public health disaster. This took place not just because Robert Logan, the acting administrator of Western Samoa, allowed vessels with the disease into port, but also because health and sanitation measures were not enforced (Tyquin, 2012). As Tahana (2018, para. 5) describes, "People went into Apia town. Others rode goods wagons up into rugged interior. A Christian missionary walked from village to village along the coast, taking a hacking cough with him." Logan's leadership of Western Samoa during the pandemic can best be described as bumbling, incompetent, and racist. Even before the pandemic arrived in Western Samoa, Logan passed laws that discriminated against Chinese immigrants, and he demonstrated a profound indifference for Samoan people (Tahana, 2018). During the pandemic, Logan refused to set up aid stations, refused medical help from American Samoa, allowed infected vessels to leave port, and, when asked to provide food for sick Samoan children at a boarding school, he replied, "there is a dead horse

S.O.S. SIGNAL FROM SAMOA.

WELLINGTON, Nov. 20

Influenza has appeared at Samoa in a bad form, and the authorities there have cabled for medical assistance.

The New Zealand Government is trying to arrange for assistance to be sent from Australia.

From *The Samoan Times*, 1918.

at your gate, let them eat that" (Tahana, 2018, p. 30). Clearly, differences in leadership and administrative decision-making between Western Samoa and American Samoa during the 1918 influenza was one of the key factors in the different outcomes, and can inform our ability to understand island resilience during the current COVID-19 pandemic.

Shanks and colleagues (2018, e323) suggest that "the high case-fatality rate associated with the 1918 pandemic in Western Samoa seems unlikely to reoccur in the future influenza pandemics. However, understanding the critical determinants of the mass mortality is essential to prepare for future pandemics." As Shanks et al. (2018) rightly state, the 1918 influenza was essentially the same strain that spread across the Pacific, which allows for important comparisons between regions and populations. The authors suggest that populations with a higher rate of pre-exposure to the 1918 influenza fared better in terms of mortality (Shanks et al., 2018; Shanks & Brundage, 2012). While this may indeed be a factor, so too is the nature of governance, as the case of Western Samoa and American Samoa demonstrates. Whereas Western Samoa suffered from poor infrastructure coupled with a dysfunctional colonial governance structure that furthered tensions rather than community-based cooperation, the governance of American Samoa demonstrated stronger processes of respect, enforcement, and ooperation between the governing authorities and local populations.

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DIFFERENCES IN LEADERSHIP and administrative decision-making between Western Samoa and American Samoa during the 1918 influenza was one of the key factors in the different outcomes, and can inform our ability to understand island resilience during the current COVID-19 pandemic.

A VIRUS WITHOUT A PLAN

Because the virus has no plan, it becomes paramount that small nations, particularly islands, are prepared. The key to a solid, resilient pandemic plan is to build on pre-pandemic foundations of economic and social strength (Sundwall, 2019). Island nations that are deeply integrated into broader global networks must find selective opportunities within the networks that they have (Kakazu, 2006). Cuba, Fiji, and Kiribati all serve as important exemplars of health governance built upon existing strengths, networks, and capabilities, without necessarily relying upon their relative isolation and control over entry. Isolated, spread over a wide area of ocean, and facing a climate emergency, the archipelago of Kiribati has taken a very isolationist approach to COVID-19 policy that has even left its own citizens stranded abroad. At the same time, it struggles to acquire much-needed resources and partnerships during this time (United Nations, 2020). Fiji has also experienced fewer COVID-19 cases to this point, but it has come at the cost of restricting all international flights, thus stifling its tourism sector. Then there is Cuba, a country that provides free universal health care to its population of 11.3 million people and offers its own medical services to foreign nations struggling with COVID-19, but that also suffers from crippling resource shortages under a tightening embargo from the United States (Huish, 2020). Taken together, these case studies offer important insights into how island governance matters in times of pandemics.

THE KEY TO A SOLID, resilient pandemic plan is to build on pre-pandemic foundations of economic and social strength.

Cooperation: Cuba's medical internationalism

Cuba has a long-standing history of medical internationalism. Since the early 1960s, Cuba has sent over 100,000 health care workers to over 100 countries. As of 2020, some 28,000 Cuban health workers were serving in 60 countries, 30 of which were solely for COVID-19 response. In 2020, Cuba sent health brigades to affluent European and Gulf States such as Italy, Andorra, Qatar, and Kuwait. As well, Cuba's health workers answered the call for COVID-19 support from many island nations in the Caribbean (Huish, 2020). This builds on a long-standing policy of offering human resources for health to countries in need on a global scale that is unmatched by any other nation (Huish & Kirk, 2007). Moreover, Cuba chose to keep its borders open to foreigners well after many island nations, including neighbouring island nations in the Caribbean, ceased international travel. As of November 2020, Cuba had averaged about 50 new cases of COVID-19 per day, suggesting that, at least for the time being, it is controlling the pandemic; a feature that is remarkable for a country of 11.3 million. Amid such strong global outreach, and such a strong national response, Cuba has suffered severe

economic hardship during the pandemic. The cessation of international tourism (and the foreign revenue and local employment earned from this activity) and a tightening U.S. embargo have led to alarming shortages, long lines, and genuine hardship for the Cuban people (Augustin & Robles, 2020). How, then, did Cuba manage to achieve such impressive COVID-19 statistics and global cooperation amid devastating economic hardship?

Simply put, Cuba has built a solid foundation of building national health capacity and global health outreach (Huish, 2013). Health is a strength that it exports, because it has an overcapacity of health services at home. In some cases this is done for generous remuneration, while at other times altruistic or geopolitical reasons have prompted the country to send Cuban volunteer doctors abroad. Cuba's foreign policy is deeply grounded in medical internationalism. It is a characteristic that has allowed Havana to build strong international relationships and to strengthen its own domestic capacity for human resources for health (Kirk, 2017).

RATHER THAN ISOLATE OR IMMEDIATELY RETREAT from the global community in the onset of the pandemic, Cuba chose to help others beyond its shores.

Crew members of British cruise ship MS *Braemar* hold a sign reading "I love you Cuba" at the harbour in Mariel, Cuba, March 18, 2020.

Cuba offers three important lessons for pandemic health for islands. First, open borders do not necessarily spell disaster if resources are in place to handle contact from potentially infectious visitors (Sundwall, 2019). Cuba's willingness to keep its borders open to other nations longer than most other nations may be interpreted as 'brave', but it has more to do with confidence in the domestic health system. Second, Cuba's commitment to internationalism maintains important networks of solidarity and cooperation (Blue, 2010). As the global economy ground to a halt, international solidarity networks remained as an avenue of communication and exchange (Huish, 2020). This approach is especially important for a heavily embargoed nation like Cuba. Finally, the shortages Cuba is experiencing during the COVID-19 pandemic from disruptions in global trading networks to a tightening U.S.-imposed embargo have caused enormous economic hardship, but not at the cost of national health security. It is a compelling example of how a commitment to health, despite resource shortages, can bring about impressive results.

Taken as a whole, Cuba's experience during the COVID-19 pandemic is one of outward internationalism, coupled with centralized public health management. Rather than isolate or immediately retreat from the global community in the onset of the pandemic, Cuba chose to help others beyond its shores. The country has maintained an effective COVID-19 response and the benefits of its cooperation are felt around the world. Cuba shows not just a radical repudiation of the common trend of quarantine and isolation, but that internal governance and leadership matters in building resilience against global health challenges. While the Cuban model is not likely to be imitated, it does inform broader discussions around the role of unitary states such as New Zealand, South Korea, and Singapore that combine high rates of testing with local level buy-in for restrictions on movement (Hazen, 2020). Runde et al. (2020) suggest that countries like New Zealand and South Korea did better at generating buy-in to health measures than other states, which may in part explain why they were able to flatten the curve more quickly than in other countries.

Collaboration: Chronicles from the Pacific

COVID-19 decimated the economies of tourism-dependent countries like Cuba and Fiji (Gaffney & Eeckels, 2020). According to the model projections by Noy et al. (2020), the economic risk from this pandemic will be high. Sheller (2020) suggests that mobility justice may be a way to approach the challenges arising from deeply wounded tourism sectors in the Caribbean. While Cuba built a robust health system and a decent social safety network, Fiji has no welfare system to cover unemployment compensation (Yeh, 2020). With resorts closed, and the virus under control, hospitality industry workers are returning to fishing or farming for survival and sustenance (Island Times, 2020). With a significant arable land mass, and abundant fishing grounds, Fijians are hoping that a return to subsistence production will cushion the impacts of a devastating loss within the tourism industry. Although a regional leader in the Pacific in building health care capacity, Fiji shares a lack of health care capacity with many other Pacific island nations. These island nations are therefore unable to handle large-scale waves of COVID-19 (Leal Filho et al., 2020). Likewise, smaller nations in the Pacific, such as Kiribati, could also be overwhelmed by the influx of COVID-19 cases. While Fiji has implemented restrictive measures and a mandatory two-week quarantine for persons upon arrival, Kiribati demands that any inbound travelers must have spent 14 days in a COVID-19 free nation before arriving (U.S. Embassy in Fiji, Kiribati, Nauru, Tonga, and Tuvalu, 2020). This policy applies to both tourists and overseas workers and encompasses visitors from all other locations, including Fiji and other Pacific island nations.

ALTHOUGH A REGIONAL leader in the Pacific in building health care capacity, Fiji shares a lack of health care capacity with many other Pacific island nations.

In as much as tourism is a devastated industry during COVID-19, so too is the impact on remittance income that comes from the ability of overseas workers to travel and send home their earnings. The international labour diaspora of islands is extensive (Durutalo, 2012). For decades, the International Monetary Fund, the World Bank, and other development finance organizations have encouraged small island nations such as Kiribati to increase their capacity to send nationals overseas for work in the hopes that a return flow of remittances would serve as a form of development. Although the long-term social and economic impacts of the pandemic remain to be seen, some research suggests that remittance income will drop significantly (Abel & Gietel-Basten, 2020).

Tourism makes up nearly 40% of Fiji's GDP. Its tourism industry has been devastated by COVID-19, and it has no welfare system to cover unemployment. Its hospitality workers are returning to fishing and farming for survival.

It is a serious moral challenge for any nation to deny entry to its own citizenry. While many nations implemented travel bans during the pandemic, it was assumed that nationals would also be welcomed to return home. For densely populated island nations with struggling health care systems, this was not an option. As a result, thousands of temporary seasonal workers were stranded in Australia and New Zealand — countries that were facing their own strict pandemic measurements. What would be the fate of temporary migrant workers who could not return home, and who do not have substantial income to support a long period of self-isolation in relatively costly nations?

The United Nations International Organization for Migration (UN IOM) found that destination nations for seasonal workers from island nations responded by extending work visas, encouraging employers to keep migrant workers at their destination work

sites (United Nations International Organization for Migration [UN IOM], 2020). While New Zealand extended its Recognised Seasonal Employer scheme visas, 1 out of every 3 migrant workers is not actively working in the country (UN IOM, 2020). This adds incredible pressure to the already vulnerable remittance economy for island nations. In order to compensate for the potential loss in this area, collaboration is necessary between the source and destination countries. The UN IOM suggests that forms of income assistance be offered directly to remittance income workers who were unable to travel, and that destination countries also provide support under government income assistance schemes, medical insurance, and opportunities for repatriation. What's more, the UN IOM argues that regional consultations and collaboration take place for the creation of Pacific travel bubbles that would allow safe migration of Pacific labourers so that they can support the economic recovery in the region.

SO FAR, AUSTRALIA AND NEW Zealand have offered minimal commitments to the preventative health needs of migrant workers from Pacific island nations. There is an opportunity to improve this by encouraging collaboration through travel bubbles, remittance security, and temporary social support for migrant workers.

So far, Australia and New Zealand have offered minimal commitments to the preventative health needs of migrant workers from Pacific island nations. There is an opportunity to improve this by encouraging collaboration through travel bubbles, remittance security, and temporary social support for migrant workers. In as much as the tourism sector has been decimated in Fiji, the remittance economy is even more important and fragile for smaller nations such as Kiribati. Ensuring minimum income to workers in such countries is essential for warding off longer term health and economic calamities.

Bearing these challenges in mind, some island territories have enjoyed strong collaborative success during the pandemic by creating travel bubbles during the COVID-19 pandemic to allow trade and traffic to other jurisdictions. It is an experience that Pacific island countries may well want to consider for current and future pandemic scenarios. Two bubbles are notable in this regard. The first is the "Bailiwick Bubble", which includes the Channel Islands of Guernsey, Alderney, Sark, and Herm, with a total population of just under 170,000 (States of Guernsey, 2020). This bubble, which has allowed for unfettered travel within the forementioned islands without quarantining on the destination island, is reported to have benefited tourist operators from islanders taking "staycations" (ITV, 2020). Anyone arriving from outside of the bubble is still required to self-isolate for 14 days, preventing tourism from Europe and Britain. The second bubble, with a total population of close to two million, includes two Canadian island provinces (Prince Edward Island and Newfoundland) and parts of mainland North America (i.e., the provinces of Nova Scotia, New Brunswick, and Labrador, the latter being the mainland portion of Newfoundland and Labrador). This "Atlantic

One month after launching its Staycation Club, hundreds of people holidayed within the Bailiwick of Guernsey.
ITV Channel TV

Bubble" permitted widespread travel without the need to self-isolate across Atlantic Canada for several months in 2020 and allowed hospitality and tourism operators to open for those traveling within the region (Ross, 2020). Despite free movement, and having many hotels, restaurants, and sports centres open for business, public health measures remained thorough, with high expectations for mask wearing in public, social distancing in shops, and contactless payments (Government of Nova Scotia, 2020). The Atlantic Bubble burst in November 2020 as community spread occurred in Nova Scotia and New Brunswick, which led to each province within the Bubble (re)imposing 14-day self-isolation periods, similar in length to the requirement of other travelers. Even still, both of these bubbles stand out as impressive examples of collaborative health policy and were likely enforceable because of the regional scale and the ability to manage connectivity with surrounding areas.

Competition: What lies beneath

Australia has long considered itself a leader and protector of its 'patch' of the Pacific (Wood et al., 2020). For countries such as Kiribati, this has resulted in development, trade, and security commitments. For development, in light of atoll nations like Kiribati being at risk of sea-level rise, Australia is offering a wider range of labour visas for migrants from the region (Department of Foreign Affairs and Trade, 2020; UN IOM, 2020; Wyeth, 2017). For security, the country continues to provide technical assistance for policing and for maritime security. As for trade, a limited quantity of goods makes its way to Tawara in Kiribati on a regular basis, with the top Australian exports being alcohol, fatty meat, and cigarettes (The Economist: Banyan, 2019). Similar outreach loosely extends from Australia to other Pacific island nations. It offers stability, but little innovation, and most of these initiatives existed prior to the pandemic. In a report commissioned for the New Zealand Ministry of Health, Wilson and colleagues (2020) offer some creative policy solutions for outreach in the Pacific, including the "keep it out" and "stamp it out" phases of pandemic response which imply strict quarantines. Proposed actions include, for example, allowing would-be travelers to Pacific islands to pre-isolate in New Zealand, and discontinuation of routine flights to relevant Pacific islands (Wilson et al., 2020). Such recommendations expand quarantine efforts, but do

not necessarily help to overcome the broader social and economic consequences of the pandemic. In addition, during a pandemic, when the exceptional becomes the "new normal", questions arise as to how and on what basis new partnerships may emerge.

Maritime security of the Pacific is a growing concern and priority for many nations (Bateman & Bergin, 2011). In recent years, many continental and powerful nations have recognized the value of small islands controlling vast areas of ocean, which holds benefits for large-scale commercial fishing and for military exercises (Leenhardt et al., 2013). Many Pacific islands have used this new geopolitical relationship to their advantage by entering into partnerships with the hope and expectation that the partner nations would help to improve local infrastructure and increase trading opportunities (Chasek, 2005). Now, amid a pandemic, how will Pacific island nations approach partnerships?

The COVID-19 pandemic has exposed the tenuous nature of relationships with traditional trading and security partners. Whereas the advantage of large-scale tourism or export markets draws immediate appeal, the ability to demonstrate low levels of COVID-19 may become the next competitive advantage in developing partnerships with island nations. Countries that cannot guarantee health security with their own resources may be overlooked as strategic partners by island nations (Edwards, 2020). China appears to be embarking on a 'health belt and road' initiative, which calls for the strengthening of health systems as a means to encourage cooperation. Tambo et al. (2019) suggest that this version of the capital- and infrastructure-intensive Belt and Road Initiative will include invigorating innovation through information development and technology sharing, but also through public health vigilance and health service provision. Indeed, the reported low COVID-19 case numbers in island jurisdictions may be a strong factor for island nations to do business with China in the post-pandemic world. The practicality, however, of ensuring information exchange and public health vigilance between jurisdictions may well continue to be a challenge for the foreseeable future. Likewise, nations that can offer more direct assistance with health care responses, especially in isolated settings, may again gain the favour of island nations.

THE COVID-19 PANDEMIC HAS exposed the tenuous nature of relationships with traditional trading and security partners. Whereas the advantage of large-scale tourism or export markets draws immediate appeal, the ability to demonstrate low levels of COVID-19 may become the next competitive advantage in developing partnerships with island nations.

Ultimately, the question comes down to the foundations upon which island nations choose to govern themselves. In a post-COVID-19 world, will the priority be on restoring the economies that were derailed by the pandemic? Or will new avenues emerge that seek more diverse collaborations? Will health care itself become a greater priority? Island states well recognize that oceans cannot stop viruses in the age of jet travel, but

preparation, good planning, and solid cooperation and partnerships can; this is why mainland nations will continue to court and compete to gain favour with island nations post-COVID-19. The immediate deals may involve maritime security, trade, fishing, or tourism privileges, but rest assured that whatever deals are struck through such competition, investment and assurances in the health sector will likely be a top priority for years to come (Atkinson, 2010; Hayward-Jones, 2013; Wesley-Smith & Porter, 2010).

FINAL THOUGHTS

Once a safe and accessible vaccine arrives, the trials and tribulations of the COVID-19 pandemic may be forgotten. However, what may be remembered is how nations chose to collaborate with each other when no medicine was available, and the non-pharmaceutical strategy of isolation was key. Islands have already offered insights regarding pandemic resilience and they will likely continue to be exemplars during the post-pandemic recovery. This chapter is intended to serve as an invitation to look beyond the assumed physical advantages islands have in imposing isolation. Rather, it is the governance of islands that matters most, as we see from the examples of Cuba, Fiji, and Kiribati. All three islands approach health as a factor that extends beyond their borders, and one that is deeply grounded in international networks and cooperation. It is a fitting example of a sense of health as a critical outcome of islandness. How islands will organize with each other and with mainland nations remains to be seen in the post-COVID-19 world. So, too, will negotiating debt commitments with multilateral institutions such as the International Monetary Fund and the World Bank. But, no doubt, global public health strategies will be grounded in a continued strong sense of islandness when island nations form new partnerships. Going beyond the challenges of physical isolation, islandness maintains community resiliency amid economic and social pressures, and is indeed an important lesson for the world (Conkling, 2007). Considering that COVID-19 impacted the economic engines of globalization, an appetite for fostering new networks of collaboration and cooperation may well emerge. Islandness may be one of the most valuable assets to such networks. One of the key factors will be demonstrated evidence that partners are in a position to contain pandemics, and to offer assistance when needed. If history is to offer any advice for emerging island policy post COVID-19, it is that closing a border is never enough to ensure public health security, regardless of the added assurance of a border that is surrounded by the sea. What matters most is how people take care of each other, and how they value that care. No doubt, island nations, through islandness, have found their own unique approach to resilience during the COVID-19 pandemic. It is more than likely that islandness will be the envy of global health policy in building new post-pandemic geographies.

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Prince Edward Island enforced its own restrictions for people travelling internally within Canada. It then became part of an Atlantic Canada travel bubble with three other provinces: from July 3 until November 23, 2020, travel for residents of these provinces was permitted within and among the bubble without quarantine or isolation upon arrival.

4

Pandemic and post-pandemic islandness

Building and wrecking resilience

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ABSTRACT

As the COVID-19 pandemic swept the world in 2020, many (although certainly not all) of the places with limited numbers of reported cases were island countries or territories. This suggests the importance of discussing island resilience and

islander resilience in the context of the pandemic and moving beyond the pandemic. This chapter does so through exploring the islandness context when focusing on the dual impacts of (i) physical connectedness being curtailed with lockdowns and border controls while (ii) virtual connectedness expanded extensively for some. Meanings of islandness and of island resilience are examined by highlighting different forms of pandemic-related isolation and connectedness as presumed characteristics of island peoples and places. Building a post-pandemic future should mean leveraging islandness, for islands and non-islands alike, to retain and enhance advantages while identifying and overcoming disadvantages. Ultimately, no single approach applies all the time to all contexts. Instead, resilience for islandness and islandness for resilience together mean developing, accepting, and having available a wide array of actions and techniques which could be started, stopped, and altered at short notice. This would take advantage of, rather than inhibit, islandness characteristics.

INTRODUCTION

In 2020, the world's resilience was tested by the COVID-19 pandemic. First identified in Wuhan, China toward the end of 2019, a new virus — which likely jumped species to humans from illegally trafficked and eaten mammalian wildlife — led to the new disease (Liu et al., 2020; Petrikova et al., 2020). By the end of January 2020, the disease's spread and major health impacts were evident, so the Wuhan area was locked down. The rest of the world continued to respond sluggishly and haphazardly, but most countries had implemented some form of border control and lockdown by the end of March.

At the beginning of April 2020, 18 countries and territories had not reported any cases, of which two-thirds were entirely islands. These numbers require caution. The six non-islands included Yemen, which was not reporting accurately at the time. Meanwhile, Nunavut is an autonomous territory — with numerous island communities and a large non-island area — which did not have any reported COVID-19 cases at the beginning of April, yet it was typically not included on such lists.

By the beginning of November 2020, the list of countries with zero reported COVID-19 cases was down to 11, of which nine were Pacific islands/archipelagos. The remaining two were North Korea and Turkmenistan, each with dubious reporting. Four territories — American Samoa, Saint Helena, Pitcairn Islands, and Tokelau, all of which are islands/archipelagos — also continued to report no confirmed cases. Nunavut managed until 6 November before confirming its first COVID-19 case. At the end of November, Samoa reported its first case, appeared to retract the announcement, and then confirmed that a different individual had definitely tested positive. Meanwhile,

a balance of islands and non-islands including Kalaallit Nunaat (Greenland), New Zealand, Thailand, and Vietnam were verifying months without confirmed local transmission. Cases occasionally appeared, but spread was quashed — although Thailand experienced a surge of cases in December 2020.

Ambiguities remain regarding the presence and rates of infection. Asymptomatic infection (He et al., 2020) alongside symptoms sometimes similar to colds or flus (Gandhi et al., 2020) were evident from the beginning. Thus, testing is required to confirm a COVID-19 case. Many islands stated as having no COVID-19 cases would be more accurately described as having no confirmed COVID-19 cases. Even attributing deaths would not be straightforward, because testing would be required to confirm COVID-19, because many outlying areas do not typically have good health systems, and, especially in the pandemic's early stages, because deaths from COVID-19 could easily be attributed to other causes (see also Kiang et al., 2020).

Irrespective, many jurisdictions identified as having no, few, or under-control case numbers clearly did not have the rates of ill people filling up healthcare facilities as seen in many other countries such as the UK and the USA. Many, although certainly not all, of the places with limited cases are island countries or territories, suggesting the importance of discussing island resilience and islander resilience (or lack thereof) in the context of the pandemic. This chapter does so through exploring the islandness context when focusing on the dual impacts of (i) physical connectedness being curtailed with lockdowns and border controls while (ii) virtual connectedness expanded extensively for some. Meanings of islandness and of island resilience are examined by highlighting different forms of pandemic-related isolation and connectedness as presumed characteristics of island peoples and places.

MANY, ALTHOUGH CERTAINLY not all, of the places with limited COVID-19 cases are island countries or territories, suggesting the importance of discussing island resilience and islander resilience (or lack thereof) in the context of the pandemic.

