LEVERAGING OCEAN RESOURCES FOR SUSTAINABLE DEVELOPMENT OF SMALL ISLAND DEVELOPING STATES

Asia-Pacific Countries with Special Needs Development Report

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

76th COMMISSION SESSION

*The shaded areas of the map indicate ESCAP members and associate members.**

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Asia-Pacific Countries with Special Needs Development Report

Armida Salsiah Alisjahbana
Executive Secretary

Hongjoo Hahm
Deputy Executive Secretary

Hamza Ali Malik
Director, Macroeconomic Policy and Financing for Development Division

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FOREWORD

This *Asia-Pacific Countries with Special Needs Development Report* examines how small island developing States could accelerate their progress towards achieving the Sustainable Development Goals by making better use of their vast ocean resources and the blue economy. More than a quarter of our member States in the Asia-Pacific region are small island developing States. These States are a diverse group of countries that differ in size of their national economies, landmass, populations and level of development.

Supporting these States to implement the 2030 Agenda for Sustainable Development is an essential component of the mandate of ESCAP. Doing so is particularly important considering that, even before the COVID-19 pandemic erupted, these States were on track to reach only infrastructure-related Goal 9 and Goal 12 on responsible consumption and production. While for many Goals insufficient data availability makes it difficult to gauge progress, the likely impact of the COVID-19 pandemic on these economies could be to disrupt these trends and push States even further from reaching the Sustainable Development Goals. COVID-19 has made the need for accelerated action to achieve all the Goals by 2030 even more urgent.

An important impediment to their progress towards the Sustainable Development Goals is the narrow resource base on land that these States face. This reality limits their ability to provide employment and decent work for all, which are critical elements to reach many of the other Sustainable Development Goals. Indeed, these economies have regressed on achieving Goal 8, which is focused on promoting inclusive and sustainable economic growth. While the COVID-19 pandemic is still under way, it is already evident that many of these economies will regress further in this area.

While small island developing States tend to cover only small areas of land, these States have – under the United Nations Convention of the Law of the Sea – exclusive rights to exploration and use of marine resources in zones covering 200 nautical miles from their shores. For several small island developing States, these exclusive economic zones exceed their land area by many thousand times. Making better use of these vast ocean resources and the blue economy could provide these States with the means to accelerate their progress towards achieving the Sustainable Development Goals.

This report highlights that implementation of the 2030 Agenda entails ensuring sustainable use of existing ocean resources and developing sectors that provide productive employment and close links to the local economy and local populations. In doing so, it focuses on two sectors which stand to gain most from these vast ocean resources: fisheries and tourism. Although these sectors, especially tourism, are being significantly affected by the ongoing COVID-19 pandemic, they remain among the most important sectors for many small island developing States in terms of their contribution to output and their importance for livelihoods.

While small island developing States can do more to embrace their blue economy to foster their sustainable development, this report emphasizes that greater regional cooperation is an important element for creating an enabling framework. Regional cooperation is especially important given the nature of fisheries as a common property resource.

I hope this report contributes to our collective push to accelerate progress towards achieving the Sustainable Development Goals in small island developing States.

Armida Salsiah Alisjahbana
Under-Secretary-General of the United Nations
and Executive Secretary of ESCAP

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Analyses in the *Asia-Pacific Countries with Special Needs Development Report* are based on data and information available up to the end of March 2020.

Groupings of countries and territories/areas referred to in the present issue of the Report are defined as follows:

- Countries with special needs – least developed countries, landlocked developing countries and small island developing States.
- ESCAP region:
  - ESCAP member States – Afghanistan; Armenia; Australia; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; China; Democratic People's Republic of Korea; Fiji; Georgia; India; Indonesia; Iran (Islamic Republic of); Japan; Kazakhstan; Kiribati; Kyrgyzstan; Lao People's Democratic Republic; Malaysia; Maldives; Marshall Islands; Micronesia (Federated States of); Mongolia; Myanmar; Nauru; Nepal; New Zealand; Pakistan; Palau; Papua New Guinea; Philippines; Republic of Korea; Russian Federation; Samoa; Singapore; Solomon Islands; Sri Lanka; Tajikistan; Thailand; Timor-Leste; Tonga; Turkey; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; and Viet Nam;
  - Associate members – American Samoa; Cook Islands; French Polynesia; Guam; Hong Kong, China; Macao, China; New Caledonia; Niue; and Northern Mariana Islands.
- Developing ESCAP region – ESCAP region excluding Australia, Japan and New Zealand.
- Developed ESCAP region – Australia, Japan and New Zealand.
- Least developed countries – Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Lao People's Democratic Republic, Myanmar, Nepal, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu.
- Landlocked developing countries – Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, Turkmenistan and Uzbekistan.
- Small island developing States:
  - ESCAP member States – Fiji, Kiribati, Maldives, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu;
  - Associate members – American Samoa, Cook Islands, French Polynesia, Guam, New Caledonia, Niue and Northern Mariana Islands.
- Pacific – American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Northern Marina Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
- Due to the limited availability of data, associate members of ESCAP are excluded from the analysis in the Report unless otherwise indicated.
- For the purposes of this Report, Singapore is not considered to be a small island developing State because of its high level of development and high-income status, and for simplicity of analysis.