COVID-19 AND ISLAND RESILIENCE

The island COVID-19 experience, with and without resilience, matches some past history of pandemics and islands. Studies of both infectious and non-communicable diseases have often taken the assumed isolation of islands as an islandness characteristic that is ideal for understanding disease entry, rates, and spread. Examples are Iceland for measles (Cliff & Haggett, 1980) and Tristan da Cunha for asthma (Mantle & Pepys, 1974). The alleged lack of connectivity of islands has not precluded epidemics and pandemics, corroborating extensive analyses from island studies that isolation is not always a clear or definitive characteristic of islands, nor does a duality exist of "isolated versus connected", but rather, there is an isolation–connectedness

continuum and different aspects of these characteristics can be present simultaneously (Baldaccchino, 2008; Hay, 2013; Leane, 2007; Lewis, 2009). For instance, an outbreak of black plague occurred in Europe during the 14th century and Iceland did not report cases, but epidemics which were likely plague ravaged the island twice in the 15th century (Streeter et al., 2012).

The apparent isolation of islands and efforts to avoid disease reaching them have become even more tenuous in recent times. Other than boats, island connections can now include causeways, tunnels, and bridges (Baldacchino, 2007) as well as aircraft (Karampela et al., 2014). Increased transportation to, from, and between islands means increased potential for transporting infectious diseases and for inducing cultural changes, such as imported food altering eating habits and increasing diabetes rates for Pacific islanders (Dye et al., 2018). For Iceland, the plague potentially took decades to arrive in the 14th and 15th centuries, while in 2009, Iceland's first pandemic influenza A (H1N1) case appeared only about a month after it was first identified in North America (Sigmundsdottir et al., 2010).

THE MAIN DIFFICULTY WITH the resilience notion of a "return to normal" is that the pre-problem state — the so-called normal — represents the conditions which permitted the problem to happen in the first place.

With respect to pandemics, are islands and islanders more resilient or less resilient than others? Much depends on context as well as on the definition of "resilience" adopted, given that the word has so many theories and definitions leading to widely divergent notions of "resilience thinking". Ideas from ecology have dominated some sectors, such as climate change (Intergovernmental Panel on Climate Change [IPCC], 2013-2014) which, despite ideas evolving to be more in line with wider literature, still base resilience on notions of "bouncing back" to the pre-problem state or a "return to normal". The main difficulty here is that the pre-problem state — the so-called normal — represents the conditions which permitted the problem to happen in the first place, so these conditions should be neither sought nor desired (Fordham, 1998; Hills, 1998). With the same argument, definitions of resilience which accept system change, but which seek to maintain core functions and structures (e.g., IPCC, 2013-2014), miss the conclusion from disasters and development research that society's core functions and structures create vulnerabilities, ranging from sexism (Enarson & Morrow, 1998) to inequity (Wisner et al., 2004).

For COVID-19, these core functions and structures were the normality of:

1. An illegal wildlife trade coupled with poor hygiene in dealing with animals, permitting the virus to jump species (Liu et al., 2020; Petrikova et al., 2020).
2. A failure to properly monitor and respond at local and international levels when a new disease was identified and reported by public health and medical personnel (Yang et al., 2020).

3. Elements of culture around the world opposing scientific investigation, evidence-based policy, and efforts to inhibit the virus' spread while maintaining livelihoods (Uscinski et al., 2020).

These three societal elements remain remarkably resilient. This resilience impedes the end of COVID-19 and supports future pandemics.

The ecology-based approach to resilience has also been used by neoliberal philosophies to explain that people and communities should and can be resilient to disturbances or disruptions by helping themselves and thus do not need or deserve external support, leading to detailed critiques of this neoliberal viewpoint (Pugh, 2014; Reid, 2012, 2018). This form of resilience becomes an excuse to reduce a government's responsibility to the people it serves, because the people should apparently be resilient enough to deal with adversity (such as a pandemic) themselves.

Other forms of "resilience thinking" from island studies instead seek to help and support people and communities. The lessons from islanders define resilience as a process always seeking to do better for society by resolving current problems and preventing future ones (Chandler & Pugh, 2020; Grydehøj & Casagrande, 2020; Lewis, 2013, 2017). Table 4.1 displays some of the emphasised topics regarding islander resilience after COVID-19. As always, no answer is clear-cut for any topic while columns 2 and 3 in Table 4.1 are not mutually exclusive. The same issue can be advantageous and disadvantageous for islander resilience, making it complicated to determine how to make a post-pandemic world resilient.

TABLE 4.1: **Examples of Discussions Regarding Islander Resilience after COVID-19**

Topic	How it might support islander resilience	How it might inhibit islander resilience
International tourism (Kock et al., 2020)	External income and connectivity.	Dependency on external decisions for unsustainable practices such as regular, intercontinental, energy-intensive travel.
Islander diaspora (Murakami et al., 2020)	Remittances and connectivity.	Dependency on external income and diluting islander culture through assimilation in destination countries.
Development aid (Santos-Carrillo et al., 2020)	Financing long-term programmes to create a better island life.	Dependency on external income and forced imposition of external development-related ideals.

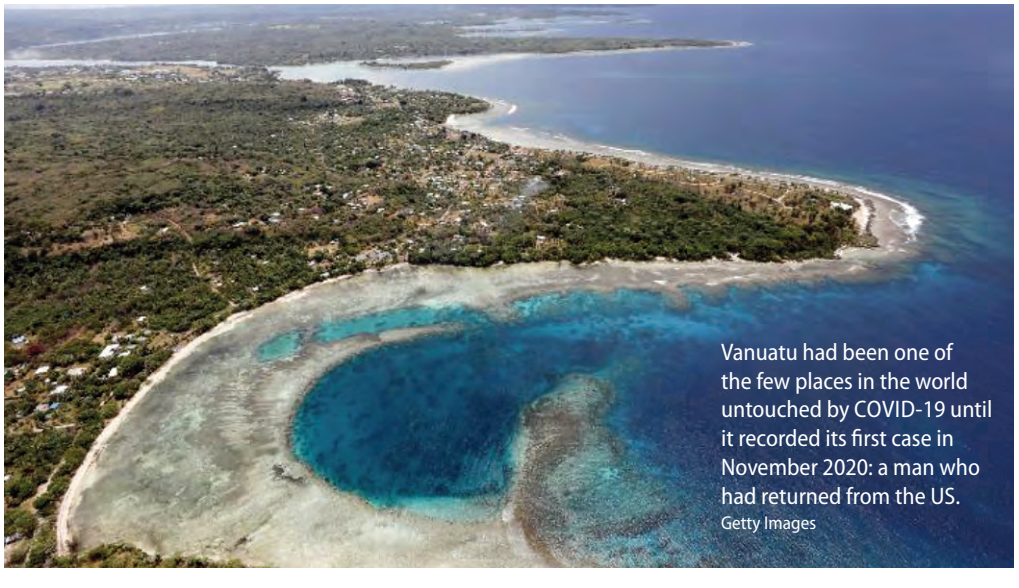
COVID-19 AND ISLANDNESS

Islandness refers to presumed characteristics of islands or islanders. Discussions sometimes question whether or not islandness truly exists or applies only to island(er)s, thereby challenging, deconstructing, and presenting counterexamples to the statements that (Baldacchino, 2004, 2007, 2008; Campbell, 2009; Conkling, 2007; Grydehøj, 2017; Selwyn, 1980; Shaw, 1982):

1. Islands are characterized by small areas, limited resources, remoteness, isolation, and marginalization.
2. Islanders are characterized by small human population sizes, tight networks, prevailing community cooperation, resource-based livelihoods, and an insular outlook on life and the world.

COVID-19 and responses to it led to island-focused analyses (e.g., Mohan & Ramsawak, 2020; Orr, 2020) and then considerations of the advantages and limitations of islandness.

A major, immediate concern was some island jurisdictions lacking the health systems, personnel, or equipment to deal with a COVID-19 outbreak. Countries such as Vanuatu and the Marshall Islands presumed that any arrival of the virus would lead to the disease running rampant with high mortality rates due to limited health-related resources. High mortality rates and near-collapse of health systems was amply demonstrated in the UK and the US despite their resources (e.g., Academy of Medical Sciences, 2020), indicating that the island governments' fears were well-founded. In a sense, lack of resilience in the islands' health systems forged the resilience they needed to close borders and keep the virus out.



Vanuatu had been one of the few places in the world untouched by COVID-19 until it recorded its first case in November 2020: a man who had returned from the US.
Getty Images

Many jurisdictions also used other forms of lockdown, not just controlling international and sub-national borders, but also restricting public activities and closing businesses, offices, and other venues. This approach islanded households and countries in terms of forcibly creating the stereotypical islandness characteristic of isolation through reduced physical connections. That is, physical connectedness was curtailed from the household to international level.

For those with the resources, reducing physical proximity to other people led to an extensive expansion of virtual connectedness. A potential paradox of islandness emerges in that:

1. Physical isolation breeds virtual connectivity for those who have this opportunity.
2. Increased resilience building based on virtual connectivity leads to more isolation and less resilience for those without the opportunity.

This "digital divide", alongside creative approaches to avoid problems from it, has been identified for islands from the Pacific (Cullen & Hassall, 2017) to the Arctic (Young, 2019). Furthermore, reliance on virtual connectivity can undermine resilience if the connectivity itself is not resilient. In January–February 2019, Tonga lost non-satellite internet connectivity for two weeks — also meaning that non-cash payments and international phone calls did not work — when the internet cables connecting the country to the world were cut (O'Connor, 2020). When the internet fails, people and households islanded due to COVID-19-related lockdown might not be able to increase their resilience.

RELIANCE ON VIRTUAL connectivity can undermine resilience if the connectivity itself is not resilient.

In the context of low-population, tight, trust-based communities and networks, one foundation is that people know each other and see each other regularly; that is, the face-to-face or eyeball-to-eyeball interaction is important (e.g., Magee et al., 2016, for the Pacific). If many virtual aspects of a pandemic society are retained post-pandemic, would increased online life help or hinder this part of islandness and resilience? The theory behind ascribing islandness characteristics to islanders is that it helps to build and maintain a society, especially for addressing external threats. Does a world with more remote interaction help island communities or does it in itself present an external threat?

A warning emerges from a popular pandemic phrase. The phrase "social distancing" has become the mainstay, even though the real issue is "physical distancing". The spread of the virus can be inhibited by reducing physical proximity, but lack of socialization can have severe mental health impacts. Islanders' experience of staying in touch with their diaspora could potentially assist in understanding how to remain socially

close without physical proximity, thereby maintaining resilience (e.g., DeLoughrey, 2007). Who can and cannot manage with online interactions for an extended period? Who does and does not have access to the technology required? How have some islanders developed a culture of living and working away from home for a long time, while still preserving strong ties to their island homes, when some lose the connections? What factors continue to apply, and no longer apply, within the context of pandemic-related lockdowns and travel bans? How are these factors relevant, or not, to islandness and to resilience?

THE CHOICE BETWEEN letting a pandemic run rampant and imposing severe and harmful restrictions on individual liberty is a no-win situation, with the consequences of each being devastating, ethically and health-wise.

Islandness is about choices to live on an island and to live as islanders, whereas lockdown is a (theoretically) temporary and involuntary measure to avoid mass death from disease. The choice between letting a pandemic run rampant and imposing severe and harmful restrictions on individual liberty is a no-win situation, with the consequences of each being devastating, ethically and health-wise. Lockdown was known to have major, deleterious health consequences, which have been documented as decreased fitness and fewer medical check-ups, along with increased stress, self-harm (including suicide attempts), domestic violence, and substance use (Bastiampillai et al., 2020; Bhavsar et al., 2020; Caballero-Domínguez et al., 2020; Iob et al., 2020).

If these consequences are seen when islanding people for COVID-19, are they seen for everyday islandness through living on an island? Social difficulties such as abuse, self-harm, and violence are not exclusive to islands or islanders. Studies do not yet exist aiming to compare degrees of islandness with degrees of social difficulties, even if either could be parameterized robustly in order to run correlations. Pitcairn Island (Oliver, 2009) and Jersey (Martin & Bray, 2015) had horrific, unacceptable, systematic child abuse, as did the USA (Frawley-O'Dea & Goldner, 2007). It is unclear that islandness, or lack thereof, must consistently affect health, social ills, and resilience, or lack thereof.

When an island culture has developed based on islandness characteristics and an island people thrives from it, then it could support resilience. Conversely, if factors such as colonialism, postcolonialism, or corruption intercede, then islandness might undermine resilience, such as for Haiti (Mika, 2019) and the Pacific (Dye et al., 2018). Similarly, people (islanders or not) who are used to extensive social networks, frequent travel, and widespread connectivity might react adversely when those are suddenly removed without much choice. This aspect of choice could be key for resilience: being able to control one's own circumstances and having options to alter them. The connection between resilience and islandness characteristics is not so much through island

life or islanded life such as lockdown — or the opposites — but is about having the control, resources, and opportunities to make one's own decisions regarding how islanded one lives, whether or not on an island. This point applies to individuals as well as collectives, such as governments and businesses.

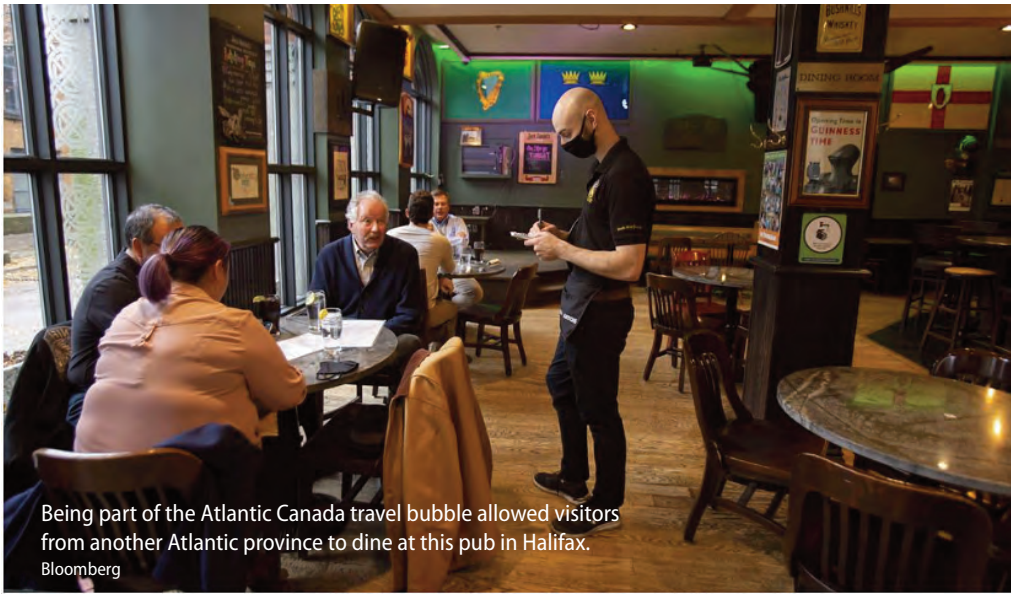
BUILDING AND WRECKING RESILIENCE

Having options and opportunities might present a crux of the meaning of pandemic and post-pandemic resilience for islands and islanders. As is already known from the multiple definitions of resilience and the multiple approaches to resilience thinking, resilience in and of itself is not necessarily advantageous or disadvantageous due to differing interpretations and characterizations. The same is true of islandness. What do the pandemic and responses to it mean for resilience and islandness during and after the pandemic?

THE CONNECTION BETWEEN resilience and islandness characteristics is not so much through island life or islanded life such as lockdown — or the opposites — but is about having the control, resources, and opportunities to make one's own decisions regarding how islanded one lives, whether or not on an island.

As noted in the previous section, one major response to the pandemic was curtailing travel. Restrictions were imposed at the local level, such as the second national lockdown in Israel starting on 18 September 2020 and in France starting on 30 October 2020, each requiring people to stay within one kilometre of their home, with many exceptions. Other travel constraints were enforced regionally and internationally, including across subnational island jurisdictions.

Canada implemented strict entry requirements on 18 March 2020 so that only people permitted to live in Canada could come to the country, but exemptions included French citizens of St. Pierre et Miquelon. Provinces including Prince Edward Island enforced their own restrictions for people travelling internally within Canada. Prince Edward Island then became part of an Atlantic Canada travel bubble with three other provinces. From 3 July until 23 November 2020, travel for residents of these provinces was permitted within and among the bubble without quarantine or isolation upon arrival. Some of the UK's Channel Islands took an analogous approach from June 2020, permitting travel within the "Bailiwick Bubble" comprising the islands of Alderney, Guernsey, Herm, and Sark. Australia has had strict entry requirements, while its states and territories, including the island state of Tasmania, had their own rules for arriving. Island countries such as New Zealand and Seychelles quickly controlled their air and maritime space to deny landing rights to craft, stopping many people from entering while quarantining most of those permitted to arrive. Non-island countries such as Thailand and Vietnam implemented similar measures.



Being part of the Atlantic Canada travel bubble allowed visitors from another Atlantic province to dine at this pub in Halifax.
Bloomberg

In effect, countries and sub-national jurisdictions islanded themselves, using islandness-based actions to prevent a mass influx of potentially infected people and to control the quarantine or isolation of people permitted into the country. Islandness and resilience coincided by reducing infection rates and deaths, yet this approach was not confined to islands. Jurisdictions aimed for resilience to infection and for resilience to lockdown measures, so that livelihoods based on local activities suffer much less, although still being harmed by the lack of international physical connections.

This latter point demonstrates that the same islandness-based action (whether or not taken for an island) supporting aspects of resilience simultaneously undermines aspects of resilience. Tourism and business travel has long been the lifeblood of many of the locations which were able to open internally, i.e., without lockdown restrictions, during the COVID-19 pandemic. Discussions emerged for these islands and non-islands about reviving travel to and from the outside (e.g., Yeh, 2020). For islands, a major component of travel in and out is for islanders themselves, leaving for education, livelihoods, and healthcare, while returning to visit family, to engage with and reaffirm land tenure systems, and to remember their home (King, 2009; King & Connell, 1999; Randall et al., 2014; Thomas-Hope, 1980). Cutting off this flow both ways inhibits island resilience through reducing life opportunities and connections to island homes. While remittances would typically be expected to offset some such difficulties by retaining connections with the island homes and supporting those remaining at home, projections are that the global livelihoods situation due to the pandemic means a substantial decrease in remittances (Murakami et al., 2020; Noy et al., 2020). In fact, Piteli et al. (2021) summarize analyses explaining that 2020 is expected to present the largest recorded decrease in international remittances.

Yet, many islands have been creative about building resilience during the COVID-19 pandemic in order to segue into a post-pandemic world. In July 2020, Barbados launched its Welcome Stamp Visa, offering a quick application for living and working in the country for up to twelve months (renewable) without paying Barbados income tax. The perks offered are stated to be good healthcare and internet, as well as no COVID-19 deaths since May 2020. This idea of "work from home" from anywhere in the world brings income, people, and entrepreneurship to the island, building resilience during the pandemic and setting the stage for establishing post-pandemic resilience. Some people working from the islands during the pandemic will likely remain there more longer-term, helping to build the society. Islands, though, have experienced some negative impacts from an influx of comparatively affluent migrants, through driving up prices for everyone and pricing locals out of the housing market (Baldacchino, 2018). Those who do not stay after the pandemic might contribute to an outflux of income and a glut of property on the market. Yet, the presumption is that visitors will start returning after the pandemic — especially since the international tourism industry is looking at major changes post-pandemic, but is not giving up entirely (Benjamin et al., 2020) — possibly balancing some of those who leave.

An open question regarding the remote working visa is monitoring the work being done, in terms of quality as well as type of work. Online businesses can lead to "dark entrepreneurship" (e.g., Bakker, 2012) for which the work has dubious ethics. While taking money for products or services which were never intended to be delivered would be fraud, and is banned in many countries, plenty of options exist to slip through legal gaps. Pre-pandemic, numerous island jurisdictions were embroiled in the blurry zone between creative entrepreneurship and dark entrepreneurship for many income-generating activities not requiring face-to-face contact, including selling votes in international venues such as the International Whaling Commission (Strand & Tuman, 2012); selling citizenship (van Fossen, 2018); hosting gambling and virtual currency websites (Connell, 2014; Williams et al., 2012); and flags of convenience for maritime vessels (Barton, 1999; Gay, 2014). Dark entrepreneurship is not exclusive to remote working, with face-to-face categories for islands including migrant detention (e.g., Australia using Nauru, Christmas Island, and Manus Island; Mares, 2016); extrajudicial proceedings against alleged criminals (e.g., the USA using Guantánamo Bay, Cuba for torturing terrorist suspects; Aggarwal, 2020); and quarantine for COVID-19 and other diseases (Baldacchino, 2020).

These activities are also not exclusive to islands. Panama and Liberia are known as flags-of-convenience (Barton, 1999) while Canada and Hungary are among the countries providing citizenship advantages in return for in-country investment (Surak, 2016). The link between islandness and resilience thus has nebulous dimensions regarding remote working, entrepreneurship, and dark entrepreneurship. The latter builds resilience for the host through bringing in income while potentially wrecking others' resilience through the unethical activities, although islandness is not necessarily a factor since any jurisdiction can choose to operate similarly.

Any jurisdiction could operate to increase or decrease certain aspects of islandness to build pandemic-related resilience. Restricting travel to and from a location has been shown to be achievable, even for non-sovereign locations and non-island locations. Such actions increase physical isolation and marginalization, which can increase togetherness and tightness of communities. There is no consensus that these traits inevitably represent islandness, but it is important to consider if it is easier and more appropriate for islands than non-islands to pivot in these directions when pandemic-type threats emerge. Some discussions suggest "yes" (Boyd & Wilson, 2020; Turchin & Green, 2019), although systematic comparative studies with non-islands remain on the research agenda. Conversely, nearly immediate air travel restrictions were implemented for the USA on 11 September 2001 following terrorist attacks in the northeast (Freni, 2003) and across most of the continent of Europe for episodes during April and May 2010 when the Icelandic volcano Eyjafjallajökull erupted, spewing ash into the atmosphere and making it dangerous for aircraft (Alexander, 2013). The latter is an example of an island-based hazard interrupting a continent. In both cases, land and water transport remained viable, but countries could have closed those entry modes if they wished, as demonstrated by the closure of land and water borders during the COVID-19 pandemic (Chaudhry et al., 2020).

ANY JURISDICTION COULD operate to increase or decrease certain aspects of islandness to build pandemic-related resilience.

Many assumptions pervade regarding borders, suggesting the need for deeper investigations and more comparative analyses. The ability to monitor borders and identify incursions across them is assumed to be easier for airspace than for land and sea areas. Small aerial vehicles (drones) undermine this assumption, especially considering the zones where air and land borders overlap, such as flying a drone through a forest or a mountain pass. International travel without detection does seem to be harder to complete via air than via land or water, although much of this difference is due to the security requirements for flying compared to using one's own car or boat. Nor have the security requirements for air travel stopped human trafficking via commercial flights (Price & Forrest, 2016), hiring a private aircraft to border-hop for delivering disaster

relief supplies (Harris, 2004), or using airdrops and private airstrips to smuggle drugs between countries (Rodgers, 1991). No claim is made that island borders are the same as non-island borders or that traversing borders by air has the same difficulty as traversing borders by land or water. The statement is that the evidence base is limited and conclusions tend to be based on assumptions rather than peer-reviewed research.

Irrespective, borders are accepted as being porous (Howell et al., 2018) and the more distant a piece of land is from another piece of land, and the smaller the piece of land, the easier it can perhaps be to monitor attempted entries. New Zealand, without land borders and typically days away from Australia by boat (precluding the smallest craft from trying to cross), can monitor attempted entries much more readily than Singapore, which is in sight of two other countries and which has two causeways connecting to Malaysia. Many inhabited Pacific islands are small enough that most or all of the coastline could be regularly monitored and any new arrivals would soon be observed.

AS PANDEMICS WAX AND WANE, along with other border topics, resilience through assumed islandness characteristics might mean developing a wide repertoire of approaches which can be started, stopped, and altered at short notice.

Rapidly shifting levels of border control, though, feed back to the point about both making and breaking resilience. Closing borders increases resilience to infectious disease, while decreasing livelihoods and socializing resilience if people are used to livelihoods and socializing with face-to-face connectivity. Achieving a balance between connectivity and border control is a common debate in governance and sovereignty (e.g., Salter, 2008), although often missing is detailed discussion regarding the speed of adjustments to changing local, national, or global situations. As pandemics — COVID-19 and others — wax and wane, along with other border topics — of which migration, people smuggling, and drug smuggling are prominent (Howell et al., 2018; Price & Forrest, 2016; Salter, 2008) — resilience through assumed islandness characteristics might mean developing a wide repertoire of approaches which can be started, stopped, and altered at short notice.

That is, flexibility — and thus, as per the previous section, having choices — becomes a predominant part of building resilience, seeking to balance isolation and openness in order to balance disease-free resilience with livelihoods and socializing resilience. This approach is very much about recognizing that resilience is a long-term societal process balancing a variety of needs, not a directly measurable one-off snapshot, as has long been lessons provided by island examples (Chandler & Pugh, 2020; Farhan & Lim, 2011; Lewis, 2009, 2013, 2017). Resilience means continual action, examining what different sectors of society do to other sectors and why, while understanding complementarities and tensions between different resilience-related interests and different types of resilience, such as avoiding disease, supporting livelihoods, and socializing. Part of this processual approach is the relationality and dynamicity of islands and of

resilience, challenging assumptions that resilience must always be positive and desirable (Pugh, 2014, 2018). Flexibility should not compromise the need to be vigilant regarding the dark sides of livelihoods for building resilience, which then wreck other aspects of resilience. Flexibility, choices, and resources to have flexibility and to implement choices might subsequently become part of the resilience–islandness interaction and, hence, part of the considerations for creating a desirable post-pandemic future.

A POST-PANDEMIC FUTURE THROUGH ISLANDNESS

When considering a post-pandemic future with islandness, and particularly through islandness, the challenges of balancing different types of resilience while balancing opportunities and ethics lead to the questions: (i) Resilience to what? and (ii) How to ensure that islandness becomes more of the solution than the problem? For the first question, one aim could potentially be to use islandness to create resilience against the idea of returning to a pre-existing state, against the domination of ecological ideas in expressing resilience, against darker manifestations of resilient but unethical livelihoods, and against assumptions that characteristics such as smallness and isolation are the antithesis of resilience. For the second question, there is much talk of aiming to establish a "new normal" for a post-pandemic world, which might or might not incorporate aspects of islandness. Irrespective, a "new normal" entails accepting some form of "normal" without it being clear who would set or monitor this standard — or whether everyone would have the same "new normal". With change of all forms being typical, as epitomized by islands, is a mode of stable "normality" really achievable or advisable?

A "NEW NORMAL" ENTAILS accepting some form of "normal" without it being clear who would set or monitor this standard — or whether everyone would have the same "new normal".

No claim is made that island lessons are, could be, or should be panaceas. A wide variety of similarly positive and negative examples is evident from islands and non-islands. Resilience–islandness explorations and interactions have plenty to offer for challenging trite phrases and driving down into the key processes which caused the problems being witnessed — and for ensuring that long-term processes can be used to generate solutions.

For pandemics, humans exploiting nature without regard to safe and healthy interactions have led to numerous species-jumping viruses and then epidemics and pandemics, including HIV, Ebola, swine flu, and previous coronaviruses causing Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) (Weber et al., 2016). These patterns continued, leading to COVID-19. Meanwhile, much island studies literature has always highlighted lessons from island societies that

Thailand began a COVID-19 testing blitz after its biggest ever surge in cases in December 2020. Migrant workers were heavily affected by an outbreak centred on Central Shrimp Market, around 45 km from Bangkok.
Reuters

humanity and the environment are inextricably intertwined and interconnected, with many possible ways of using nature for living and livelihoods without exploiting it, ruining it, or pursuing destructive practices (e.g., Brookfield et al., 1977). Less resource-intensive ways of living do not necessarily mean a lower quality of life, less equity, less opportunity, or fewer choices (Kallis, 2018; Raworth, 2017; Schumacher, 1973; Washington & Twomey, 2016). Achieving post-pandemic resilience should be about changing the normality of the pandemic-causing factors, for which islandness can assist.

Ultimately, resilience for pandemics and other concerns means a process of always monitoring and improving long-term societal conditions, which can include islandness, rather than focusing on a specific microbe's traits. Microorganisms with pandemic potential are inevitable, so society must be ready to deal with a variety of possible contagions (among other challenges). Yet, many countries do not maintain the local presence of, or accessibility to, health professionals, equipment, or facilities to deal with regular health needs. This chronic crisis of insufficient healthcare on a regular basis inevitably invites acute health-related crises such as outbreaks. Within this context, the poor state of health systems for some islands is continually explained as being a difficulty for island life (Binns et al., 2010; Guan & McElroy, 2012; Setoya & Kestel, 2018). Consequently, islandness seems to reduce resilience with respect to health, yet has advantages for increasing resilience with respect to health-related crises such as outbreaks. Building a post-pandemic future should mean leveraging islandness, for islands and non-islands alike, to retain and enhance advantages while identifying and

overcoming disadvantages. Both activities must continue in times of rapid change, such as a new pathogen emerging which could entail sudden border closures alongside other lockdown measures.

RESILIENCE FOR ISLANDNESS and islandness for resilience together mean developing, accepting, and having available a wide array of actions and techniques, with rapid flexibility, taking advantage of, rather than inhibiting, islandness characteristics.

No single approach works for everyone and everywhere, whether an approach is a "normal" or not. A diverse repertoire is required, with this repertoire representing resilience. No assumptions can or should be made of a continually or increasingly physically connected world. As pandemics, volcanic eruptions, pollution, and other difficulties ebb and flow, so too will interest and availability of travel for people, goods, and services. Resilience for islandness and islandness for resilience together mean developing, accepting, and having available a wide array of actions and techniques, with rapid flexibility, taking advantage of, rather than inhibiting, islandness characteristics.

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Limassol Marina, Cyprus. Cyprus recognizes that health is a necessary component for socio-economic stability, and an essential aspect of sustainable development.

5

Islands and the 2030 Sustainable Development Goals:

Learning lessons to transform our world — A health perspective

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ABSTRACT

In 2015, global leaders adopted the resolution, Transforming our world: The 2030 Agenda for sustainable development, *driven by the Sustainable Development Goals (SDGs). Most island states, and some island jurisdictions, seized the opportunity to use these goals to 'transform' their islands' development process. This chapter highlights some key lessons of*

islands on their journey of development transformation using SDG3 — good health and well-being — *and its interactions with other health-related SDGs (HRSDGs). Firstly, the genesis and intent of the 2030 Sustainable Development Agenda is introduced. The call for an integrated approach to implementing the SDGs is highlighted and the Six Transformations Framework (STF) is proffered as a framework for analysis. A systematic review of ten island states' Voluntary National Reviews (VNRs) and, for comparative purposes, the SDG-related plans of two island territories, is conducted and analyzed using the 'health, well-being, and demography' Transformation of the STF. The overall analysis reveals lessons, including in public health services and innovation, from an integrated or holistic manner congruent with the intent of the 2030 Agenda. The chapter concludes with some suggestions on how island policy makers can achieve deeper interactions with the SDGs while establishing policy, goal-based development, and improved stakeholder engagement in the era of COVID-19.*

INTRODUCTION: THE SUSTAINABLE DEVELOPMENT GOALS, INTERACTIONS, AND TRANSFORMATIONS

In 2015, global leaders adopted the resolution *Transforming our World: The 2030 Agenda for Sustainable Development* (United Nations [UN], 2015), driven by the Sustainable Development Goals (SDGs) (see Appendix A; UN, n.d.). According to the United Nations (2015, p. 3), "the 17 Sustainable Development Goals and 169 targets … are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental." Moreover, heads of states have "set a supremely ambitious and transformational vision," that "envisage[s] a world free of poverty, hunger, disease and want, where all life can thrive" (UN, 2015, p. 5). This new global agenda is focused on a holistic approach to transform our world and local societies.

The SDGs "are intended to be universal, in the sense of embodying a universally shared common global vision of progress towards a safe, just and sustainable space for all human beings to thrive on the planet" (Osborn et al., 2015, p. 2). However, global attempts at implementing global goals such as the Millennium Development Goals (MDGs), which expired in 2015, have met limited success and unintended outcomes (Sheppard et al., 2015). Recognizing the shortcomings of the MDGs, the United Nations (UN, 2013, p. iii) argued that "a new development agenda should carry forward … the best of the MDGs." However, Griggs et al. (2013, p. 305) contended that a mere extension of the MDGs will be insufficient in the current context of humans' transformation of "the planet in ways that could undermine development gains." Moreover, Eisenmenger et al. (2020) noted that the economic growth imperative of the SDGs has overshadowed the focus on "sustainable resource use." Further, Stafford-Smith (2014, p. 281) pointed out that the SDGs have moved "the strategy from a list of priorities to an

unwieldy and impractical catch-all." He further argued that, "most importantly, the goals must work towards a common purpose, thus avoiding … perceived trade-offs between securing the long-term stability and health of the Earth system and securing water, food and energy security in the short term" (Stafford-Smith, 2014, p. 281). From this perspective, recent research has focused on finding synergies, while addressing trade-offs, leading to analyses of how the SDGs interact and integrate (Alcamo et al., 2020; Griggs et al., 2014; International Science Council, 2017; Nilsson et al., 2016; Prajal et al., 2017; Spangenberg, 2016; Weitz et al., 2018). This chapter focuses on SDG3 — *good health and well-being* — and, in this regard, Asma et al. (2020, p. 240) identified twelve "health-related SDGs (HRSDGs)" that interact with SDG3 to ensure healthy lives and promote well-being for all ages (see Appendix B; UN, n.d.).

FROM THIS PERSPECTIVE, recent research has focused on finding synergies, while addressing trade-offs, leading to analyses of how the SDGs interact and integrate.

Sachs and colleagues (2019) moved beyond merely analyzing interactions by proposing six Transformations that might be able to provide a deeper (yet less complex) consideration of the interactions and relationships among SDGs. According to Sachs et al. (2019), the proposed six Transformations (see Table 5.1), referred to in this chapter as the Six Transformations Framework (STF), are intended to focus on how the implementation of the SDGs must be organized; a gap that exists with the extant research on interactions. In this regard, Sachs et al. (2019) concluded that the six Transformations organize the SDG interventions into discrete but interacting pillars.

In this chapter, therefore, the STF is used to analyse the interactions and relationships of SDG3 with the HRSDGs and the Transformations presented in Table 5.1 (next page). An analysis of the Voluntary National Review (VNR) reports of ten island states and similar reports developed by two subnational island jurisdictions (SNIJs), Guam and Aruba, is conducted. The argument is presented in the following sections: the first considers the SDGs in the context of island jurisdictions, introduces the VNRs, and describes the rationale for selecting the particular island cases. The ensuing results section presents the findings from the reviews. In the discussion section, some key lessons from the findings that demonstrate the relational and transformative nature of the SDGs in the context of the STF are presented. The paper ends by presenting suggestions for improving the relational approach for further implementing the SDGs and in the context of COVID-19. The main points are summarized in the conclusion.

TABLE 5.1: **The Six Transformations of the Sustainable Development Goals**

Transformation	SDG Interventions	Intermediate Outputs
1. Education, gender, and inequality	Early childhood development Primary and secondary education Vocational training and higher education Social protection system and labour standards Research and development	Education and human capital Decent work and income support to vulnerable groups Innovation
2. Health, well-being, and demography	Universal health coverage Healthy behaviours and social determinants of all health and well-being	Public health services
3. Energy, decarbonization, and sustainable industry	Access to clean energy Zero carbon electricity generation Curbing pollution	Energy access for all Energy decarbonization Clean air and water
4. Sustainable food, land, water, and oceans	Efficient and resilient agricultural systems and fisheries that support healthy diets and farm livelihoods Healthy food promotion and regulation	Sustainable land use, oceans, and food systems
5. Sustainable cities and communities	Urban access to water, sanitation, and waste management	Transport, water, and sanitation infrastructure
6. Digital revolutions for sustainable development	Universal broadband and information technology infrastructure	Digital technologies and infrastructure

Source: Author's adaptation of the Six Transformation Framework from Sachs et al. (2019).

ISLANDS AND THE SUSTAINABLE DEVELOPMENT GOALS

At the United Nations Sustainable Development Summit held in New York in 2015, the leaders of many island states delivered passionate and compelling speeches regarding adopting the Sustainable Development Agenda 2030. Subsequently, Sachs and colleagues (2020) have been preparing the *Sustainable Development Report*, which presents a dashboard of how countries are progressing towards meeting each of the SDGs. The report uses data from the World Bank, for example, as well as from "non-official sources" (Sachs et al., 2020, p. 23) such as research institutes and non-governmental organizations to create a composite SDG score that can be used to gauge how jurisdictions are achieving the SDGs. Each of the SDGs are weighed equally and "the score signifies a country's position between the worst (0) and the best or target (100) outcomes" (Sachs et al., 2020, p. 25). The SDG scores and the rankings of all island states in the report are shown in Table 5.2. To illustrate the utility of the SDGs score, that Cyprus has an overall score of 75, for example, "suggest[s] that the country is on average [75]% of the way to the best possible outcome across the 17 SDGs" (Sachs et al., 2020, p. 25). According to the *Sustainable Development Report*, the lack of data in many jurisdictions hindered the assessment (Sachs et al., 2020). However, these rankings do provide an overview of the relative success of islands in meeting the SDGs. For comparative purposes, the SDG scores of the metropole associated with the two island territories are used as proxies and are shown in Table 5.2 (next page).

All countries are provided with the opportunity to conduct a self-assessment on how they are implementing and achieving the SDGs, and these assessments are reported in their VNRs. In essence, these reviews provide a comprehensive picture at one point in time on how countries are progressing with the implementation of the SDGs. In other words, it allows countries to gauge their progress on achieving their local goals enshrined in their national plans and, indirectly, the SDGs. According to the United Nations Department of Economic and Social Affairs (UN DESA; 2019, p. 2), "the VNRs are intended to track progress in implementing the 2030 Agenda, including the SDGs and targets in all countries, in a manner that respects their universal and integrated nature and all dimensions of sustainable development." Moreover, and in accordance with the requirements for review contained in the outcome document on the adoption of the SDGs (UN DESA, 2019, p. 2), "reviews will be substantive and knowledge based, as well as open, inclusive, participatory and transparent for all people, with a particular focus on the poorest, most vulnerable and those further behind."

TABLE 5.2: **Island States Ranked by SDG Scores**

Island State	Island Ranking	World Ranking	SDG Score
United Kingdom	1	13	79.6
Ireland	2	14	79.4
New Zealand	3/4 (Tied)	16/17 (Tied)	79.2
Japan	3/4 (Tied)	16/17 (Tied)	79.2
Iceland	5	26	77.5
Malta	6	32	76.0
Cyprus	7	34	75.2
Cuba	8	65	72.6
Dominican Republic	9	73	70.2
Fiji	10	74	69.9
Bahrain	11	82	68.8
Jamaica	12	84	68.7
Barbados	13	87	68.3
Brunei Darussalam	14	88	68.2
Maldives	15	91	67.6
Cabo Verde	16	92	67.2
Singapore	17	93	67.0
Trinidad and Tobago	18	98	65.8
Philippines	19	99	65.5
Indonesia	20	101	65.3
Mauritius	21	108	63.8
São Tomé & Príncipe	22	115	62.6
Vanuatu	23	122	60.9
Comoros	24	146	83.1
Haiti	25/26 (Tied)	154/155 (Tied)	51.7
Papua New Guinea	25/26 (Tied)	154/155 (Tied)	51.7
Madagascar	27	161	49.1
Aruba (Netherlands)	n/a	9	80.4
Guam (USA)	n/a	31	76.4

NOTES: Island rankings were determined by the author. Metropole scores were used as proxies for the two island territories (Aruba and Guam). Green highlights are the islands selected for review in this chapter.
Source: Compiled based on data from Sachs et al. (2020).

SELECTION OF CASE STUDY ISLANDS

To select a cross-section of island states, four measurements were chosen as suggested indicators of the country's economic (GDP), social (life expectancy at birth), and environmental (population, population density) status (Randall & Brimacombe, 2020; see Table 5.3, next page). Although one might question the selection of these indicators, they have the advantages of being readily available for all jurisdictions and understood by most people. Island states with the highest and lowest GDP/capita were selected from each of the continental regions. The SDG scores from Sachs and colleagues' (2020) report, as noted in Table 5.2, were then highlighted in green. The final criterion used for selection was the availability of a VNR (in English) for each of the states. Since VNRs are rarely prepared for subnational island jurisdictions, they were formally omitted from the selection process. However, several of these SNIJs have developed sustainable development roadmaps and action plans. Given the importance of many of these islands for overall goals of sustainability, two such SNIJs (Aruba and Guam) are included in this analysis.

The island states selected represent, to some extent, the heterogeneity of islands. In this regard, the population density, which features in debates on island development (e.g., Baldacchino, 2010; Randall & Brimacombe, 2020), ranged from 7,953 persons/km^2 to 24 persons/km^2. Similarly, there was a wide range of GDP/capita. However, using the *World Bank Classification of Economies* (The World Bank Group, 2020), eight of the islands are classified as 'upper income' while four are in the 'upper/lower middle income' group: the classifications in which the majority of island states and territories belong. Relating to the SDG scores for island states, three rank at the top, three in the middle category, and one in the lowest grouping. There were no scores for the three remaining island states in the report.

TABLE 5.3: Proxy Indicators of Economic, Social, and Environmental Status of Islands

	Island state	GDP/capita (USD)	Population (Million)	Population density (per km^2)	Life expectancy at birth (years)
Asia	Singapore	94,100	6.209	7,953	85.5
	Timor-Leste	6,500	1.382	85	68.7
Europe	Cyprus	37,200	1.266	129	79.1
	Ireland	73,200	5.176	70	81.0
Africa	Cabo Verde	7,000	0.583	135	72.7
	Seychelles	29,200	0.096	210	75.2
Oceania	New Zealand	39,000	4.925	19	81.4
	Vanuatu	2,700	0.298	24	74.0
Caribbean/ Americas	Jamaica	9,200	2.808	271	74.5
	Bahamas, The	32,400	0.337	39	72.9
Island Territories	Aruba	37,500	0.119	663	76.0
	Guam	35,600	0.168	310	80.0

NOTE: Island states and territories selected by author for the study.

Sources: Randall & Brimacombe (2020); Central Intelligence Agency (2020); The World Bank (https://data.worldbank.org/indicator).

RESULTS FROM THE CASE STUDIES: A HEALTH PERSPECTIVE

For the purposes of this study, and given the theme of this volume, the analysis of these twelve island states and territories focuses on SDG3 (see Appendix B; UN, n.d.) and Transformation 2: 'Health, well-being, and demography' (see Table 5.1). An initial analysis of the global reports on how the data driven approach has ranked the 'status' and 'trend' of SDG3 in these islands is provided in Table 5.4. The *status/trend* column suggests that the majority of these islands have challenges with health, with only moderate improvements having been made over time. However, we should be cautious about drawing conclusions from this assessment, because only Vanuatu conducted an overall self-assessment of their progress with the SDGs, and reported steady progress on SDG3. A more comprehensive summary of the findings from the reviews of the countries' VNRs follows.

TABLE 5.4: **Overall Assessment of Status and Trend Regarding the SDGs**

Islands	Status/trend on SDG3[1]	Country's self-assessment of status/trend on SDG3[2]
Cabo Verde	Major challenges/moderately improving	No overall assessment
Cyprus	Challenges remain/moderately improving	No overall assessment
Ireland	Challenges remain/moderately improving	No overall assessment
Jamaica	Significant challenges/moderately improving	No overall assessment
The Bahamas	Significant challenges/moderately improving	No overall assessment
New Zealand	Challenges remain/moderately improving	No overall assessment
Singapore	Challenges remain/moderately improving	No overall assessment
Seychelles	No assessment	No overall assessment
Timor-Leste	No assessment	No overall assessment
Vanuatu	Major challenges/moderately improving	Steady progress

1 Compiled based on data from Sachs et al., 2020c.
2 Based on VNR Reports. 'No overall assessment' indicates that the country's VNR did not include an overall status or trend assessment.

Aruba

Aruba developed *A Roadmap for SDG Implementation* (Government of Aruba, 2018). According to the roadmap, 'youth empowerment, quality of life, and wellbeing' was identified "as one of nine accelerators ... to catalyze progress towards the SDGs" (Government of Aruba, 2018, p. 5). A number of challenges relating to health were identified, including "the need for increasing community health and wellbeing" and "lack of professional health capacity and a monolithic health care system" (Government of Aruba, 2018, p. 6). In this regard, a number of interventions were proffered, including an integrated approach on vulnerable groups, programs with a focus on NCDs, and improved mental and physical health (Government of Aruba, 2018, pp. 6-7).

The Bahamas

The Bahamas reported on some important challenges and opportunities relating to meeting SDG3, including the significant contribution of newborn and infant deaths to the 2016 mortality rate, and a high prevalence of non-communicable diseases (NCDs; due mainly to the changing demographics and lifestyles), also noting the urgent need to arrest the frequency of road accident fatalities (Government of The Bahamas, 2018, pp. 52-53). The report noted, however, that the incidence of tuberculosis has steadily declined since 1990 (Government of The Bahamas, 2018, p. 53). The country has introduced some key strategies, plans, and policies to address some of these issues, including a national health insurance plan for universal access to primary care, a national road safety strategy (which aims to reduce road fatalities), and a national multi-sectoral NCD strategy and plan "to halt and reverse the climbing NCD statistics" (Government of The Bahamas, 2018, pp. 54-55). The report further noted that some key challenges to implementing SDG3 included sustainable funding for the health care system, the high cost of healthy food, and a predominantly sedentary lifestyle for some residents (Government of The Bahamas, 2018, p. 57).

THE REPORT BY THE GOVERNment of The Bahamas (2018) noted that some key challenges to implementing SDG3 included sustainable funding for the health care system, the high cost of healthy food, and a predominantly sedentary lifestyle for some residents.

Cabo Verde

Cabo Verde's VNR (National Directorate for Planning, 2018, p. 46) reported that, in the health field, the country "has had a successful journey and has made great progress," particularly in terms of under-five and maternal mortality rates, and attributed this success to the "preventative aspect," especially the "high vaccination coverage of children." Another area of significant importance noted in the report was in the area of reproductive health, where investments in education have made significant impacts.

Cabo Verde also indicated that, due to its high vaccination coverage of children, it has avoided inequalities in the health care system. The VNR further noted that chronic diseases such as cardiovascular diseases and cancers, which are the leading causes of death, pose a cost challenge to the country due to the "prolonged treatment" (National Directorate for Planning, 2018, p. 47) needed for these diseases. Another challenge reported is that of dealing with vector-borne diseases and the emergence of malaria in 2017. Recognizing the importance of health, the government of Cabo Verde pledged health sector reform that ensures "the availability of health care for all" (National Directorate for Planning, 2018, p. 48).

Cyprus

Cyprus attributes its success in meeting SDG3 to achieving a number of the targets in full, including maternal mortality ratio (SDG 3.1.1) and under-five mortality rate (SDG 3.2.1), and having a number of policies and strategies in place to aid in their implementation (Republic of Cyprus, 2017). Additionally, related to Target 3.7 and Target 3.3, respectively, the country has strategic plans on sexual and reproductive health and the control of HIV/AIDS (Republic of Cyprus, 2017, p. 19). However, the report further noted that "despite high scores in the majority of SDG3 targets, … a major challenge is the absence of Universal Health Coverage" (Republic of Cyprus, 2017, p. 18), an issue which the country is addressing through its legal system. The Republic of Cyprus recognizes that health is a necessary component for socio-economic stability, and an essential aspect of sustainable development (SDGs 1, 3, and 5).

CYPRUS ATTRIBUTES ITS SUCCESS in meeting SDG3 to achieving a number of the targets in full, including maternal mortality ratio (SDG 3.1.1) and under-five mortality rate (SDG 3.2.1), and having a number of policies and strategies in place to aid in their implementation.

Guam

One of the five categories of action identified in *The Guam Green Growth Plan* (University of Guam and the Office of the Governor of Guam [UG/OGG], 2020, p. 5) was "healthy and prosperous communities," which focuses on SDGs 1,2,3, and 9 (UG/OGG, 2020, p. 7). In this regard, some key proposed actions were "increasing food security and accessibility to local nutritious food" and "creating an environment for innovative cottage industries" (UG/OGG, 2020, p. 7) that will assist with reducing reliance on imports and waste generation. Guam further recognizes that "achieving sustainable development will be impossible without a healthy community that can meet its basic needs" (UG/OGG, 2020, p. 7).

Ireland

Ireland ranks high on the SDG score (see Table 5.2) but, according to information in Table 5.4, the country has challenges with meeting SDG3. However, comparing itself to the EU indicators, the VNR identified several areas in which it was doing well. For example, the death rate due to chronic disease was "below the EU average in 2015 for both females and males," (Government of Ireland, 2018, p. 31) and life expectancies for both females and males at birth were above the EU average. However, the country noted that "health and social care services continue to face demographic pressures and a rising burden of chronic diseases" (Government of Ireland, 2018, p. 31). These "demographic pressures" and the "changing nature and complexity of care required" (Government of Ireland, 2018, p. 31) are placing pressures on the system. The report further indicated under its 'Healthy Ireland' framework that a number of targets, such as SDG 3.3 and 3.4, are addressed "to improve the health and well-being of the people of Ireland" (Government of Ireland, 2018, p. 32).

Jamaica

'Significant challenges, but moderately improving' is how Jamaica's status and trend are described in Table 5.4. However, according to the VNR (Planning Institute of Jamaica, 2018, p. 28), Jamaica is at an "advanced stage of the demographic transition," characterized by a decline in the 0-14 age group and an increase in both the working age population and dependent elderly age groups, thus affecting "social and economic development particularly as it relates to provision of and access to health" (Planning Institute of Jamaica, 2018, p. 28). Additionally, the country reported on some significant activities that have occurred in the health sector, vis-à-vis the achievement of universal health coverage and health financing, reduction of maternal and child mortality, and promotion of healthy lifestyle practices (Planning Institute of Jamaica, 2018, pp. 29-30). However, some key challenges were noted, including the lack of significant resources in high dependency care for newborns (as well as external issues, e.g., indirect maternal deaths from complications of chronic diseases), aged infrastructure, and strengthening of rehabilitation services for vulnerable persons (Planning Institute of Jamaica, 2018, p. 33).

New Zealand

New Zealand ranks third in the SDGs scores (see Table 5.2), but still has challenges with SDG3 (see Table 5.4). However, as a high-income country, New Zealand claimed to have achieved SDG3 targets at an aggregate level and is well-placed internationally (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 31). The country also recognized the synergistic nature of the SDGs, noting that the achievement of health outcomes contributes to achieving other goals. The national VNR also noted that "achieving good health is reliant on social, cultural and economic factors enshrined in

many of the SDGs" (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 31). In this regard, the report further noted that "initiatives to reduce greenhouse gas emissions and improve individual health by some of its national health boards have been successful" (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 34). Four key priorities of the country are noted to be in alignment with SDG3: achieving equity, child well-being, mental health, and primary health care (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 31). However, New Zealand recognizes two major challenges to achieving the goal: (1) the "strong inequalities [that] still exist between sub-populations," (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 31) and (2) the achievement of universal health care.

NEW ZEALAND HAS recognized the synergistic nature of the SDGs, noting that the achievement of health outcomes contributes to achieving other goals.

Seychelles

Linking health to economic growth, the Seychelles VNR report notes that "as the Seychelles has made great strides in economic development, including achieving high-income status, the country has also acquired better health status" (Economic Planning Department, 2020, p. 30). However, a few challenges were noted: despite the fact that access to sexual reproductive health services is widely available, the adult fertility rate remains high; there are signs of poor quality in the delivery of health services; and there is a shift from communicable diseases to non-communicable diseases (Economic Planning Department, 2020, p. 32). The Seychelles also recognized the need to address the social determinants of health, and noted that some of these are addressed through policy, "such as providing universal education, maintaining low unemployment and empowering youth" (Economic Planning Department, 2020, p. 32). The report acknowledged, however, that critical gaps such as the "urgent need to improve collection, analysis, sharing and use of data for health" must be addressed (Economic Planning Department, 2020, p. 33).

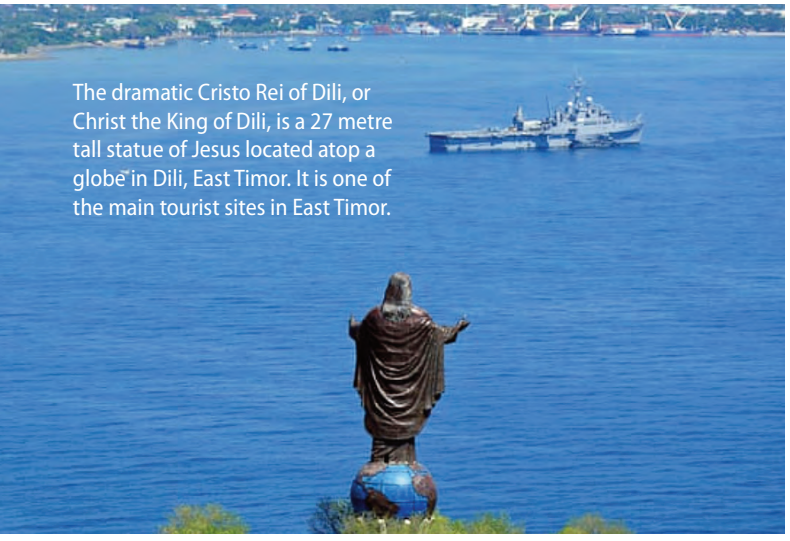
Singapore

Singapore ranks at the top of all the indicators in Table 5.3 and, maybe not surprisingly, declared in the VNR report (Ministry of Foreign Affairs, 2018, p. 10) that "Singaporeans are living longer in full health than people of other nationalities," which they attribute to "the accessibility of quality and affordable basic medical services for all, the active promotion of preventative health programmes and medicine, high standards of living, clean water, hygiene, and a culture of healthy living." In this regard, three bright spots in the health system were highlighted: (1) accessible and improved health care, (2) control of non-communicable diseases, and (3) control of communicable diseases (Ministry of Foreign Affairs, 2018, pp. 10-11). In the latter, it is noted that Singapore

has "enhanced its surveillance and response on disease outbreak, drawing on its experiences with SARS and H1N1 outbreaks in 2003 and 2009, respectively" (Ministry of Foreign Affairs, 2018, p. 11). The report noted the challenge in the future of meeting health care cost as the population ages.

Timor-Leste

Timor-Leste reported significant progress with improving child and maternal health, attributed partly to "investment in the health workforce and system" (Government of Timor-Leste, 2019, pp. 55, 58). The report also noted that the decline in fertility rates was significant and that the country was on track to eliminate malaria by 2021 (Government of Timor-Leste, 2019, p. 58). A number of challenges were noted, including increases in the number of HIV/AID cases, a considerable increase in the number of tuberculosis cases, and the fact that 45% of deaths are attributed to non-communicable dieases, "highlighting the importance of looking ahead to future healty lifestyle challenges" (Government of Timor-Leste, 2019, pp. 58-59).



The dramatic Cristo Rei of Dili, or Christ the King of Dili, is a 27 metre tall statue of Jesus located atop a globe in Dili, East Timor. It is one of the main tourist sites in East Timor.

Vanuatu

As noted in Table 5.4, Vanuatu is the only island country that has rated itself on achieving each of the SDGs and, in this regard, claimed to be making "steady progress" (Republic of Vanuatu, 2019, p. 23) with SDG3. Vanuatu used its VNR to report mainly on the progress with its National Plan and alignment with the SDGs, and focused mainly on targets. For example, the national maternal mortality ratio target (SDG Target 3.1, indicator 3.1.1) is set at less than 70 deaths/100,000, but in 2017 it was 122 deaths/100,000 (Republic of Vanuatu, 2019, p. 25). Secondly, the country is focused on targets on three non-communicable diseases: diabetes, tuberculosis, and malaria (SDG Target 3.3, indicators 3.3.1-4) (Republic of Vanuatu, 2019, p. 25). The country also has a focus on the promotion of healthy lifestyles and the building of health sector capacity and systems to ensure the delivery of efficient and effective services (SDG Target 3.c) (Republic of Vanuatu, 2019, p. 26).

DISCUSSION: TRANSFORMATION LESSONS

In this section, we re-examine these islands in the context of the STF, as shown in Tables 5.5 and 5.6 (following pages). The pivotal Transformation pillar of *health, well-being, and demography* is intended to focus on two intermediary interventions: *universal health coverage and healthy behaviors* and *social determinants of all health and well-being* (see Table 5.1), which may be achieved through the intermediate output of *public health services*. Tables 5.5 and 5.6 show all of the relevant intermediary outputs for the six Transformations and their relations to the SDGs. The numbers in the metrics of both tables indicate the strength of relationship between the SDGs and the outputs. In this regard, 3 means 'directly targets the SDG'; 2 'reinforces the SDG'; 1 denotes 'enabling the SDG'; and the value 0 suggests no interaction at all with the SDG (Sachs et al., 2019, p. 805). Table 5.5 demonstrates how the outputs on the 'health' Transformation relate to all of the other SDGs, while Table 5.6 suggests how SDG3 interacts with the other five Transformations. For example, as shown in Table 5.5, 'public health services' relates directly to SDG2 (*zero hunger*) and SDG5 (*gender equality*), all denoted by '3'. Alternatively, when assessing Table 5.6, SDG3 relates directly to intermediate outputs on 'clean air and water' and 'sustainable land use, oceans, and food systems'. Analysis of the case study islands focuses on the two intermediate outputs: 'innovations' and 'public health services'. However, the other outputs with a direct and sometimes enabling relationship as identified in the case countries' VNRs under SDG3 are also featured. The island case studies provide several key lessons on SDG interactions and their relationships in the STF.

Public health services

First, the need to provide accessible and high-quality public health services has been recognized by a number of these case study islands. For example, Cabo Verde, a lower-middle income economy, has pledged health sector reform that ensures availability, while the high-income countries of New Zealand and Cyprus have also recognized the lack of achievement of universal health care as a major challenge. Universal health care can assist with the improvement of health services. Moreover, some of the islands, such as The Bahamas and Singapore, have noted the future cost challenges for the health system associated with changing demographics and the prevalence of NCDs. Aruba identified the need to focus on NCDs and "lack of professional capacity and a monolithic health care system" (Government of Aruba, 2018, p. 6) as a challenge. In this regard, islands such as Cabo Verde, Vanuatu, and Aruba have pledged to provide the necessary improvements to supply high-quality health services. Despite the challenges, some bright spots are being reported. For example, high-income Singapore attributed the long life of its citizens to "quality and affordable basic medical services for all" (Ministry of Foreign Affairs, 2018, p. 10). Timor-Leste, a lower-middle income economy,

has also reported that investments in its health care system have improved child and mental health. Finally, upper-middle income Jamaica declared the "achievement of universal health coverage and health financing" (Planning Institute of Jamaica, 2018, p. 29).

Public health services also relate directly to SDG2 (*zero hunger*) and SDG5 (*gender equality*) and reinforce SDG10 (*reduced inequalities*). A number of the case study islands have demonstrated these relationships. For example, Ireland reported that the death rate from chronic diseases for both males and females was below the EU average, while the life

TABLE 5.5: **Relationships between SDGs and 'Health' Transformation Pillar Output (*Public Health Services*)**

Sustainable Development Goals (SDGs)		Relationship with 'Health' Transformation output
1	No poverty	2
2	Zero hunger	3
3	Good health and wellbeing	3
4	Quality education	2
5	Gender equality	3
6	Clean water and sanitation	0
7	Affordable and clean energy	0
8	Decent work and economic growth	2
9	Industry, innovation, and infrastructure	1
10	Reduced inequalities	2
11	Sustainable cities and communities	1
12	Responsible consumption and production	1
13	Climate action	0
14	Life below water	0
15	Life on land	0
16	Peace, justice, and strong institutions	1
17	Partnership for the goals	0

Strength of relationships between all SDGs and STF 'Health' Transformation pillar output, where 3=directly targets the SDG, 2=reinforces the SDG, 1=enabling the SDG, and 0=no interaction.

Source: Adapted from Sachs et al., 2019 (p. 805).

expectancy for both genders was above the EU average, which 'reinforces' SDG10. Cabo Verde and New Zealand have also demonstrated this relationship, with the former noting the avoidance of inequalities in its health care system due to the high vaccination rate of children. New Zealand has also recognized the need to address the inequalities that exist within its sub-populations. Finally, Aruba identified the need for an integrated approach in dealing with public health service delivery to vulnerable groups.

TABLE 5.6: Relationships between all Transformation Pillar Outputs and SDG3

Transformation and intermediate outputs	Relationship with SDG3
Education, gender, and equality	
Education and human capital	2
Decent work and income support to vulnerable groups	2
Innovation	1
Health, well-being, and demography	
Public health services	3
Energy, decarbonization, and sustainable industry	
Energy access for all	2
Energy decarbonization	2
Clean air and water	3
Sustainable food, land, water, and oceans	
Sustainable land use, oceans, and food systems	3
Sustainable cities and communities	
Transport, water, and sanitation infrastructure	2
Digital revolutions for sustainable development	
Digital technologies and infrastructure	2

Strength of relationships between SDG3 and all STF Transformation pillar intermediate outputs, where 3=directly targets the SDG, 2=reinforces the SDG, 1=enabling the SDG, and 0=no interaction.

Source: Adapted from Sachs et al., 2019 (p. 805).

Innovations

While innovation can enable the performance of the health care system, an analysis of SDG3 in the islands' VNRs has not revealed many examples of this interaction — although these may have been addressed under the relevant SDG9 (*industry, innovation, and infrastructure*). However, the island territory of Guam has indicated that they have incorporated innovations that will reduce waste and provide more local foods to support a "healthy and prosperous community" (UG/OGG, 2020, p. 5).

Education and gender equality

As shown with the example of the Seychelles, there is a need to address the social determinants of health. In this regard, it is noted in their VNR that the provision of universal education, maintenance of low unemployment, and youth empowerment are important for a healthy nation (Economic Planning Department, 2020). Aruba also identified targeting single parents with dependent children for vocational training and adult education (Government of Aruba, 2018, p. 7). These examples demonstrate the enabling relationship between SDG3 and the intermediate output on 'education and human capital' and 'decent work and income support for vulnerable groups'.

Energy decarbonization and sustainable industry

New Zealand addressed this Transformation from the perspective of health by acknowledging the work done by some of its District Health Boards (DHBs) on reducing emissions of greenhouse gases. For example, their VNR (New Zealand Ministry of Foreign Affairs and Trade, 2019, p. 34) noted: "A growing number of DHBs employ sustainability officers and also measure and take action to reduce their greenhouse gas emissions." These initiatives can improve individual health through reduced local pollution. Additionally, since one of the SDG interventions of this Transformation was 'curbing pollution by achieving cleaner air and water', it is noted that Singapore also identified clean water as an important attribute of health (Ministry of Foreign Affairs, 2018, p. 10).

THERE IS A CLEAR AND DIRECT cause-and-effect relationship between SDG2 (*zero hunger*) and health care services.

Sustainable land use, oceans, and food systems

There is a clear and direct cause-and-effect relationship between SDG2 (*zero hunger*) and health care services. This is considered within the intermediary outcome of 'sustainable land use, oceans, and food systems'. The Bahamas addressed this relationship from the perspective of SDG3, indicating that the high cost of healthy foods may hinder the implementation of SDG3. Additionally, Guam identified the need for food security and access to local nutritious foods as a means to achieve a healthy community through SDG3.

POLICY, GOAL-BASED DEVELOPMENT, STAKEHOLDER ENGAGEMENT, AND COVID-19

Policy and goal-based development

Notwithstanding the lessons stated above, there is still room to improve on the goal of achieving a better and deeper understanding of the interaction of the SDGs, in turn improving policy making, goal setting, and stakeholder engagement during the implementation of the SDGs. In the VNRs of five of the case study island states, the integration between SDG3 and other SDGs was demonstrated. For example, under Jamaica's national outcome, "a healthy and stable population" (Planning Institute of Jamaica, 2018, p. 17), SDG3 is grouped with SDG2 (*zero hunger*) and SDG6 (*clean water and sanitation*). Two of the islands simply aligned the SDGs and SDG Targets with their national targets, and in three others there was no evidence of integration or alignment to national plans. In the cases of the two SNIJs, there was evidence of SDG interactions. However, as was discussed earlier, interactions may be insufficient for effective implementation or even for designing policies to drive this implementation (Sachs et al., 2019). Also, the need to mobilize efforts and stakeholders to implement the SDGs in this "decade of action" (UN, 2019) and during the current COVID-19 pandemic is critical.

Sachs (2015, p. 489) coined the phrase "goal-based development" to highlight the importance of the SDGs and the role they can play in focusing policy makers on sustainable development, while Le Blanc (2015) further suggests that the integration of strategies and policies are critical for sustainable development. In this regard, island policy makers may be well advised to consider the Six Transformations Framework as an approach to creating goal-based policies and strategies that will not only consider the interactions among the SDGs but also their interaction with all of the Transformation pillars. Sachs and colleagues (2019, p. 805) noted that "many policy interventions … are needed to achieve each SDG, and each intervention generally contributes to several goals." For example, The Bahamas introduced a non-communicable diseases strategy and plan that aims to halt the surge in the prevalence of NCDs. This strategic approach is encompassed within the 'health, well-being, and demography' pillar. However, it relates directly to and reinforces other Transformations, such as 'digital revolution for sustainable development', which was absent from The Bahamas integration of SDG3 with SDGs 1, 2, 4 5, 6, and 10. Additionally, the majority of islands do not indicate a relationship between SDG3 and innovation. In this regard, the STF, which indicates that there is a reinforcing relationship between SDG3 and the output 'digital technologies and infrastructure', allows island policy-makers to approach policy design, planning, and goal-setting with a deeper understanding of SDG interactions, thus producing improved policies and plans for sustainable development.

Another important aspect of the STF proposed by Sachs et al. (2019, p. 805) is to "organize SDG interventions through a semi-modular action agenda that can be

designed by discrete, yet interacting, components of government. Each Transformation engages a different subset of business and civil society, facilitating targeted problem-solving, clear communication and mobilization of stakeholders." The Ministries of Health, or related government departments, will most likely have oversight for SDG3. According to Sachs and colleagues (2019), different government ministries will have the responsibility to develop and implement policies to ensure that the SDGs, which are mostly aligned to local plans, are being implemented. However, using the STF, the Health Ministry will now have "discrete" responsibility — not just for SDG3, but for the larger package of interactions under the 'health, well-being, and demography' Transformation. In this regard, responsible ministries will now have a better and deeper understanding regarding how the discrete package of SDGs contained in the Transformation related to their ministry is interacting with all other SDGs. Therefore, the STF provides a more systematic approach for island policy makers to continue the implementation of the SDGs, allowing them to engage all influential stakeholders, even outside of the realm of health.

Stakeholder engagement

The United Nations (2019) recently called for a "Decade of Action" in which global action, local action, and people action — the latter appealing to civil society, youth, and academia, among others — will galvanize to achieve the intended Transformations to implement the SDGs. In this time span, stakeholder engagement and involvement with the implementation of the SDGs will be critical and, in this regard, there will be a need for island governments to make a concerted effort to engage all stakeholders to achieve the SDGs locally. Therefore, with smaller and discrete but integrated Transformation packages, stakeholders may be more inclined to participate. Also, this approach will be more manageable by the governments. In other words, the Ministries of Health will be better placed to engage stakeholders with a more streamlined and integrated approach, as opposed to the presentation of a whole plan or parts of the plan that may not have taken into consideration all the relationships between the SDGs.

Integrate COVID-19 into VNRs

Finally, the COVID-19 pandemic has presented a challenge with meeting the SDGs by 2030 (e.g., Naidoo & Fisher, 2020; Nature, 2020). In this regard, Naidoo and Fisher (2020, p. 198) noted: "Progress across the SDGs was slow even before COVID-19. Now it is even more likely that many of the 169 targets will not be met by 2030." Specifically relating to SDG3, it is reported that several health gains, such as the reduction in maternal and child mortality rates, may be reversed due to COVID-19 (The Lancet Public Health, 2020; UN DESA, 2019) and that "health service disruptions could reverse decades of improvement" (The Lancet Public Health, 2020, e460), for example with vaccinations. This disruption may have negative consequences for meeting SDG3 and

other HRSDGs, as case numbers in islands may distract from the targets established by the SDGs. For example, as of December 8, 2020, seven out of the twelve case study islands had reported five thousand or more cases of COVID-19 (see Appendix C; World Health Organization, 2020). Sachs, Schmidt-Traub, and Lafortune (2020b; 2020a, p. 3), however, offer an optimistic argument, concluding that "the SDGs can be achieved through a combination of policies" and that "ambitious goals, if assiduously and creatively pursued, can unleash human innovation to accelerate progress beyond previously unimaginable rates."

The optimism expressed by Sachs and colleagues (2020a, 2020b) may be seen in the VNR report of the Seychelles, the only island in the sample that released its report during the pandemic. In their VNR, the country elaborated a number of measures, spanning the economy, society, and environment, to address the impacts of COVID-19 (Economic Planning Department, 2020). Like the Seychelles, it is recommended that island states and territories integrate COVID-19 impacts into their VNRs, paying specific attention to the HRSDGs, and build on the Transformation lessons such as those reported in this chapter. In this regard, the STF may be an adequate tool to assist island policy makers achieve this integration into future VNRs.

CONCLUDING REMARKS

In 2015, the majority of island states adopted the 2030 Sustainable Development Agenda. Since then, island states and territories have provided some key lessons as they implemented SDG3 and other HRSDGs. Using a Six Transformations Framework, these lessons provided a 'discrete but interactive' approach to implementing the SDGs. However, notwithstanding these lessons, there were specific strategies that islands can employ to assist with developing a deeper understanding of the interactions among SDGs and how these interactions can be linked to policy planning and goal setting. It was also shown that the STF could be used by line ministries to engage key stakeholders during implementation. Although SDG implementation may be interrupted by the COVID-19 pandemic, island leaders should consider the impacts of the pandemic in future VNRs as they plan to achieve the SDGs by 2030.

ADDITIONAL RESOURCES

For an overview and interactive list of all Sustainable Development Goals, Targets, and indicators: http://sdgs.un.org/goals

For an overview of SDG3 (*good health and well-being*) and interactive list of Targets and indicators: http://sdgs.un.org/goals/goal3

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SOURCES AND NOTES FOR APPENDICES

Appendix A: United Nations SDGs and number of targets, compiled from United Nations (2015).

Appendix B: SDG3 and all targets, from United Nations (2015).

Appendix C: Cumulative COVID-19 cases in the twelve case study islands, as of 8 December 2020 (World Health Organization, 2020).

APPENDIX A: **United Nations Sustainable Development Goals and Number of Targets**

SDG	Description	No. of targets
1	End poverty in all its forms everywhere.	7
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.	8
3	Ensure healthy lives and promote well-being for all at all ages.	13
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	10
5	Achieve gender equality and empower all women and girls.	9
6	Ensure availability and sustainable management of water and sanitation for all.	8
7	Ensure access to affordable, reliable, sustainable, and modern energy for all.	5
8	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.	12
9	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.	8
10	Reduce inequality within and among countries.	10
11	Make cities and human settlements inclusive, safe, resilient, and sustainable.	10
12	Ensure sustainable consumption and production patterns.	11
13	Take urgent action to combat climate change and its impacts*.	5
14	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.	10
15	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	12
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.	12
17	Strengthen the means of implementation and revitalize global partnership for sustainable development.	19

*Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

APPENDIX B: **Sustainable Development Goal 3 and its Targets**

SDG3: *Ensure healthy lives and promote well-being for all at all ages*

Targets	
3.1	By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
3.2	By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.
3.3	By 2030, end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases, and combat hepatitis, water borne diseases, and other communicable diseases.
3.4	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment, and promote mental health and well-being.
3.5	Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
3.6	By 2030, halve the number of global deaths and injuries from road traffic accidents.
3.7	By 2030, ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.
3.8	Achieve universal health coverage, including financial risk protection, access to quality essential health-care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.
3.9	By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination.
3.a	Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.
3.b	Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.
3.c	Substantially increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries, especially in the least developed countries and small island developing States.
3.d	Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction, and management of national and global health risks.

APPENDIX C: Cumulative COVID-19 Cases in the 12 Case Study Islands (as of December 8, 2020)

	Cumulative cases	Cumulative cases per one million population	Cumulative deaths	Cumulative deaths per one million population
Island states				
Cabo Verde	10,626	19,112	105	189
Cyprus	12,181	10,089	59	49
Ireland	7,3948	14,976	2,099	425
Jamaica	11,063	3,736	261	81
The Bahamas	7,570	19,250	163	415
New Zealand	1,722	357	25	5
Singapore	58,255	9,958	29	5
Seychelles	182	1,851	0	0
Timor-Leste	31	24	0	0
Vanuatu	1	3	0	0
Island territories				
Aruba	4,923	46,110	45	421
Guam	6,845	40,557	113	670

Source: World Health Organization, 2020.

PART III

Maritime cooperation and large ocean economies

Containers being unloaded at the Port of Yangpu in Hainan Province.
Xinhua News Agency/Pu Xiaoxu

6

A call for action:

Prospects for cooperation between Hainan and other global islands

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ABSTRACT

In June 2020, the Chinese government released the Master Plan for the Construction of Hainan Free Trade Port*, specifying the policy and institutional system to build a free trade port in Hainan. Given its relatively independent geographical location and the size of its economy in China, Hainan Island, being used as a "living laboratory" to test policy, is a fitting site to build a free trade port. This chapter introduces six aspects of the institutional framework of the Hainan Free Trade Port and discusses three strategic sectors that will increasingly shape the island's economy in the future: tourism, modern services, and new and/or high-tech*

industries. Against this backdrop, the chapter also emphasizes Hainan's cooperation with other islands. Although global islands face many difficulties or challenges in the fields of trade, investment, and connectivity, Hainan can take advantage of its role as a free trade port to strengthen cooperation with other global islands. To this end, the chapter suggests five possible ways in which Hainan can strengthen its linkages with other islands. In addition to more traditional paths of development — such as trade, investment, and agriculture — increased cooperation in the digital economy and intellectual capacity-building are underlined as being key to Hainan's future.

INTRODUCTION

Hainan is a tropical island at the southernmost tip of the Chinese mainland. It was administered as part of Guangdong Province until 1988. Since that date, it has been upgraded to a province and designated a Special Economic Zone, the largest of its kind in China (Hainan Provincial People's Government, n.d.). In 2009, Hainan proposed the development strategy of building an international tourism island, which was supported by the Chinese government (State Council, 2010). At a gathering on April 13, 2018 celebrating the 30th anniversary of the founding of Hainan Province and the Hainan Special Economic Zone, Chinese President Xi Jinping spoke highly of the development achievements of Hainan over the last 30 years, stressing that "Hainan has been developed from a border island to an important window to China's reform and opening-up." At the same time, Xi (2018) also announced the major decision by China's Central Government to support Hainan in exploring the building of a free trade port.

After two years of intense preparation, the Chinese government published the *Master Plan for the Construction of Hainan Free Trade Port*, hereinafter referred to as the *Master Plan*, on June 1, 2020 (Central Committee of the Communist Party of China & State Council [CCCPC & SC], 2020). At the 2019 G20 Summit, the 3rd China International Import Expo in 2020, and other foreign-related occasions, Chinese President Xi Jinping (2019, 2020) also declared to the world that China would build a free trade port in Hainan Province to further open China's market to the outside world. According to the *Master Plan*, the construction of the free trade port is seen as China's commitment to addressing the difficulties and challenges facing the world economy. As stated in the *Master Plan*, "building the Free Trade Port in Hainan is the fundamental requirement of promoting high-level opening up and establishing a new opening-up economic system, as well as the practical action of supporting the economic globalization and building a community of shared future for mankind" (CCCPC & SC, 2020, p. 5).

A NEW CHOICE FOR HAINAN'S ISLAND ECONOMY: A FREE TRADE PORT

Islands seem to be ideal places to support the development of free trade. Surrounded by sea, islands are born with the characteristic of openness, where people and cargo can travel relatively freely and easily from island to island and from island to mainland. Of course, whether an island adopts freer trade as its economic development strategy requires a comprehensive evaluation of many factors, such as its resource endowment (e.g., degree of self-sufficiency), relative geographical location (e.g., access to a major trade route), political status (e.g., an independent island state or a subnational island jurisdiction), and social and economic structures and characteristics. We see that some islands, such as Singapore, have developed into globally famous free trade ports at least partly because of their advantageous geographical locations. Others, such as the Cayman Islands in the Caribbean, have become adept at providing financial services as a function of the constitutional relationship with their metropole (Vicek, 2019).

Though free trade has been found to be an important way for islands to realize economic success, adopting a successful 'free zone' model from one context to another does not necessarily lead to success. Nor will the solutions that seem to work on one island automatically translate into success when implemented elsewhere (Randall, 2018b).

THOUGH FREE TRADE HAS BEEN found to be an important way for islands to realize economic success, adopting a successful 'free zone' model from one context to another does not necessarily lead to success.

From the perspective of its characteristics as an island, Hainan has several advantages in developing a free trade port strategy:

1. Compared with the nearby mainland of China, Hainan's relatively independent geographic status makes it more convenient and affordable to establish import and export management mechanisms conducive to free trade. Moreover, as a natural gateway to the South China Sea, the island is geographically close to many Association of Southeast Asian Nations (ASEAN) countries and some major international trade routes, thus giving it the potential to become an important hub for the Pacific and Indian Oceans.
2. Based on traditional economic indicators, Hainan is already successful among global islands in achieving rapid economic development, having reported a GDP of US$63.75 billion in 2017; 21.8 times that of 1987 (Xi, 2018). In absolute terms, Hainan's economy is equivalent to that of a medium-sized developing country such as Dominica (Randall & Brimacombe, 2019, 2020). However, among Chinese provinces, Hainan's economy is one of the smallest, accounting for only 0.54% of total Chinese production and ranking 28th out of the nation's 31 provinces (excluding Hong Kong, Macau, and Taiwan) in terms of total production (National Bureau of

Statistics, n.d.). However, from a different perspective, this means that the pilot policy of opening Hainan wider will not have a major impact on the whole country's economy, making it easier to plan, implement, and manage internally. Therefore, as stated in the *Master Plan*, "Hainan has unique advantages of comprehensively deepening reform and testing the highest level of opening-up policies" (CCCPC & SC, 2020, p. 5). This approach of being used as a "living laboratory" to test policy is not uncommon for small islands (Baldacchino, 2007).

3. The economic development models adopted by some other islands, including those that have used tourism as a source of development (McElroy, 2006), allow us to see the trajectory that Hainan could take as a province. The warm and comfortable climate gives it a natural advantage over other regions of China to market itself as a tropical island tourism destination. Touted as "China's Hawai'i" (Blair, 2020) by some in the mass media, the perception is that tourism could continue to grow as a major pillar of the island economy. Since approval of its international tourism island strategy in 2009 (State Council, 2010), Hainan has focused its attention on selling duty-free commodities to travelers from home and abroad. In this sense, it is like other ports that have "leveraged their jurisdictional enclave status to become intermediaries in global supply chains for consumer goods" (Bertram, 2018, p. 71). Tourism will continue to play an important role in Hainan's economy, as the main source of tourism revenue generation for Hainan is from tourists in other provinces and nearby countries, which also encourages foreign trade.

THE CHINESE GOVERNMENT'S decision to build a free trade port in Hainan — the only one in China today — will drive rapid economic development on the island while also transforming the island economic model and increasing the proportion of trade-related industries in its economic structure.

The Chinese government's decision to build a free trade port in Hainan — the only one in China today — will drive rapid economic development on the island while also transforming the island economic model and increasing the proportion of trade-related industries in its economic structure. Furthermore, the ongoing practices of Hainan in developing its island economy may serve as a pilot case study for other islands seeking economic growth.

THE INSTITUTIONAL FRAMEWORK OF HAINAN FREE TRADE PORT

Core system

It is generally agreed that the principle of "customs extraterritoriality" (Lavissière, 2019, p. 128) and, in the Chinese context, the principle of "outside the customs and within the boundary" (CCCPC & SC, 2020) are central to the system of the free zones concept (Lavissière, 2019). The design of the institutional system of the Hainan Free Trade Port is also based on these principles, aiming to promote the free, orderly, safe, and convenient flow of production factors, which is embodied in the following six aspects (CCCPC & SC, 2020):

1. A Customs Supervision Zone is going to be established on the whole island, and a goods import and export management system featuring "free flow through the first line and efficient control at the second line" (CCCPC & SC, 2020) will be implemented (for more about the "first line" and "second line", see State Council, 2020). The Chinese government is formulating the list of goods and items prohibited or restricted from import and export in Hainan Free Trade Port; the goods and items not on the list will be freely imported and exported under customs supervision. Similarly, a catalogue of goods that are subject to import duties at Hainan Free Trade Port is being created, and goods not in the catalogue will be exempt from import duties when entering the Free Trade Port. At the "second line", when goods from other provinces of China enter from the Hainan Free Trade Port, import tariffs will be levied. Goods transportation from the mainland shall be managed in accordance with domestic regulations when entering Hainan Free Trade Port. To ensure the full implementation of these basic measures by 2025, China's customs authority has decided to test this import and export management system in Yangpu Bonded Port Area in Hainan (General Administration of Customs, 2020).

2. A significantly broadened market access, also known as the "market access upon commitment" system, will be implemented, under which market entities are allowed to carry out investment and business activities on the condition that they promise to meet the relevant requirements and submit relevant materials for filing. A negative list of cross-border trade in services in Hainan Free Trade Port will be formulated and released, and national treatment will be granted to overseas service providers.

3. Since the financial industry will be further opened up and the establishment of settlement centers enhanced, free and convenient capital flow between Hainan Free Trade Port and foreign countries will take place.

4. Policies will be put in place to encourage the development of highly skilled labour for living and working in Hainan, and more liberal stay and residence policies for foreign professional and technical staff will be adopted. Soon, foreigners will be able to apply for visa-free entry to Hainan for various reasons, including commercial trade, short-term visits, family reunions, employment, and attending exhibitions and sporting events.
5. Highly free, convenient, and open policies on shipping and air transport will be developed. Foreign ships will be allowed to register at "Yangpu-Port-of-China" without restrictions on the proportion of foreign shareholding. The third and fourth freedoms of the air will be opened, a trial implementation of the seventh freedom will be conducted, and foreign airlines will be allowed to carry passengers or freight via Hainan to a third country (International Civil Aviation Organization, n.d.).
6. Openness in the data field will be encouraged. Value-added telecommunication services will be opened up and limitations on the maximum share of foreign capital will be lifted gradually. Basic telecommunication services will also be opened up in a safe and orderly manner.

SOON, FOREIGNERS WILL BE able to apply for visa-free entry to Hainan for various reasons, including commercial trade, short-term visits, family reunions, employment, and attending exhibitions and sporting events.

Key industries

As planned by the Chinese government, tourism, modern services, and new and/or high-tech industries will be the pillars of the modern industrial system of the Hainan Free Trade Port, complementing each other with the free trade port system featuring the "outside the customs and within the boundary" principle (CCCPC & SC, 2020).

Tourism

The international tourism island strategy was upgraded to an "International Tourism Consumption Center" in 2018, with the aim of highlighting the role of "tourism consumption" in driving the island's economic growth (CCCPC & SC, 2018). On July 1, 2020, the adjusted policy for offshore duty-free shopping came into effect, raising the quota for offshore duty-free shopping in Hainan to US$14,492.00 from the current US$4,261.00, expanding the categories for duty-free goods from 38 to 45, and significantly reducing the number of categories with a single-purchase quantity limit (Ma, 2020). Offshore duty-free shops on the island reported sales of US$2.086 billion for 2019, but then more than doubled to US$4.6 billion by mid-December 2020 (Luo, 2020; Xinhua News Agency, 2020).

In 2013, at Hainan's Boao Lecheng International Medical Tourism Pilot Zone, a special area near the permanent site of the Boao Forum for Asia, the concept of "medical tourism" (Rogers, 2021) was operationalized, whereby medical devices, medicines, and therapeutic methods that have not been approved by the authorities in mainland China are allowed to be imported and used (Zheng, 2020). This preferential policy, which can be enjoyed only within this pilot zone, is aimed at attracting patients from home as well as from abroad (e.g., Russia) to receive treatment and rehabilitation in Hainan.

There is enormous potential for cruise tourism in the South China Sea region. The coastal city of Sanya at the southern tip of Hainan Island is developing into a home port to cruise tourism and has extended Hainan's 15-day visa-free stay policy to foreign groups travelling by cruise ships. CGTN photo

Finally, although currently in limbo as a result of the COVID-19 pandemic, it is generally acknowledged that cruise tourism can bring economic benefits to home ports and ports of call (Brida & Zapata, 2008). Given the growth of the cruise tourism market and tourist numbers in Asia prior to the pandemic, there is enormous potential to develop cruise tourism in the South China Sea region. To this end, Sanya, a coastal city at the southern tip of Hainan Island, is developing itself into a home port to cruise tourism and has extended Hainan's 15-day visa-free stay policy to foreign tourist groups traveling by cruise ships (Huang et al., 2020).

It is thus foreseeable that the Hainan Free Trade Port policy of exempting most imported goods from tariffs will encourage the growth of tourism consumption.

Modern services

The role and value of islands in the global service economy can be embodied in fields such as offshore finance and the Orange Economy (Vicek, 2019; Pacheco & Pacheco, 2020). In addition to opening the financial sector, including allowing overseas institutions

dealing with securities, funds, and futures to set up wholly or jointly owned financial branches in the island, Hainan also pays attention to supply chain services related to trade in goods, such as warehousing, transit trade, sales exhibitions, and product processing. Hainan has also set a goal of building an "international design island" (Ren, 2020), focusing on the development of creative and design sectors such as architecture, fashion, film and television, animation, digital entertainment, and industrial design.

New and/or high-tech industries

Some islands have encouraged new and high-tech industries as a strategy for economic development. For example, both Jeju Island (South Korea) and Malta have established the use of the blockchain as a key aspect of their respective economic strategies (Choi, 2018; Aloisio, 2020). Hainan will prioritize information industries and focus on cutting-edge technologies such as artificial intelligence (AI), blockchain, and the "internet of things" (IoT). As China's first province to set a target date to ban sales of gas-powered vehicles, Hainan will lead the way in production and application of renewable energy vehicles as a key element of a strategy to build a clean energy island (Shao & Cai, 2019). Hainan's position as a tropical island adjacent to the equator and the South China Sea makes it quite suitable for building new and high-tech industries, and several industries on the island are currently focusing on the technologies associated with deep-sea exploration and the development of tropical agriculture, as well as building a new spacecraft launch station.

AS CHINA'S FIRST PROVINCE to set a target date to ban sales of gas-powered vehicles, Hainan will lead the way in production and application of renewable energy vehicles as a key element of a strategy to build a clean energy island .

COOPERATION BETWEEN HAINAN AND GLOBAL ISLANDS

Hainan is committed to establishing partnerships with other islands and forming an island network so as to promote joint development. Three ways in which it is doing so are through continued development of political contacts and mutual trust, continued global cooperation in tourism and agriculture, and active collaboration in the field of Island Studies.

Continuously deepened political contacts and mutual trust

Of the world's many global island countries, 41 have officially established diplomatic relations with China (Ministry of Foreign Affairs, 2014). In 2013, in Indonesia — the world's most populous island country — Chinese President Xi Jinping put forward the

initiative of building the 21st Century Maritime Silk Road (National Development and Reform Commission, Ministry of Foreign Affairs & Ministry of Commerce, 2015). Through cooperation and coordination, this initiative can help to rebuild the global island network and prevent small islands from being marginalized in the global economy, doomed to be not much more than "statistical footnote[s]" (Randall, 2018a, p. 8).

Hainan is a beneficiary of China's cooperation with island countries, especially as a node along the 21st Century Maritime Silk Road and the host location for the Boao Forum for Asia, the only economic forum in Asia. It is not uncommon for global heads of state, provincial- or ministerial-level officials, and international business leaders from many island countries and subnational island jurisdictions to assemble on Hainan and learn about the social and economic development potential of the island while attending the Forum. This has the potential to lead to greater familiarity and future cooperation.

Hainan has long been engaged in friendly exchanges with global island countries and provinces to expand international cooperation. The first three international sister-city relationships Hainan established after its founding as a province were with Hyogo Prefecture in Japan, the State of Hawai'i in the USA, and Jeju Province in South Korea, all of which are subnational island jurisdictions. Currently, Hainan has tied sister regional bonds with 39 regions at the provincial level, one third of which are islands, including Cebu and Palawan provinces in the Philippines, Prince Edward Island in Canada, County Wicklow in Ireland, the Canary Islands Autonomous Region in Spain, the Southern Province in Sri Lanka, Phuket Province in Thailand, the East New Britain Province in Papua New Guinea, Gotland County in Sweden, the Autonomous Region of Sardinia in Italy, Bali Province in Indonesia, Penang State in Malaysia, and Yap State in Micronesia (Foreign Affairs Office of Hainan Province, 2015b).

Continued cooperation in tourism and agriculture

In recent years, Hainan has been expanding cooperation with global island provinces in many key industries, including tourism, agriculture, and fisheries. Given the significance of tourism to many island economies, Hainan established the Inter-island Tourism Policy (ITOP) Forum in 1997 in conjunction with South Korea's Jeju Province (Jeju Special Self-Governing Province as of 2006), Japan's Okinawa Prefecture, and Indonesia's Bali Province. Currently, the ITOP Forum has a total of ten member islands and three observer islands (for a full list of member and observer islands, see Foreign Affairs Office of Hainan Province, 2015a). The 23rd ITOP session took place in November 2019 in Naha, Okinawa. As more islands continue to join, the Forum has gradually become a multilateral platform for member islands to explore tourism development and share experiences with each other. In terms of agriculture, Hainan has signed memoranda of cooperation with the Federated States of Micronesia and Sri Lanka during the Second

Belt and Road Forum for International Cooperation in 2019, agreeing to cooperate in the "China (Hainan)-Micronesia Coconut Standard Plantation Demonstration Park" project and the "China-Sri Lanka Science and Technology Industry Park of Tropical Modern Agriculture" project, respectively (Zhou & Luo, 2019).

Active progress in cooperating in the field of Island Studies

One area of inter-island cooperation that may surprise non-islanders is the field of Island Studies, which was discussed at the first 21st Century Maritime Silk Road: Islands Economic Cooperation Forum held during the 2016 Boao Forum for Asia Annual Conference (Boao Forum for Asia Institute, 2016). The Island Economic Cooperation Forum was intended to establish a platform for global island leaders to discuss shared problems and challenges, and was attended by leaders, provincial- or ministerial-level officials, and well-known experts in Island Studies. Considering the key role played by the interdisciplinary field of Island Studies in promoting mutual learning among islands and island leaders, inter-island academic exchanges, and consolidating the intellectual contributions of those participating at the Forums, the Foreign Affairs Office of Hainan Province, as the organizer of the Forum, signed a Memorandum of Understanding (MOU) at the 2nd session of the Forum in 2017 to establish a Research Network on Island Economies with the Institute of Island Studies at the University of Prince Edward Island (Canada) and other organizations. The purpose of this agreement was to "link isolated academic and research institutes along the Maritime Silk Road, boost the quantity and quality of research on island economies, and encourage high-quality academic work to help island economies achieve sustainable development" (Randall, 2018a, p. 12). Since the signing of the MOU, Prince Edward Island and the Foreign Affairs Office of Hainan Province have jointly held two international symposiums on island economic development and have published three issues of the Annual Report on Global Islands to date (Randall, 2018c, 2019, 2020b). Though the 2020 session was not held due to the COVID-19 pandemic, preparations are under way for continued activities. As a result of its leadership in events such as this, the many stakeholders and the people of Hainan have shown Asia and the world that this island is committed to building a platform for exchange and cooperation on issues related to island economies, not only along the Maritime Silk Road but throughout the world of islands (Baldacchino, 2007; Randall, 2018a, 2018b).

CHALLENGES FACED BY HAINAN IN COOPERATING WITH GLOBAL ISLANDS

Difficulties in rapid growth of trade and investment

Preferential policies for free trade ports cannot guarantee the rapid growth of economic and trade exchanges. Future economic and trade cooperation between Hainan and other global islands will be subject to many factors, including the overall structure and trend of economic and trade exchanges between China and island countries, as well as the ability and success in developing economic and political ties between Hainan and other islands. As of now, China has signed memoranda of understanding as part of the Belt and Road Initiative with 23 island countries (Office of the Leading Group for the Belt and Road Initiative, 2021). However, signing agreements with other jurisdictions does not necessarily guarantee that the objectives of those agreements will be fulfilled.

Also, although Hainan strives to be an export-oriented jurisdiction, its degree of connectedness with other jurisdictions is still much lower than other leading global islands. For example, in 2019 Hainan reported a trade volume (both imports and exports) of US$2.698 billion with six island countries, consisting of Japan, Singapore, the Philippines, Indonesia, the United Kingdom, and New Zealand (Statistical Bureau of Hainan Province, Survey Office of National Bureau of Statistics in Hainan, 2020). However, this accounted for only 0.39% of China's total volume of trade with island countries and only 10.63% of Hainan's GDP (in 2018), much lower than that of Singapore and other internationally acknowledged free trade ports (Shen, 2020). In this context, even after Hainan realizes trade liberalization and facilitation, considering the current volume of trade between the rest of China, Hainan, and other islands, it will be difficult to catch up in trade volume unless there are unanticipated rapid market demands, such as expanding the import of coconuts.

FUTURE ECONOMIC AND TRADE cooperation between Hainan and other global islands will be subject to many factors, including the overall structure and trend of economic and trade exchanges between China and island countries, as well as the ability and success in developing economic and political ties between Hainan and other islands.

These challenges also extend to investment. In a bid to drive the development of the three key sectors noted above, Hainan has encouraged foreign direct investment (FDI) to implement its free trade port policies. However, other islands are often competing with Hainan for this same FDI in areas such as tourism. From 2005 to 2019, Hainan received FDI sporadically from eight islands (Statistical Bureau of Hainan Province, Survey Office of National Bureau of Statistics in Hainan, 2020). Though access to data on outgoing capital investment from Hainan to other island countries and regions is not available, anecdotal evidence, including measures in the agreements noted above, suggests that these islands are seeking greater investment from Hainan rather than investing in Hainan.

A worker walks inside Tunnel 1 of the Jakarta-Bandung high speed railway (HSR) project in Pondok Gede, Besaki, West Java in December, 2020. With a total length of 142.3 km, the railway will carry people from the capital to Bandung in West Java province at 350 km/h. The project was launched in 2016 and is being built with Chinese technology. Jakarata Post/Wendra Ajistyatama

Difficulty in satisfying demand for infrastructure investment on islands

Small islands have strong demands for investment in infrastructure, such as in transportation projects. Much of the significant increase in China's FDI to island countries and regions is linked to the financing, construction, and assistance of major infrastructure projects on these islands. However, infrastructure projects require large amounts of capital. For example, the total cost of the China-funded Jakarta to Bandung high-speed-rail project was estimated to be US$5.5 billion (Xinhua News Agency, 2016). Given the long-term nature of these projects, economic benefits will not be realized quickly. With a relatively small economy and significant demands for capital to support the improvement of its own seaport and airport, Hainan may be unable to provide financing for large infrastructure construction on other islands. This lack of investment capital may be one of the major obstacles to pragmatic cooperation between Hainan and other global islands.

Difficulty in solving the problems of connectivity with other islands

Although islands can be very connected in many ways, insularity and remoteness still represent the greatest vulnerabilities to their economic and social development (Moncada et al., 2019). This makes the costs of connecting higher for small islands. For example, trips between Hainan and many South Pacific island countries are usually indirect, requiring flight connections at transit sites such as Australia and Guam. In

Some 80 km of Jakarata-Bandung HSR will run on elevated structures, shown here.
China Railway Engineering Corporation photo

addition to the higher costs, this represents a barrier to face-to-face communication and trade. Although many small islands in the region aspire to have more direct flight connections with Hainan, airlines are often reluctant to expand service given low passenger volumes and the absence of government subsidies. This reluctance has been exacerbated during the COVID-19 pandemic, and it is uncertain when passenger volumes will once again reach pre-pandemic levels.

FINAL THOUGHTS ON FUTURE COOPERATION BETWEEN HAINAN AND OTHER GLOBAL ISLANDS

As China's only island free trade port, Hainan is ideally situated to serve a central role in expanding and improving relationships between China and other island countries. Hainan is willing to share the development opportunities brought by the construction of the free trade port with other islands and hopes that its experience in developing free trade can help to form working relationships with other islands seeking economic development. To that end, the following suggestions regarding future cooperation are suggested:

Improving inter-island platforms for cooperation

Island countries have already become engaged and have expressed a unified voice for change internationally through the activities of the Small Island Developing States

(SIDS) group (United Nations, n.d.) and the Alliance of Small Island States (AOSIS). However, in addition to this collaboration of island countries, there are many more subnational island jurisdictions (SNIJS; i.e., island provinces and states, self-governing territories, dependencies) whose voices are rarely heard on the international stage. It is not uncommon for their voices to be "subsumed within the larger federal or state entities of which they are a part" (Randall & Brimacombe, 2019, p. 48). As a subnational island itself, Hainan may be able to exert an influence beyond its size, thus playing a leading role in establishing inter-island exchanges and cooperation platforms that link global islands. As noted earlier, the annual Islands Economic Cooperation Forum organized by Hainan has taken on this role and achieved considerable progress. However, annual platforms alone are not enough to meet the demand for ongoing inter-island exchanges and cooperation. Therefore, one possible suggestion is to establish a platform-based inter-island economic organization composed of island member countries and SNIJs with an effective mechanism for inter-island cooperation. In this respect, the Inter-island Tourism Policy Forum, which has been a success for the past two decades, may serve as a model for such an inter-island organization.

Strengthening cooperation in trade and investment

Other islands can make use of the tax-exempt system of a free trade port and offshore duty-free shopping policies to ship their goods and products to and from Hainan for marketing or processing. This would allow Hainan to serve a gatekeeper role in facilitating the sale of international goods to the Chinese mainland or to neighbouring markets. Despite the challenges noted above, it is hoped that other islands will be able to invest more in Hainan's strategic sectors while Hainan enterprises increase their investment in other islands' key industries.

Promoting cooperation in agriculture and fisheries

With globalization, it is not uncommon for agriculture-based economies to gradually evolve to place a greater emphasis on services, including tourism. Compounding this move away from agriculture on small islands is the greater vulnerability associated with the impacts of climate change, including sea level rise, saltwater intrusion, and more frequent and severe weather events. However, developing island agriculture not only provides islanders with more nutritious food choices and reduces their dependence on imports; it will also support the sustainable development of rural communities, outlying islands, and even rural and/or agricultural tourism (Barker, 2018). With technological advances in tropical agriculture, and recognizing that all islands have their own unique natural and human contexts, Hainan may be able to transfer technology in this area to other tropical islands.

Similar cooperation or assistance may also be extended to the fisheries. Though

small in land size, when the Exclusive Economic Zones are considered, small islands and archipelagos often have responsibility for a relatively massive marine area. Especially in some South Pacific island countries, these areas may have abundant fishery resources, representing a critical source of revenues. Considering the past damage from large-scale fish harvesting on fish stocks and the marine ecological environment, fishery cooperation between Hainan and other islands may encourage a greater emphasis on fish farming — a traditional strength of Asian communities.

Linking agriculture and the fisheries to tourism is a driver for rural incomes in Pacific Island states.

Technical Centre for Agricultural and Rural Cooperation (CTA)

Expanding cooperation in the digital economy

The global spread of COVID-19 has constrained the growth of goods manufacturing and exchange while providing fertile soil for the development of contactless exchange through the digital economy (Bai, 2021). Practices have proved that the strategic application of information and communications technology (ICT) can help islands overcome some of the challenges of physical distance, while providing new opportunities in emerging sectors and improving their place in global value chains (Pacheco & Pacheco, 2020). Focusing on information-intensive industries, Hainan hopes to cooperate with global islands in AI, blockchain, IoT, and other fields, and help them to transform and upgrade in the digital economy.

Developing cooperation in intellectual capacity-building

Finally, research has shown that the most effective path to long-term economic development is to improve islands' intellectual capacity by cultivating their local entrepreneurship, skills, and research capacity in specific areas of strength (Randall, 2018a, 2018b). To this end, the following should be considered: (1) have more islanders participate in relevant exchange or training programs on Hainan, and (2) fund island students elsewhere to study at universities on Hainan Island. According to Hainan's free trade port policies, foreign universities and vocational colleges in science, engineering, agriculture, and medicine are allowed to run independent schools in Hainan (CCCPC & SC, 2020). This means that students from neighbouring islands can receive quality higher education in Hainan with significantly lower living costs, and (3) continue to cooperate in the field of Island Studies. Hainan is making efforts in Island Studies to provide both intellectual and policy supports for its construction of the free trade port while at the same time collaborating with other global islands on solutions to relevant issues. The interdisciplinary field of Island Studies continues to grow in recent years, with the establishment of specialized institutions and the launch of related research projects in island universities around the world (Randall, 2020a). Given this, and to attract more researchers to Hainan, the island has as its medium-to-long-term goal to establish a comprehensive research institution of Island Studies.

THE MOST EFFECTIVE PATH to long-term economic development is to improve islands' intellectual capacity by cultivating their local entrepreneurship, skills, and research capacity in specific areas of strength.

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The Tiger's Nest Monastery high above Paro, Bhutan. Bhutan shows how small island-like states can succeed in influencing global policies and dynamics.
Arctic Adventures photo

7

Explaining conflicts and cooperation among islands:

Towards a unified framework

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ABSTRACT

This chapter aims to provide an overview of island cooperation, collaboration, and conflict from a global perspective. The discussion starts by looking at the scope of potential interactions between island jurisdictions (both as independent states and subnational island jurisdictions) around the world, in particular their similarities and differences — which might hint

at the major factors that underpin the specific conflicts and areas of cooperation among islands, and between islands and mainland powers. Next, the chapter will introduce the theoretical framework of cooperation and conflict in the literature, which mainly includes realism and liberalism. Based on the discussion, the chapter will explore if, and in what ways, island interaction might be either similar or different from that which takes place among other forms of political jurisdictions. The chapter concludes by way of a two-dimensional island-centric typology, which can incorporate the unique interactions involving islands into a unified framework.

INTRODUCTION

Islands have long been a major source of territorial disputes and geopolitical conflict among nations. The Issue Correlates of War Project has identified more than 800 territorial disputes since 1816 (Frederick et al., 2017). Generally speaking, territories which are often associated with natural resources, religious sites, or historical homeland claims often induce more disputes and conflicts when compared to others. Although it is widely perceived that these disputes and conflicts could easily escalate into larger scale military wars, in reality the issue is far more complicated. While some of these nations remain hostile and antagonistic towards one another, most remain tolerant or even cooperative. While nations remain keen to claim power and control over islands in order to secure their interests and maximize their power, increasing economic interdependence and the growing importance of international institutions has helped to mediate or resolve nation-to-nation conflicts over islands. Using the lens of international relations theories, one can better understand how territorial disputes and conflicts are understood through the larger dimensions of conflict and cooperation, and approaches ranging from negotiation and compromise to aggression and war.

INCREASING ECONOMIC interdependence and the growing importance of international institutions has helped to mediate or resolve nation-to-nation conflicts over islands.

The study of islands is intricately tied with economic development, as well as openness and connectivity among nations across the world. Their influence goes well beyond their land area, population size, and resource abundance, including how they affect the structure and dynamics of the international system. This explains why Vasquez (2009) takes the position that disputes regarding territory are often the most conflict-prone and fatal, including escalating into inter-state wars. Nonetheless, Owsiak (2012) suggests that the resolution of territorial disputes and stable borders are also linked to the more rapid bilateral trade flows and much higher likelihood of joint democratization (though it is less clear if the relationship is endogenous). The emergence of territorial disputes across the world reflects the fundamental fact that

contexts and conditions matter a lot when analysing the controversial issue of islands among nation states, and it is simplistic to view state relations as a binary of either conflict or cooperation. As is the case with much recent research by Hassner (2007), Nagy (2013), and Fang and Li (2020), we believe that a single international relations framework oversimplifies the matter and cannot sufficiently account for the unique dynamics and tensions that emerge from territorial disputes across many islands (Yu & Li, 2020). Taking this position, and recognizing the multifaceted and complex nature of islands, this chapter will develop such a framework by employing and integrating different international relations schools of thought. We start by first reviewing several of the mainstream international relations frameworks so as to better understand the various perspectives on conflict and cooperation among states. A series of representative cases involving island disputes and conflicts around the world is then presented to illustrate the specific circumstances that lead to conflict and cooperation. We then conclude by presenting a new analytical framework for the incorporation of islands into traditional theoretical perspectives on cooperation and conflict that are informed by the two fundamental concepts of realism and liberalism.

RELATIVE SIGNIFICANCE OF ISLANDS

In order to place the subject of islands in the framework of international relations, we first have to understand how islands are differentiated from other entities. Generally speaking, 'islands' are referring to the presumed features of islands or islanders (see the chapter by Kelman in this volume). Nonetheless, as the attributes of islandness are diverse and might not be applicable to all types of islands (Grydehøj, 2020a), the concept of 'islandness' is employed here to study the physical properties and social characteristics of islands as an intervening variable to understand them (Ma, 2020). According to Baldacchino (2006), much of island studies focuses on the composition of islandness, as well as its impact on natural ecology, human behavior, political economy, social culture, tourism development, and other dimensions, which are all embedded in the discussion in the following sections. All of these aspects are believed to be shaping and influencing the unique features of islands around the world. After all, 'islandness' is a highly complicated concept, which is also because islands are sometimes open or insular to the larger world. This line of thought is crucial in relation to the focus of this chapter, which is the conflict and cooperation across islands. On one hand, some islands prefer to become more interconnected and interdependent to facilitate economic and diplomatic linkages. On the other hand, some islands would rather be more autonomous and independent given the divergence of values and interests.

As shown in Tables 7.1 and 7.2, the economic significance of islands, especially when compared to other jurisdictions in the region (as defined by the World Bank [2021]), should never be underestimated. While there is a considerable level of overlap

TABLE 7.1: **Economic Features of Islands in Asia and the Pacific, 2018**

		GDP per capita (US$)	Trade (% of GDP)	FDI inflow (% of GDP)	Resources (% of GDP)
Asia	Japan	48,766	36.82	0.50	0.03
	Singapore	59,073	326.94	24.39	0.00
	Indonesia	4,285	43.00	1.81	4.78
	Timor-Leste	848	63.01	3.06	33.55
	Brunei Darussalam	31,437	93.90	3.80	25.43
	Philippines	3,191	72.16	2.87	1.47
	Sri Lanka	3,946	53.23	1.83	0.06
	Maldives	8,033	146.24	10.81	0.00
	Bahrain	21,478	151.40	0.30	4.34
Asian islands average		*20,117*	*109.63*	*5.48*	*7.74*
Regional average (East Asia and Pacific)		*10,326*	*57.43*	*2.32*	*1.74*
Oceania	New Zealand	38,764	55.94	1.02	1.32
	Papua New Guinea	2,419	131.10	4.85	24.52
	Solomon Islands	1,483	98.40	1.79	22.08
	Vanuatu	2,862	97.90	4.15	0.54
	Fiji	4,795	–	8.47	1.47
	Tonga	4,055	98.22	3.34	0.03
	Samoa	3,749	84.51	2.04	0.27
	Nauru	8,143	105.63	0.00	0.00
	Micronesia, Fed. States	2,729	100.85	–	0.02
	Marshall Islands	3,067	125.73	4.41	0.00
	Kiribati	1,778	98.39	-0.58	0.04
	Tuvalu	3,636	–	0.70	0.00
	Palau	12,260	123.30	7.57	0.00
	Cook Islands	27,694	–	–	–
	Niue	17,032	–	–	–
Oceania islands average		*8,964*	*101.82*	*3.15*	*3.87*
Regional average (Pacific island small states)		*3,358*	–	*5.95*	*3.83*

NOTE: List of islands follows Randall (2020). Missing data are represented by "–". "Regional average" refers to the average of the corresponding region, as classified by the World Bank (The World Bank Group, 2021).
Source: World Bank World Development Indicators (The World Bank Group, n.d.).

in group membership, especially within regions, the comparison is useful in identifying the relative characteristics of the region and the islands. As is often the case with small islands, they are closely connected economically with each other and with mainland jurisdictions, with a strong and rapid exchange of goods, services, capital, and people. As Table 7.1 shows, in comparison to the average state in East Asia and the Pacific, the small islands in this region experience about twice the value of Gross Domestic Product (GDP) per capita (in constant 2010 US$) and trade as a percentage of GDP, and Foreign Direct Investment (FDI) inflow as a percentage of GDP is almost 2.4 times greater on the islands in this area than the regional average. One of the most noticeable and distinguishing features of islands is the abundance of resources, in this case defined as the total natural resource rents as a share of GDP. On average, Asian islands have more than four times the share of GDP associated with resource production than is the case for all jurisdictions in East Asia and the Pacific. In fact, similar figures can also be found among islands across all of Oceania (i.e., the Pacific). Taken as a whole, the statistics in Table 7.1 suggest that islands perform consistently better than mainland jurisdictions in the importance of trade, FDI inflows, and resource production, all measured as a percentage of GDP.

If we extend this comparison to other parts of the world, a similar pattern holds. Table 7.2 (next page) shows that European islands have a consistently higher GDP per capita, trade as percentage of GDP, and FDI inflows than all jurisdictions within the European Union (EU), as one can once again see a stronger economic performance of the former than the latter. The islands of this region do substantially better than the EU average in terms of GDP per capita (1.27 times), trade in terms of percentage of GDP (1.72 times), and FDI inflow in terms of percentage of GDP (3.31 times). When a comparison is drawn between an average of African islands and the rest of Sub-Saharan Africa, we can likewise see a consistently higher economic performance of islands than that which exists across the region. This is true in terms of GDP per capita (3.18 times greater), trade in terms of percentage of GDP (1.85 times greater), and FDI inflow in terms of percentage of GDP (3.41 times greater). Furthermore, when comparing islands in the Caribbean and all political jurisdictions in Latin America and the Caribbean, the former has a better performance than the latter in areas of GDP per capita (1.14 times greater), trade in terms of percentage of GDP (1.76 times greater), and FDI inflow in terms of percentage of GDP (1.43 times greater).

All of these comparisons suggest the folly of thinking of islands as vulnerable, marginalized economic entities within the larger global economy. Nonetheless, a lingering question is how to facilitate more networks and closer partnerships across nations when conflict and cooperation among states with regard to islands seems to be occurring at the same time. This requires one to unfold the larger dynamics of the global political economy, so as to better understand the possibilities of the future development of island economies.

TABLE 7.2: Economic Features of Islands in Europe, Africa, and Latin America/the Caribbean, 2018

		GDP per capita (US$)	Trade (% of GDP)	FDI inflow (% of GDP)	Resources (% of GDP)
Europe	Cyprus	31,507	145.34	20.86	0.01
	Iceland	51,593	92.02	-2.42	0.00
	United Kingdom	43,324	62.62	2.84	0.66
	Ireland	76,663	211.51	17.60	0.13
	Malta	28,758	268.77	32.53	0.00
European islands average		*46,369*	*156.05*	*14.28*	*0.16*
Regional average (European Union)		*36,608*	*90.95*	*-0.42*	*0.20*
Africa	Cabo Verde	3,740	117.27	5.49	0.38
	Madagascar	490	62.50	4.42	6.09
	Seychelles	14,417	182.35	19.40	0.09
	Mauritius	10,577	95.11	2.62	0.00
	Comoros	1,403	43.09	0.58	1.39
	São Tomé and Príncipe	1,297	–	5.61	1.90
African islands average		*5,321*	*100.07*	*6.35*	*1.64*
Regional average (Sub-Saharan Africa)		*1,675*	*54.00*	*1.86*	*10.33*
Caribbean	Cuba	6,817	27.09	–	0.68
	Haiti	730	75.55	1.09	0.68
	Dominican Republic	7,698	52.06	3.21	1.45
	Jamaica	4,855	89.03	4.93	1.32
	Bahamas, The	27,261	77.35	3.96	0.01
	St. Kitts and Nevis	16,943	116.66	9.26	0.00
	Antigua and Barbuda	15,135	90.20	8.39	0.00
	St. Vincent and the Grenadines	6,853	85.20	13.56	0.02
	St. Lucia	9,237	–	1.94	0.01
	Grenada	9,092	111.00	13.16	0.00
	Barbados	16,137	80.99	4.75	0.07
	Trinidad and Tobago	15,161	–	-2.95	10.61
	Dominica	6,694	109.88	2.41	0.03
Caribbean islands average		*10,970*	*83.19*	*5.31*	*1.15*
Regional average (Latin America and Caribbean)		*9,588*	*47.26*	*3.70*	*4.43*

NOTE: List of islands follows Randall (2020). Observations refer to 2018, and the most recent data are used in case of missing data. "–" indicates missing data. "Regional average" refers to the average of the corresponding region, as classified by the World Bank (The World Bank Group, 2021). Source: Data from the World Bank World Development Indicators (The World Bank Group, n.d.).

CONFLICT AND COOPERATION BETWEEN STATES

Although islands are on average smaller than mainland political jurisdictions in terms of share of land area and world population, based on the analysis of economic capacity articulated above it is clear that their significance is far more substantial. The same goes for their geopolitical roles. This section begins with an overview of international conflict, one of the most important aspects of international interactions, with intrastate cooperation being a related and significant dimension. The emergence of international conflict can be attributed primarily to the differences of interests among states. One of the most long-standing and central puzzles in the field is why wars recur throughout the centuries, despite the fact that wars are so costly and risky. It is even more difficult to understand how what one might assume are careful and rational actors are inclined to make such decisions for their states. To these decision-makers, the anticipated gains from a war in terms of power, territory, resources, and glory must far exceed the anticipated costs, including potential damage to property and loss of life. Without this prerequisite understanding, there can indeed be no lasting peace (Braumoeller, 2019; Jackson & Morelli, 2011; Vasquez, 1993). Therefore, many international relations scholars are interested in exploring why rational states, who one might expect should prefer a bargained solution over violent conflict, instead opt for war (Fearon, 1995; Goemans & Fey, 2009). In other words, these scholars analyze the factors that hinder or prevent states from arriving at an outcome preferable to war. Arriving at this understanding is important, because scholars can then better disentangle the dynamics and complexities of conflicts and cooperation among states in the contemporary world.

Conflict

An understanding of the motivations of those states that prefer conflict rather than cooperation may be explained by the conceptual frameworks of *structural realism* (James, 1995; Waltz, 2000), *the security dilemma* (Jervis, 1978), and *rationalist explanations of war* (Fearon, 1995). All of these frameworks suggest that individuals are by default aggressive and selfish, meaning that their principal focus is on gaining power and security within the self-help anarchical international system (Havercroft & Prichard, 2017). As such, they are less willing to cultivate trust and confidence with one another, hindering the possibility of initiating mutually beneficial and peaceful cooperation with other states.

AN UNDERSTANDING OF THE motivations of those states that prefer conflict rather than cooperation may be explained by the conceptual frameworks of *structural realism, the security dilemma*, and *rationalist explanations of war.*

Maximization of power and security (Structural realism)

According to structural realists such as James (1995) and Waltz (2000), structure causes conflict in international relations. They believe that the international system is anarchical, meaning that there is an absence of a higher authority above states. The key units are independent and undifferentiated states who seek their own survival under a self-help system. In order to achieve security, states must maximize their power by all means possible (Buzan et al., 1993). In this framework, power is interpreted as a zero-sum game, where an increase in one actor's power automatically leads to a decrease in another actor's power. States aim to maximize relative rather than absolute power gains (Snidal, 1991). The constant and intense struggle for power among states means that conflict is somehow unavoidable. Under the offensive version of structural realism, there is a belief that the most effective way to be secure is to maximize power through domination and hegemony, where initiating war is one of the most prominent ways to achieve security. States should aim for hegemony wherever possible, which leads to a highly competitive international system (Snyder, 2002). Even when states are not attempting to heighten their own power, they cannot trust that other states are also behaving passively. States always safeguard and strengthen their own interests by seeking further control despite no observable threats.

IN A STRUCTURAL REALISM framework, power is interpreted as a zero-sum game, where an increase in one actor's power automatically leads to a decrease in another actor's power.

Lack of mutual trust and confidence (The security dilemma)

Also associated with the realist tradition, the security dilemma has long been employed to illustrate the hindrances that different states would encounter when attempting to attain peace and cooperation (Jervis, 1978). Whenever there are policies or initiatives that a state pursues to enhance its own security, such as building up arms, committing to the use of weapons, or forming alliances, these reduce its adversary's security. This often happens when states are uncertain or distrustful of their adversaries' underlying intentions. Any security-seeking action put forward by a state may be perceived by another state as something threatening, which might in turn be perceived as aggressive by the former state. This induces a spiraling effect of action, such that states can ensure survival in an anarchic environment (Booth & Wheeler, 2007).

Egoism and self-interest (Rationalist explanations of war)

According to Fearon (1995), there are several standard rationalist explanations of war. First, under the anarchic international system, there is an absence of a supranational authority which otherwise may have been able to coerce, punish, or penalize state

violence. This makes states more likely to turn to war to resolve conflicts. In particular, strong states are more inclined to employ military means to force weaker or more vulnerable states to capitulate. Moreover, some nations think that the expected benefits of initiating wars outweigh expected costs. War is a rational option when the expected outcomes of war are perceived as being beneficial for both states. Furthermore, states will sometimes engage in preventative war. This usually occurs when a state is declining in power, while another state is surging in power. These commitment problems can be linked to the large shifts in the future distribution of power. An example would be the Peloponnesian War when Sparta feared the surging power of Athens. The changes in relative power over time affects the bargaining power of states. Since a declining power may anticipate an attack from a surging power in the near future, it may prefer to rationally initiate a preventive war, rather than being forced to make concessions by bargaining later on.

Nevertheless, Fearon (1995) argued that none of these explanations adequately address why states do not negotiate a settlement that would be superior to the costs and risks associated with fighting for all parties. He suggested three alternatives which may better explain the puzzle from a rationalist lens. First, the absence of negotiation may be due to the fact that there is an absence of complete information about relative capabilities or resolve, or there is an incentive to misrepresent information about state power so as to attain a better deal. Since states are egoistic, as suggested by Wendt (1992), they often attain benefits by bluffing in a world full of uncertainties (Mercer, 1995). Since stronger or more resolved states tend to dominate at the bargaining table, they tend to misrepresent their information and position in order to make the informational problem even more challenging. Moreover, commitment problems may hinder the emergence of a settlement that would lead both parties to prefer war. This may exist in situations wherein states would have incentives to renege on the terms of non-binding agreements. Furthermore, there is no consensus due to issue indivisibilities, meaning that some issues in dispute by nature do not allow for compromise across an array of components or issues.

Cooperation

Despite all of the forces that might lead to conflict, there are also incentives for states to seek cooperation. The two main frameworks to better understand cooperation are liberalism (Dorussen & Ward, 2010; Oneal et al., 1996) and neo-institutionalism (Keohane, 2011; Stein, 2008). Both of these suggest that individuals are by default capable of resisting aggression and violence. Nonetheless, cooperation among states is only possible when anarchical conditions are minimized, which requires various international institutions to balance and facilitate the relationships. These institutions play important roles in formulating rules and norms that bound the behaviour of individual states, and promote interdependence and integration among states.

Common gains (Liberalism)

According to liberalists such as Oneal et al. (1996), international trade is often viewed as a means to contribute to world peace and prevent war. State leaders are less willing to damage their well-established trade relations and the economic benefits that accrue from trade by engaging in aggressive war and military conflict with their trading partners (McDonald, 2004; Tanious, 2019). Therefore, given the current and expected gains from trade, countries would prefer to gain by trade rather than gaining by war (Martin et al., 2010). Trade can also help to cultivate better mutual understanding between societies and individuals, which in turn reduces mistrust or misunderstanding and leads to more peaceful relations among states (Dorussen & Ward, 2010). Given that states seek to maximize absolute welfare, maintaining strong trade relations should be seen as rational behaviour by states. States with recurrent and extensive trade ties are strongly incentivized to sustain or even deepen their peaceful relations (Simpson, 2019). Therefore, Copeland (1996) has argued that there is reason for optimism as long as such high levels of interdependence can be maintained.

TRADE CAN ALSO HELP TO cultivate better mutual understanding between societies and individuals, which in turn reduces mistrust or misunderstanding and leads to more peaceful relations among states.

Common security (Neo-liberal institutionalism)

Neo-liberal institutionalists such as Keohane (2011) and Stein (2008) accept that states must pursue their interests under the conditions of anarchy. They counter the realist assumption that international cooperation could only occur under hegemony by suggesting that, even in an anarchic world, the prospect of cooperation is not a zero-sum game. Instead, complex interdependence is manifested across various dimensions like the economy and the environment, meaning that states are striving to attain mutual goals and interests (Genest, 2004). Mutual interests pave the way for cooperation as states seek to maximize absolute gains.

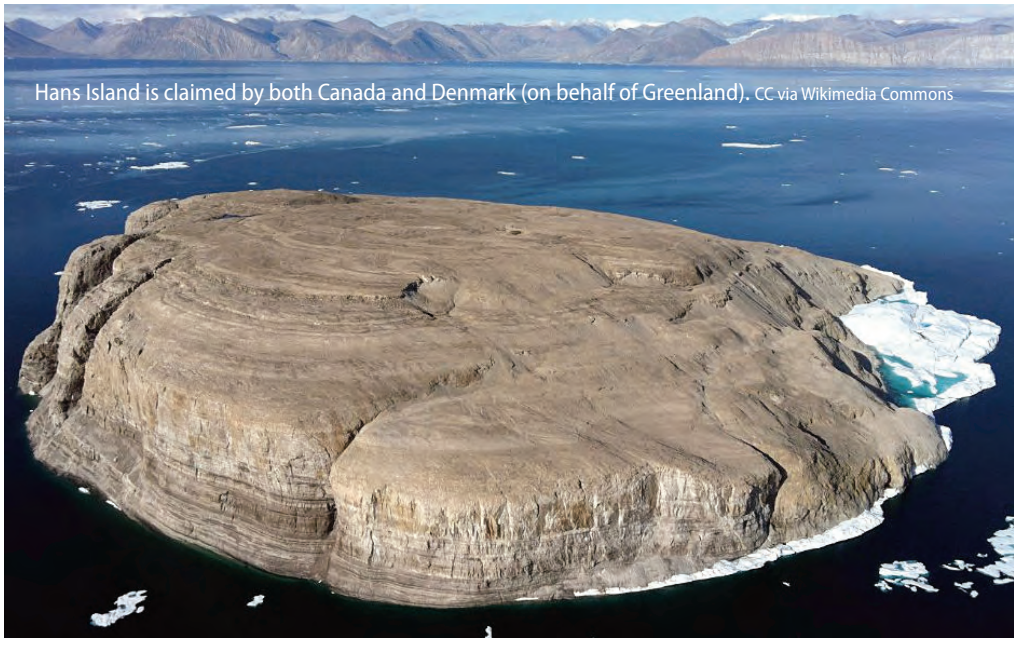
It is widely understood that even during conditions of cooperation, states may cheat or free-ride, and it can be costly to cooperate. These challenges are greater when there is no overarching enforcer. Therefore, states have constructed a series of international institutions or regimes throughout the decades to maintain world peace and order (e.g., the United Nations), advocate for free trade (e.g., World Trade Organization), stabilize the global economy (e.g., the International Monetary Fund), and alleviate global poverty (e.g., the World Bank). All of these help states overcome collective action problems, advocate for global welfare, and cultivate a wide range of shared values and norms, which in turn facilitate cooperation.

APPLICATIONS OF REALISM AND LIBERALISM IN UNDERSTANDING ISLAND CONFLICT AND COOPERATION

Throughout the centuries, a series of scholarly arguments and explanations have emerged from realism and liberalism to account for the maintenance of peace and resolution of conflicts. Understanding territorial disputes between and among islands is no exception. Nonetheless, the following case studies go further by offering a series of contexts and conditions that help to better understand the underlying mechanisms of the conceptual frameworks summarized above. In some examples, one explanatory framework may dominate, while in other situations, conflict and cooperation, as represented by realism and liberalism, may coexist.

Hans Island

Hans Island is a 1.3 km^2 rock islet in the Arctic with no inhabitants or resources. Nonetheless, it holds strategic transportation importance given its location in the Kennedy Channel separating Ellesmere Island (Canada) from Greenland (an autonomous territory of Denmark) (McRae, 2007). As is the case in the East China Sea, the area surrounding Hans Island is also assumed to be rich in fossil fuel reserves. Canada has assumed ownership of the island through the title of acquisition of the territory based on the British Adjacent Territories Order of 1880, while Denmark bases its claim to the island in part on the belief that it was named after a Greenlandic explorer, Hans Hendrik (Stevenson, 2007). Throughout the 20th century, both Canada and Denmark have taken turns in "conquering" the island with troops and have raised their respective



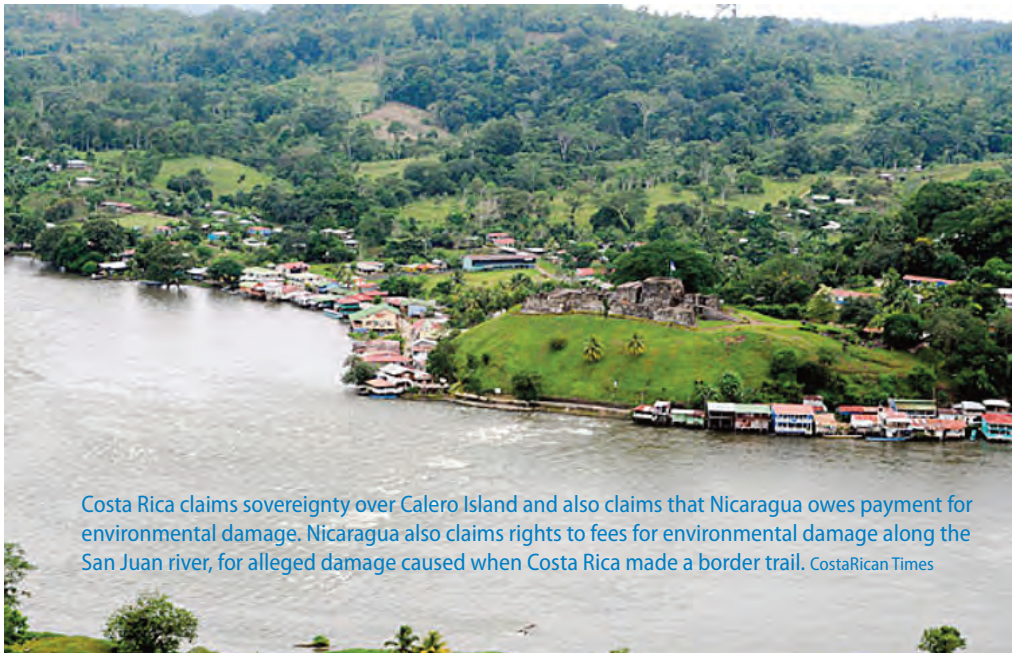
Hans Island is claimed by both Canada and Denmark (on behalf of Greenland). CC via Wikimedia Commons

national flags. Nonetheless, disputes over border demarcation have been recently resolved via bilateral agreements using a cooperative approach (Global Affairs Canada, 2018), and there has yet to be any military encounters on the island (Stevenson, 2007).

According to a liberalism approach, democratic states should prefer to avoid the initiation of any war which might threaten long-term stability and prosperity for all parties (Ray, 1998). After all, both Canada and Denmark are constitutional monarchies with parliamentary democracies and are highly supportive of peacekeeping around the world. There is also a normative imperative for them to resolve differences through non-violent means. More pragmatically, both countries are trying to maintain and strengthen a mutually beneficial trade relationship, as well as international cooperation in various research and development initiatives, including in higher education as well as in science and technology. The vested interests held by both nations helps avoid conflicts due to the substantial and recurrent economic gains that are at stake (Stevenson, 2007). Meanwhile, many interest groups are involved across these well-established and intimate networks and ties, which help impose constraints on the actual decisions and behaviours of the national leaders (Grady, 1978). Even if there may be an underlying desire to initiate war, these impulses are controlled because of the fear of public pressure. States that find themselves in situations such as this will remain cautious and careful, especially balancing and coordinating competing interests, when they are dealing with territorial disputes (Jönsson, 2014).

Calero Island

Located in the delta at the mouth of the San Juan and Colorado Rivers separating Nicaragua and Costa Rica, ownership of Calero Island has been disputed between the two countries for two centuries. Internationally, most nations have viewed Calero Island to be part of Costa Rica. The International Court of Justice (ICJ) once provisionally ruled that both countries should refrain from maintaining civilians, security forces, or police on the island (Bons, 2015). Unlike the case presented above, in this situation both countries have low levels of bilateral trade and investment, meaning that the potential economic disruptions would be limited under the dispute. This also implies that the earlier approach of analysing the dispute through economic liberalism is not as useful in this context. The involvement of the ICJ highlights the importance of international institutions in influencing the preferences and actions of states in the unavoidable anarchic world environment (Kolb, 2013). According to liberal institutionalism, the promotion of institutionalization is crucial for preventing states from engaging in disputes, and advancing collective interest, which in turn promotes international stability (Grieco, 1988). It is always tempting for both sides to adopt a more aggressive stance, which could potentially escalate into armed conflict and lead to a breakdown in their diplomatic relations. Nonetheless, international institutions are



Costa Rica claims sovereignty over Calero Island and also claims that Nicaragua owes payment for environmental damage. Nicaragua also claims rights to fees for environmental damage along the San Juan river, for alleged damage caused when Costa Rica made a border trail. CostaRican Times

essential in facilitating both parties to negotiate and compromise for the sake of attaining a diplomatic outcome. With the involvement of the ICJ, despite the anarchic world environment, it becomes possible for such external organisations to formulate an objective decision that both parties are required to follow, which might be more likely to avoid further disputes and conflicts than if they attempted to settle these issues surrounding Calero Island between themselves.

Islands and the Belt and Road Initiative

As a result of their small size, specialization, and location in strategic waterways, foreign linkages have always been critical for the sustainability of many islands (Dornan & Pryke, 2017; Ferdinand et al., 2020; Karlsson, 2009). Despite their resilience, there is also a need for islands to seek out and maintain economic and political relationships with large states (Armstrong & Read, 2000; Campling, 2006; Grydehøj, 2020b). Given the resources associated with a typical small island state, its relationship with large states is likely to be asymmetrical (Wivel & Oest, 2010). However, this does not mean that the relationship is necessarily one of domination or exploitation. Cooperation is actually very common in such asymmetric relationships, with China's Belt and Road Initiative (BRI) being a recent prime example. According to Kwong and Wong (2020), the Faroe Islands and Greenland, both self-governing island territories of Denmark, have demonstrated different degrees of readiness to cooperate with China under the BRI framework. Following the traditions of realist theories, it is argued that the difference might be attributable to the economic and diplomatic interests enjoyed by hegemons in

the island entities. From this perspective, it may not be surprising that the likelihood of cooperation is greatest where islands are not heavily influenced by a major power, or where an island can leverage itself strategically between different powers.

According to Beck (2020), although many small Pacific island countries describe themselves as large ocean states due to their large Exclusive Economic Zones and historic connections to the sea, attempts made by various regional organizations to develop regional synergies through political and economic cooperation are not substantial and prominent enough to place them in a more symmetrical relationship with larger states. Many of the exchanges and partnerships still take place in a fragmented and piecemeal manner, often leading to a disarticulated and incoherent system. The ideal of regionalism is often greater than the outcomes. This hinders the potential of international cooperation that might otherwise be associated with these islands (Jumeau, 2013).

CONCLUSION: TOWARD A UNIFIED FRAMEWORK OF ISLAND COOPERATION AND CONFLICT

The emerging literature on small states suggests that these jurisdictions have attained a disproportionately high level of democracy and regime stability (Baldacchino, 2012; Corbett & Veenendaal, 2016; Veenendaal, 2020). As an example using a metaphorical island, Theys and Rietig (2020) focus on Bhutan, a small, landlocked, developing country geographically situated between India and China; the two most populous countries in the world. Despite the close proximity of these major state actors, Bhutan has been able to exert substantial global influence and internal well-being, especially on the issue of measures of happiness and sustainability governance. Bhutan succeeded in putting the concept of happiness on the global agenda when the United Nations General Assembly (UNGA) unanimously adopted *Resolution 65/309*, calling for a holistic development approach aimed at promoting sustainable happiness and well-being (Theys & Rietig, 2020). While such an achievement might be dismissed as symbolic, this case does contradict traditional international theories, which tend to regard small states as being synonymous with high vulnerability and limited capacity to effect change on the world stage (Keohane, 1969). Despite the structural vulnerabilities associated with Bhutan, such as a disadvantaged geographical location and limited material resources, their goals and strategic approach to governance and international issues are critical to understanding their approach in this context (Theys & Rietig, 2020). The case of Bhutan shows how small island-like states can succeed in influencing global policies and dynamics.

THE CASE OF BHUTAN SHOWS how small island-like states can succeed in influencing global policies and dynamics.

The same argument can be applied to islands, arguably with a greater theoretical impetus, given some of the unique characteristics of islands as compared to continental small states. It should be noted that the concept of an island-centric governance model is by no means a novel contribution (Overton et al., 2018; Prinsen & Blaise, 2017). Instead, the framework suggested (see Table 7.3) has several features distinguishing it from other classifications: (i) it explicitly focuses on the international relations dimensions of islands; (ii) it allows for the possibility that islands can be either an "actor" or a "subject" in international conflict/cooperation; and (iii) it connects island-specific discussions with the "mainstream" international relations studies, thus providing a "unifying framework".

Drawing on some of the foregoing discussion, a two-dimensional island-centric typology can be suggested to incorporate the unique interactions involving islands (see Table 7.3). Islands can feature in international politics in two forms: as points of contention (i.e., islands themselves as the subject of sovereignty disputes) or as participants (i.e., islands as a party in international relations). The second dimension is about whether one or both of the parties involved is an island. Within this framework, 'island-specific conflicts' refer to disputes involving at least one island over issues involving island sovereignty. An example might be the dispute over the Diaoyu Islands (an archipelago) between Japan (itself also an island archipelago) and China. Alternatively, if two non-islands lay their claim over an island entity, it would be better regarded as a "traditional" territorial dispute. Third, other non-sovereignty-related issues involving an island might refer to general concerns affecting islands (e.g., global warming) which create conditions for cooperation as well as conflict. Finally, the residual category in the bottom-right hand corner of Table 7.3 comprises other issues between non-island countries and is not part of the scope of this chapter.

TABLE 7.3: A Preliminary Framework of Island-Centric Cooperation and Conflict

	Island as a Participant (at least one party is an island)	**Between Two Non-Islands**
Sovereignty disputes involving islands	Island-specific conflicts	"Traditional" territorial disputes
Other issues	Cooperation/conflicts	X (out of scope)

Two-dimensional island-centric typology classifying conflicts and cooperation between and regarding islands.
Source: Author (M. Y. H. Wong).

Such a framework implies that, first, islands might behave differently in international interactions and, second, territorial disputes over islands (instead of over mainland areas) might have different dynamics. Both of these premises are highly plausible given the specific and often unique attributes of islands as discussed above. The same holds true for cooperation, as issues faced by islands are likely to be more similar than those faced by non-island countries.

Although this framework presents only a rudimentary typology of classifying conflicts and cooperation between islands, the important point here is that it theorizes how we can explicitly include islands in the study of international relations, which typically do not feature islands. The framework also distinguishes between how islands are involved in current debates, either as a participant or as a subject. For any researcher of international relations, for instance, territorial disputes over an island might carry different implications than one involving a mainland jurisdiction. Such a framework uniquely bridges the discussion among scholars of Island Studies, those who are focused on sovereignty disputes over islands, and other international relations researchers in general. Future studies might further build on the classification to highlight the unique dynamics of island-centric interactions.

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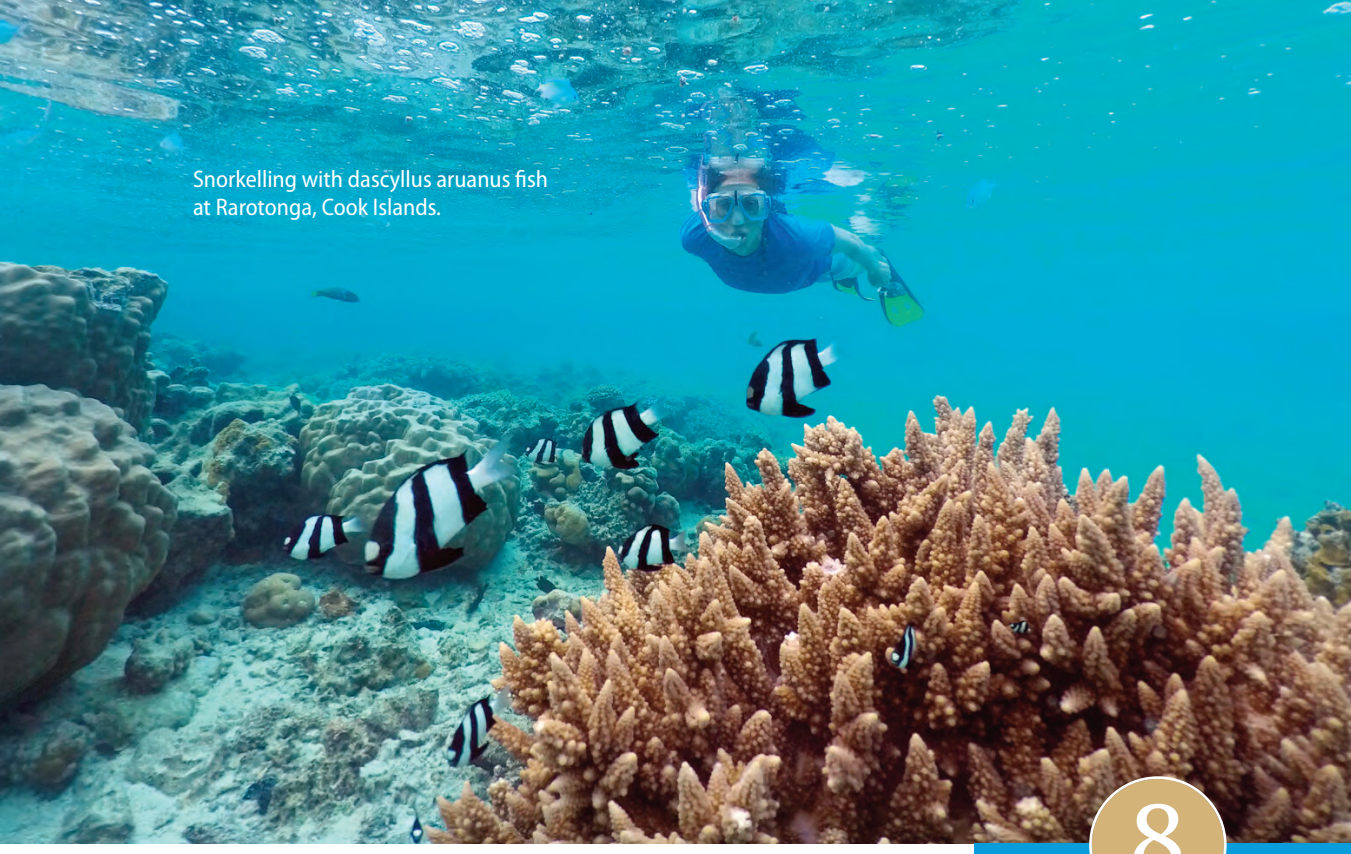

Snorkelling with dascyllus aruanus fish at Rarotonga, Cook Islands.

8

Building cooperation among networks of islands:

Redefining large ocean economies

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ABSTRACT

Islands have long inspired the imagination of humankind. As unique units of the ecosystem, islands have distinct attributes in both the protection of biodiversity and the utilization and management of resources. Although many islands are isolated geographically, they share characteristics that may make them central within ocean regions and in the broader world. However,

from the perspective of the marine economy, there are indicators that suggest the importance of islands is declining, due in part to the lack of close cooperation among what could be a network of islands. Based on an overview of the formation and current situation of island networks, this chapter demonstrates that there are country-specific, regional, sector-specific, and globally specialized networks of islands. The current state of island networks might be described as fragmentary, and there is room for much greater cooperation across a diverse range of issues and fields. Communication and mutual benefits are inherent motivators for the cooperation and development of island networks. Large ocean economies can gain momentum in cooperation among the networks of islands. This chapter makes the case that inclusive island networks can lead to infinite possibilities. Based on shared consensus and principles, building the nodes and lines of the island networks in key fields and on shared issues — including scaled up Blue Economy demonstration areas and the construction of central, nodal urban areas among global islands — creates a virtuous cycle for further cooperation within and across island networks. In this way, we may finally be able to achieve economic, societal, and environmental balance for islands and islanders.

INTRODUCTION

Despite a shared understanding of the existence of islands, people have very different perceptions of the word itself, based at least partly on whether they take a legal or geographical perspective (Baldacchino, 2018; Deng & Liu, 2018; Jayewardene, 1990). Stated simply, compared with continents, islands are surrounded completely by water. This may be the reason that they inspire the human imagination (Hage & Harary, 1996) and have been conceived as sites of innovation (e.g., in building free trade ports) (Baldacchino, 2006; Feng & Deng, 2019). In fact, as distinct units of the ecosystem, islands have unique attributes related to their biodiversity and how they utilize and manage resources (Baldacchino, 2018; Deng, 2020; Deng & Liu, 2018; Deng et al., 2020; J. Randall, 2020a).

Islands are magical worlds (M. Randall, 2017) and, compared to mainlands, are relatively more isolated and sparsely populated. However, with progress in ocean navigation and accelerated globalization, they may become regional centres or even central to our world more broadly. There are millions of islands in the world, most of which are uninhabited (Misachi, 2017); among them are the 300+ islands that make up Fiji (Lal, 1992), the ten islands of the Cape Verde archipelago (Gillespie & Clague, 2009), and more than 10,000 islands that are part of China (Deng, 2015). Although terminology has been put forward from legal, geological, biological, and human perspectives (United Nations, 1982; Depraetere & Dahl, 2018), there is no universally accepted definition of "island". This may be due in part to the incredible number and diversity

Traditional fishing boats at Santa Maria, Sal Island, Cape Verde.

of islands, as well as the range of country-specific standards for defining them. With continued developments in science and technology, and especially since the Information Technology revolution, one might assume that islands are becoming less important, particularly given that there appears to be very little cooperation among them. This may be especially the case if seen from the perspective of the marine economy.

IN THE PAST: FORMATION AND CURRENT SITUATION OF ISLAND NETWORKS

Island networks have evolved dramatically over time. For example, prior to European contact, Indigenous peoples of the Caribbean used the sea extensively for the exchange of goods and ideas (Hofman et al., 2020). This exchange all but disappeared with colonization and only emerged again with globalization in the 20th century. Some oceanic islands, far from mainlands, were, at best, considered as provisioning stations during the early period of European exploration and colonization (J. Randall, 2020a). However, after World War II and what Firth (2007) refers to as a second wave of globalization, islands once again became integrated within a system of global trade and communications. As part of their development strategies, some islands have established strong and diverse transportation relations with the external world, both with

mainlands and with other islands. Over time, persistent relationships have transformed into more established networks. In the context of this research, the core characteristic of island networks is their connectivity. Though some island networks are relatively tangible, others might be described as "silent networks". For example, "barefoot doctors" (rural physicians) in China have made a great contribution to the health of islanders, but they do not conform to the current Chinese medical management system. Therefore, although they continue to operate in a number of islands for consultation and treatment, they are overlooked in any formal accounting. Despite this, however, these rural doctors have created an important silent network of island health (e.g., Wenming Net, 2015).

This chapter makes the case that inclusive island networks can lead to infinite possibilities. While there are many organizations that identify as "island networks", for the purpose of this research, we will introduce only a selection of these, providing examples of country-specific, regional, sector-specific, and global island networks.

A country-specific island network: Hellenic Small Islands Network

The Hellenic Small Islands Network is a non-profit organization established in 2007, mainly made up of Greek island municipalities with populations of less than 5,000 people (Kechagioglou, 2019). This network's mission is to develop the islands' human and social resources, and to "support the societies and municipalities of the small islands in all matters relating to their development, including to the Greek administration and the European Union" (Kechagioglou, 2019). The organization aims to empower small islands to take actions on the affairs related to them by supporting the social and administrative authorities of participating small islands, and strengthening their actions by offering assistance where needed (Kechagioglou, 2019).

A regional island network: European Small Islands Federation (ESIN)

In 2001, six national organizations representing small island communities, including those of Denmark, Finland, and France, decided to create the European Small Islands Network (ESIN) (European Small Islands Federation [ESIN], 2021). In 2005, the network was formalized and renamed as the European Small Islands Federation, although it has maintained its original ESIN acronym. At present, ESIN represents the voices of over 355,000 residents on 1,640 islands across 11 national and subnational jurisdictions, "helping them remain alive" (ESIN, 2021). ESIN functions on two levels: at a local level and at a European level. Locally, ESIN strengthens cultural identity among islanders and facilitates knowledge-sharing between its member islands. At a European level, ESIN informs relevant European Union institutions, influencing EU policy "by increasing their awareness and understanding of small islands" (ESIN, 2021; J. Randall, 2020b).

A sector-specific island network: Network of the Insular Chambers of Commerce and Industry of the European Union (INSULEUR)

Given the importance in the promotion and realization of sustainable development for islands, the non-profit Network of the Insular Chambers of Commerce and Industry of the European Union (INSULEUR) was set up in 2000 with the aim of "improving economic and social conditions in European insular regions" (Network of the Insular Chambers of Commerce and Industry of the European Union [INSULEUR], 2021b), addressing the difficulties stemming from the isolated geographical position of European islands, and gradually "evening out the imbalances" (INSULEUR, 2021b) between continental and island regions. With permanent representatives at European Union organizations in Brussels, this association encourages and oversees cooperation between insular Chambers of Commerce in the EU in support of island development (INSULEUR, 2021a).

The Hellenic Network of Small Islands tracks local products of the small islands. The goal is to map and promote local products in an effort to enhance the islands' profile and to increase public awareness of the valuable resources the islands produce.
The Chamber of Development of the Greek Islands (EOAEN)

Global specialized island networks

Global Islands Network (GIN)

The concept of the Global Islands Network can be traced back to the UN Global Conference on the Sustainable Development of Small Island Developing States and its parallel NGO Island Forum held in Barbados in 1994. The Barbados Declaration and the *Action Guideline for Sustainable Development of Small Island Developing States* adopted at the Barbados Conference put forward 14 priority areas relating to small islands, and recommended "that regional organisations and networks be created to strengthen the ability of small islands to develop in a sustainable manner" (Global Island Network, 2021; United Nations General Assembly, 1994). In its earlier forms, the Global Islands Network mainly provided services related to the dissemination of information on the internet. Later, all parties agreed to formally set up the Global Islands Network (GIN) because a centralized portal website was needed. GIN is committed to promoting the wellbeing of islanders and islands at different levels, primarily through electronic communications, and operated as a non-profit organization from 2002–2015. The objectives of GIN include: "facilitating the capacity of islanders to acquire, disseminate and utilise knowledge resources; improving access to existing data and generating original information about islands; providing technical assistance and supporting initiatives which further integrated development on small islands; encouraging collaborative projects and comparative studies between and among islands; fostering cooperation by sharing good practices and offering a forum for discussion; and strengthening the voice of island communities as well as their representatives in intergovernmental and policymaking bodies" (Global Islands Network, 2021). While GIN now operates primarily as a worldwide network and key source of island-related information, it has undoubtedly made — and continues to make — valuable contributions in addressing issues of information asymmetry and in promoting the voices of islands and islanders globally.

Global Islands Network (GIN) is committed to promoting the wellbeing of islanders and islands at different levels, primarily through electronic communications.

Local2030 Islands Network

September 27, 2019 was an auspicious date for island networks. Not only was this the day on which the 74th Session of the United Nations General Assembly carried out a high-level review of the *Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway*, but it was also the day on which the Global Island Partnership (GLISPA) launched the Local2030 Islands Network. Led by islands for islands, the Local2030 Islands Network is intended to "accelerate action on UN Sustainable Devel-

opment Goals (SDGs) and the *SAMOA Pathway*" (Local2030 Islands Network, 2020b). The premise of this network is that islands are unique, producing unique cultures and communities, and play a special role in leading the whole world in coping with climate change and promoting sustainable development (Local2030 Islands Network, 2020b). The goal of this network is "to promote island solutions and leadership based on shared island experiences and perspectives" (Local2030 Islands Network, 2020a).

Fishermen on the Cook Islands.
Alliance of Small Islands AOSIS photo

In addition to the types of networks described above, there are many other examples of island networks that serve specific functions. For instance, IslandNet is devoted to improving the network of information technology service in the Caribbean and Latin America (IslandNet, 2020), and the Island Travel Network is a platform specializing in providing travel services to tourist destinations such as Fiji, Hawai'i, the Cook Islands, and Vanuatu (Island Travel Network, 2014). In addition, there are many more networks focusing on regional and sectoral dimensions of islands, including the B7 Baltic Islands Network and the Excellence Network of Island Territories/Réseau d'excellence des territories insulaires (RETI) (J. Randall, 2020b).

Though the networks noted above carry out exceptionally important functions and operate effectively across different scales and issues, they reflect the fragmented nature of island organizations and the possible need for an overarching network. One implication is that there is still room for further cooperation in building a network of islands and island organizations.

COMMUNICATION AND MUTUAL BENEFITS: INHERENT MOTIVATION FOR THE COOPERATION AND DEVELOPMENT OF ISLAND NETWORKS

Research on network analysis is closely related to mathematical models (Hage & Harary, 1991, 1996). Among these models, the *graph theory* model (Hage & Harary, 1996) is one of the more suitable network analysis tools for examining island networks. The value of this model is that it defines the critical structural characteristics of all networks. For a network of islands, these characteristics include their distance, accessibility, and connectivity, as well as their centre, source, closure, sequence, division of zone, and cross-substructure (Hage & Harary, 1996). Existing research has suggested that island networks are internally connected through many kinds of social, cultural, religious, language, ecological, and research relationships, as well as through the influence of networks on the components (Constantakopoulou, 2007; Hage & Harary, 1996; Sierra & Feng, 2018; J. Randall, 2020a, 2020b). These island connections allow the societies that are part of the network to show their special attributes (Hage & Harary, 1996).

INTER-GOVERNMENTAL international organizations such as the Alliance of Small Island States (AOSIS) have united small island states to establish new cooperative island networks to allow their collective voice to be heard, especially as it concerns sustainable development and the consequences of global warming.

Even with the existence of a network, cooperation and further development among islands still requires an inherent motivation, and at the core of that is communication and mutual benefit. Of course, in actuality, benefits may be asymmetrical or unitary. Nevertheless, because of the existence of a network, islands are not "solitary kingdoms" or marginalized. In the process of driving the communication and mutual benefits among island networks, international politics causes national realism to play an important role. As an example of mutual benefits, inter-governmental international organizations such as the Alliance of Small Island States (AOSIS) have united small island states to establish new cooperative island networks to allow their collective voice to be heard, especially as it concerns sustainable development and the consequences of global warming (Alliance of Small Island States, 2021). For the vast majority of small island states, sea level rise due to climate change is an existential crisis (Huang et al., 2018). As such, the case can be made that we need to build a new island cooperation network to promote inclusive growth (Hampton & Jeyacheya, 2020) and advance sustainable development. In other words, we should construct a more inclusive form of cooperation among island networks based on communication and mutual benefits.

LARGE OCEAN ECONOMIES: GAINING MOMENTUM IN COOPERATION AMONG THE NETWORKS OF ISLAND

Since the outbreak of COVID-19 in 2020, many islands have been forced to lead a relatively secluded life to cope with serious health threats. But travel prohibitions and tightened entry policies have dealt a serious blow to the foundational industries on many islands that rely on the flow of people, especially tourists, for their development (see the chapters by Sindico, Huish, and Kelman, this volume). Even without these added obstacles, small island states and subnational island jurisdictions (SNIJs) face many other challenges (Lanthén & Beyersdorff, 2017). Our world is undergoing changes unparalleled in the past hundred years, however, which may provide islands with greater development opportunities. For those who have lived in mainland areas for a long time, their understanding of islands focuses primarily on the limited resources associated with small island areas, the small population, and high transportation costs, often leading them to conclude that the development potential and opportunities of islands are relatively limited. In fact, many small island states have extensive marine Exclusive Economic Zones (EEZ) that are not easily understood. Tuvalu's EEZ, for example, is 27,000 times the size of its land area, while the Republic of Kiribati, the largest Small Island Developing State in terms of ocean territory, has the 13th largest exclusive economic zone on Earth (Jumeau, 2013). To better illustrate this feature, and based on the existing literature, we focus on one type of large ocean economy: large ocean states, also referred to as "small island states" or Small Island

A mangrove planting project on Nanumea atoll, Tuvalu. Tuvalu's EEZ is 27,000 times the size of its land area.

Developing States (SIDS) (Cedras, 2020; Govan, 2017; Hind et al., 2015; Jumeau, 2013; United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States [UN-OHRLLS] et al., 2014).

Given the marine territory associated with large ocean states and the natural resources and economic potential they contain, there is a tremendous opportunity for development (United Nations Environment Programme et al., 2012). According to the Organisation for Economic Co-operation and Development (OECD), it is estimated that the marine economy will generate US$3 trillion by 2030 (Organisation for Economic Co-operation and Development, 2020; UK Government Office for Science, 2018). In key marine sectors, the investment of one US dollar can generate at least five US dollars worldwide, and the rate of return on investment is up to 450%–615% in some key fields over a period of thirty years (Konar & Ding, 2020).

THE "BLUE ECONOMY" IS A conceptual framework proposed by the international community which takes the sustainable health of the ocean into consideration. This concept promotes economic growth, social inclusiveness, and improved living standards while guaranteeing the sustainability of the marine environment.

As per the principles of sustainable development, islands have been seeking a balance among three aspects of their development goals: the economy, society, and the environment. The "Blue Economy" is a conceptual framework proposed by the international community which takes the sustainable health of the ocean into consideration (United Nations Development Programme, 2019). This concept promotes economic growth, social inclusiveness, and improved living standards while guaranteeing the sustainability of the marine environment (United Nations Development Programme, 2019). But what merits the most attention is that, because the Blue Economy is defined in different ways (e.g., Hassanali, 2020; Smith-Godfrey, 2016) and is relatively new, it is still at the stage where it is not generally observed in all jurisdictions (Hassanali, 2020) other than in some specific cases (Keen et al., 2018; Lu et al., 2019). Despite this absence in application in all islands, ocean and coastal states have a long history of participating in the marine economy. Therefore, in this chapter we regard the Blue Economy as a development pursuit similar to that of the marine economy. As far as SIDS are concerned, the concept of the Blue Economy seeks to transform their geographic location from what might be perceived as a liability into "an asset for ocean-based economic development" (Halais, 2019, para. 3). Of course, compared with continental states, small island states often have a specialized industrial structure that may make it difficult for them to build on the opportunities of the marine economy. There are, however, opportunities for change.

Marine industries that facilitate and utilize cooperation across island networks may support successful development of SIDS for the following reasons:

- **Contributions made by the network to connectivity**.
  Paradoxically, islands are isolated yet also connected by the sea (Sen, 2010). The connection among islands allows for an effective exchange of resources. For example, to many Pacific islanders, the sea is their main economic, social, and cultural lifeline (Seidel & Lal, 2010). These tangible and intangible exchanges have formed more efficient networks of industries.

- **Enormous achievements within marine related sectors.**
  Development of the traditional marine fishery and island tourism, both of which are influenced by and dependent on the presence of the sea, have enormous potential. Although the value of the contributions of these sectors may vary significantly among islands, for many it is substantial. For example, Peterson and DiPietro (2021) note that for the Caribbean region, international tourism constitutes 20% of exports, 15% of Gross Domestic Product, and 14% of labour. In fact, the issue in some cases is not the lack of achievements in this sector but rather that it may be so large that it adversely impacts local society and the physical environment (i.e., overtourism; Peterson & DiPietro, 2021).

- **The ability and willingness to cope with common challenges**.
  With the development of marine industries, islands face common challenges, including the impacts of climate change and sea level rise, frequent natural/environmental disasters, difficulty in the management of wastes, shortage of fresh water, heavy dependence on traditional fossil fuel-based sources of energy, endangered bio-diversity resources, difficulties in transportation and communications, and deficiencies in science and technology (Ault, 2016; Deng, 2016; Deng & Fu, 2017; Huang et al., 2018; Mataki, 2011; United Nations General Assembly, 1994). Coping with these challenges, including implementing creative solutions in the areas of disaster prevention and mitigation, desalination, offshore wind power, and green science and technology, creates a foundation for the exchange of knowledge across a network.

- **The development of marine technologies**.
  The development of new energy technologies, including offshore wind power and hydrogen energy, may help to solve the problems of energy shortages and high energy prices on islands. Some SIDS are aspiring to achieve 100% renewable energy by 2030 (Wehner et al., 2017). To accelerate the realization of this goal, island governments need to cooperate by increasing

"monitoring efforts, knowledge sharing, and the transfer of technology and digital infrastructure" (Winther et al., 2020, p. 1453). Although any one single island might have little impact, a network of islands working together is more likely to make substantial advances. Therefore, it is important to strengthen this aspect of cooperation among islands.

IN THE FUTURE: THE LASTING CONNECTION OF ISLAND NETWORKS

Existing linkages among islands may have stagnated as a result of the impacts of the COVID-19 pandemic. While we know that achieving mutual benefits is an inherent motivation for cooperation among — and development of — island networks, a lack of communication may hinder knowledge sharing (Lanthén & Beyersdorff, 2017). A new route is needed to build stability and cooperation among island networks, and this new and inclusive islands network has tremendous possibilities. We will now highlight four key strategies to achieve this goal.

Form cooperation based on a shared consensus and principles

In addition to shared cultural characteristics, trade relationships, and/or systems of governance, island networks are linked on the basis of common interests. It could be argued that this is what brings SIDS together as a coherent entity (United Nations General Assembly, 1994). However, more can be done to bring islands together under a shared consensus. The idea of "building the community of shared future for mankind" (Xi, 2017) can give us some inspiration. Though this approach was first proposed by China (Xi, 2017; Zhao, 2018), its value and rich connotations originate in and have developed from common practices, to the point that it is now included in relevant United Nations resolutions (United Nations Economic and Social Council, 2017). In order to build cooperation among networks of islands, we argue that large ocean economies could coalesce around a shared principle such as "building the community of shared future for all islanders."

Of course, to turn a shared consensus into actuality, there must be some form of agreement on what this means for islands, and how it helps them to address their challenges. The following principles are suggested:

1) **That island networks are for every islander, and island networks are within every islander.** Although the contents of the island networks are rich and diverse, the goal of cooperation based on island networks is for every islander. By involving every islander in one or more island networks, the breadth and depth of islanders' participation can be reemphasized.

2) **Where applicable and appropriate, borrow the development plans of large countries**. While internal cooperation within island networks in SIDS

is important, it is also important to cooperate with mainlands, especially large countries that have large markets. In the process of building cooperation among networks of islands, we suggest that it would be beneficial to make good use of external resources, actively participate in the development plans of large countries, and build up the strength of large ocean economies by "free riding".

3) **Promote inclusive growth of the marine economy.** Instead of simply charging for using resources on the basis of "investment licensing", we suggest emphasizing the inclusive growth of the marine economy. Relevant managers can consider participating in the marine industry value chain by means of resource investment, labour, and management service, so as to complete the transformation from resource provider and exporter to resource user and active participant. This suggests that more of the development value chain remains on the island. In addition, relevant rules should be formulated requiring the participation of multiple actors so as to prevent countries or investors from monopolizing the use and development of certain resources, which could harm the connectivity of the island network.

Highlighting key fields among islands

Cooperation within island networks should be practical within the marine economy. As has been stated by Seychelles Ambassador for Climate Change and SIDS Issues Ronny Jumeau (2013, p. 2), islanders are "ocean people" with a "unique dependence" on oceans. In his 2013 report to the United Nations, Ambassador Jumeau proposed several key areas for island cooperation, including capacity building, shared interest in caring for areas beyond national jurisdiction, marine pollution, sea level rise, ocean acidification, coral reef protection, marine protected areas, innovative financing, marine renewable energy, and fisheries. Similarly, Govan (2017) notes that key issues among Commonwealth small island states include fisheries, transport, emerging sectors (e.g., deep sea minerals, bioprospecting, and marine genetic resources), environmental pressures and threats, geopolitical interest, and gender perspectives. When discussing international collaboration in marine science in small island states, Hind and colleagues (2015, p. 2) have argued that "well-meaning engagement by foreign marine scientists can have limited or even negative impact if it does not meet locally identified needs."

Perhaps this conclusion can also be applied to key fields among island networks. Identifying key fields is a dynamic process. Based on the Belt and Road Initiative, we suggest the following areas can be considered for large ocean economies: maritime transport and trade, a competitive fishery, leisure and tourism, low-cost ocean energy, port infrastructure development, and marine disaster mitigation and risk management. Supported by advanced information and communications technology (ICT) and renew-

able sources of energy, new platforms could be established that may result in greater cooperation among islands. Large ocean economies choosing among the key fields can use these new platforms to maximize benefits for their island populations.

Joint construction of Blue Economy demonstration areas

The development of the marine economy requires considerable capital investment, often involving foreign investment. The development of the marine economy should not repeat the traditional exploitative, resource-intensive model used in the past by many continental states (Stevens, 2015). The pursuits of the Blue Economy may be an appropriate choice for developing the marine economy. A first step may be the joint construction of Blue Economy demonstration areas that would attract the capital needed to develop the marine economy.

Planning global central island cities

In the process of cooperation among island networks, some islands may focus their attention on developing key nodes (M. Randall, 2017). Given the influence of marine economy activities on coastal areas and mainlands (Meister, 2015), having a global central island city may be useful. We are not advocating for every island to become a modernized city, since not all islands can successfully support this kind of development. However, those island cities that have the greatest potential may wish to unite under formal legal agreements. In doing so, they may develop connectivity advantages comparable to those of continental metropoles.

CONCLUSION

Island networks are starting to form but, at least to this point, are often fragmented, with little cooperation across networks. Through reconceptualizing large ocean economies, a greater level of stable cooperation could be built among networks of islands. Based on shared consensus and principles, large ocean economies could highlight key fields to promote this cooperation. Furthermore, establishing joint construction of Blue Economy demonstration areas and planning centralized global island cities represent valuable opportunities. The final, overarching goal of this process is to achieve economic, societal, and environmental balance for all islands.

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Nay Harn beach at Phuket, Thailand. Part of Thailand's plan to re-ignite the decimated Phuket economy is to quickly vaccinate the local island population, with the hope that once "herd immunity" is achieved, they can open up to vaccinated tourists.

Conclusions

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As might be expected, any publication on public health that takes place during the COVID-19 pandemic is inevitably going to be linked to the current crisis. Even those places that have not experienced large numbers of cases, hospitalizations, and fatalities have still suffered turmoil. This is especially so for small islands. Although many islands have been relatively successful at protecting their populations from the virus, they have all suffered the economic and social consequences of an epidemic during this modern era of globalization. For a variety of reasons, this is particularly problematic for small islands.

First, as is clear to most, it is not uncommon for islands to have a greater revenue and employment dependency on international tourism. Over the past year, and in almost every jurisdiction, international travel has declined precipitously. Given the

viral incubator role that cruise ships were perceived to have played in the early stages of this pandemic, those islands with a greater reliance on this form of tourism have been even more adversely affected. If tourism itself may be slow to recover, then cruise ship tourism will undoubtedly be even slower to bounce back to previous levels (Nhamo et al., 2020).

Even those places that did not have a large tourism presence have suffered. The decrease in mobility has affected those jurisdictions that have traditionally relied upon remittances as an important part of community and household income. For example, the World Bank (2020) estimates that remittances will fall by approximately 20% in 2020. Migrant workers, and by extension their families and community economies, "may be among the hardest hit groups" (Takenaka et al., 2020, para. 1). It is difficult to send money back home if temporary migrant workers, health care professionals, or caregivers are not even allowed to travel to their employment destinations. Although some islands may not have experienced a steep decline in remittance revenues, others have suffered to a greater extent (Connell, 2021).

THE LEVEL OF POVERTY HAS increased in many islands in the Pacific. Food insecurity, a feature that was already a health challenge for many islanders, has become even more severe. Ironically, the pandemic has made more transparent how the prevailing import-dependent and monoculture food export system has created greater vulnerability for small islands.

The economic crisis has also created a parallel social crisis. The impact of any pandemic inevitably hurts those already vulnerable, including those in unstable employment, women and other marginalized groups, and those in rural areas or outlying islands (Connell, 2021). With already weakened social protection systems, the economic decline has increased the level of poverty in many islands in the Pacific (Edwards, 2020). Food insecurity, a feature that was already a health challenge for many islanders, has become even more severe. Ironically, the pandemic has made more transparent how the prevailing import-dependent and monoculture food export system has created greater vulnerability for small islands (Leweniqila & Vunibola, 2020). Not only has this been a major contributor to non-communicable diseases associated with obesity, but it has also revealed the susceptibility of the food supply chain to external shocks (Murphy et al., 2020).

One of the prevailing themes of recent research on island development is their adaptability and nimbleness; being able to react quickly to changing circumstances. For those islands that are especially dependent on international tourism, the pandemic has forced them to adopt alternative strategies to assist this sector, in the process creating a greener and more sustainable future (Ioannides & Gyimóthy, 2020). In some cases, islands have marketed themselves to "digital nomads" as part of a wider "Work from Everywhere" trend (Buhalis, 2022). While these footloose workers, characterized

as young, professional, and motivated by broader quality-of-life considerations, existed before the current pandemic (Woldoff & Litchfield, 2021), islands such as Bali, Indonesia, and Phuket, Thailand, are now explicitly branding themselves as destinations for this class of worker (Cook, 2020; Orel, 2020). It is too early to assess the success of this strategy. It is clearly not going to attract large numbers of tourists. However, that may be the point. It becomes one of a series of strategies that, collectively, may diversify the tourism base in a more sustainable manner.

Some island governments and tour operators in places such as Cuba have attempted to surgically host groups of tourists on offshore islands, thereby restricting their contact with the host population (Rizzo, 2020). St. Kitts and Nevis in the Caribbean have implemented a strict regimen of testing prior to and after arrival on the islands, with tourists moving from initial isolation at their hotel complex to free movement throughout the islands over a period of 14 days. In Phuket, Thailand's plan for the resumption of tourism is to quickly purchase and vaccinate most of the local island population, with the hope that once "herd immunity" is reached, they can more quickly open up to vaccinated tourists (Thanthong-Knight, 2021).

THE COVID-19 PANDEMIC has revealed opportunities to strengthen food systems, including greater intra-regional trade and ecologically sound practices in traditionally import-dependent islands in the Pacific and Caribbean.

The COVID-19 pandemic has revealed opportunities to strengthen food systems, including greater intra-regional trade and ecologically sound practices in traditionally import-dependent islands in the Pacific and Caribbean (Farrell et al., 2020; Murphy et al., 2020). While the pandemic has brought about increased land disputes and a reduction in agricultural production and planting materials, it has also resulted in a re-emergence of cultural safety networks such as barter systems, and a reinvigoration of traditional food systems (Iese et al., 2021). As the subtitle in an article by Miles (2020) suggests, "If we get food right, we get everything right." A more self-sufficient food system has the added benefit of being more nutritious, supporting small scale producers and rural/outlying islands.

For many islands, a new economic normal is going to be accompanied by increased reliance on aid to meet the cost of COVID-19 mitigation efforts, either bilaterally or through multilateral agencies such as the World Bank, regional development banks, and the International Monetary Fund (Herr, 2020). Despite increased aid, the current economic dilemma has even longer-term consequences for deficits and debt loads, increasing the likelihood of social services cutbacks through structural adjustment or even to the possibility of debt defaults (Rashid et al., 2020).

Even in a post-COVID-19 world, governance may matter. For example, even as vaccinations are distributed to parts of the developing world, a pattern seems to be emerging wherein subnational island jurisdictions (SNIJs), such as those that are part

of the British Overseas Territories, are accessing vaccines faster than their neighbouring independent island states, in much the same way that some SNIJs were able to access recovery funds after hurricanes or tsunamis. There are some who say that, despite all of the aspirational talk of "building forward better" or the "new normal", our post-pandemic world may be much like the old normal, with decisions on island futures being made elsewhere (Herr, 2020).

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Given the multiple and ongoing impacts of the COVID-19 pandemic throughout the world, it should come as no surprise that the theme for this year's edition of the Annual Report is public health on small islands, the vulnerabilities and resilience associated with the public health systems, and the links to the rest of the world that both aggravate challenges and offer creative solutions.

Using historical and current examples, the authors contributing to this volume show how islands experience and govern this external crisis while balancing economic and social agendas. As is the case with most issues on islands, the internal relationships developed on the islands, and the collaborations they have established externally, are critical to understanding islands' current circumstances and the likelihood of experiencing sustainable futures.

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