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Growth rates are on an annual basis, except where indicated otherwise.

Reference to "tons" indicates metric tons.

References to dollars ($) are to United States dollars, unless otherwise stated.

The term "billion" signifies a thousand million. The term "trillion" signifies a million million.

In the tables, two dots (..) indicate that data are not available or are not separately reported; a dash (–) indicates that the amount is nil or negligible; and a blank indicates that the item is not applicable.

In dates, a hyphen (-) is used to signify the full period involved, including the beginning and end years, and a stroke (/) indicates a crop year, fiscal year or plan year.

ACRONYMS

ADB	Asian Development Bank
COVID-19	coronavirus disease of 2019
EEZs	Exclusive Economic Zones
ESCAP	Economic and Social Commission for Asia and the Pacific
FADs	fish aggregation devices
FAO	Food and Agriculture Organization of the United Nations
FFA	Pacific Islands Forum Fisheries Agency
GDP	gross domestic product
GNI	gross national income
IOTC	Indian Ocean Tuna Commission
IPCC	Intergovernmental Panel on Climate Change
ISA	International Seabed Authority
IUCN	International Union for Conservation of Nature
IUU	illegal, unreported, unregulated (fishing)
MSP	marine spatial planning
PIASA	Pacific Islands Air Services Agreement
PIFS	Pacific Islands Forum Secretariat
PNA	Parties to the Nauru Agreement
RFBs	regional fishery bodies
SARS-CoV-2	severe acute respiratory syndrome coronavirus 2
SPC	Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SPTO	(South) Pacific Tourism Organisation
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNWTO	World Tourism Organization
VDS	vessel day scheme
WCPFC	Western and Central Pacific Fisheries Commission

Chapter I

Ocean resources for sustainable development of small island developing States

This report is focused on how small island developing States can leverage ocean resources for sustainable development. As a companion report to the thematic study entitled *Changing Sails: Accelerating Regional Action for Sustainable Oceans in Asia and the Pacific*, this report recognizes the particular development challenges that these States face. In view of these States' vast ocean resources, this report argues that two sectors – fisheries and tourism – should be used more effectively to accelerate action towards achieving sustainable development.

While focused on small island developing States, the policy recommendations emanating from this report are also valid for other countries in the Asia-Pacific region. For instance, lessons learned from tourism are valid for the landlocked developing countries in Central Asia and beyond, where the unique geography of high passes and mountains, vast deserts, grassy steppes and rich cultures appeals to visitors. Similarly, the role of oceans is also important for coastal economies, especially coastal least developed countries in Asia and the Pacific. For that reason, ESCAP resolution 72/9 highlights the importance of sustainable use of oceans, seas and marine resources for sustainable development in the region.

Despite being classified as one group, Asia-Pacific small island developing States are in fact a very diverse group of countries and territories. They face specific and increasing challenges due to their geographic characteristics, which include remoteness, limited landmass, small populations, modest size of their economies, and high exposure and vulnerability to external environmental and economic shocks. This classification of "small island developing States", which is a technical and political term, was formally introduced at the Earth Summit in 1992.[1]

In the Asia-Pacific region, 15 members and 7 associate members of ESCAP are classified as small island developing States.[2] They differ in the size of their national economies, their landmass and populations, as well as their international status and level of development. For instance, in the Pacific, where these States are divided into three geographic areas (Melanesia, Micronesia and Polynesia), Melanesian States usually possess the largest landmass, with Papua New Guinea standing out with 462,840 km^2, whereas Micronesian and Polynesian States are often small atolls or groups of atolls: for example, Tuvalu covers only 26 km^2 and Nauru 21 km^2. The populations in Asia-Pacific small island developing States also vary considerably, with Tuvalu, the smallest, having a population of less than 12,000 while Papua New Guinea is home to more than 8 million people. Similarly, gross domestic product (GDP) per capita ranges from $1,625 in Kiribati to $17,318 in Palau (World Bank, 2019b), if one does not consider much richer Guam and Northern Mariana Islands, which are territories of the United States of America, and Singapore, which at $64,581 per capita is significantly more developed than the other small island developing States.

Small island developing States possess a narrow resource base and are confronted with small domestic markets. The elements of "smallness" deprive these States of the benefits of economies of scale. As a result, there tend to be only limited opportunities for private sector development in these economies. They face a combination of being far from export markets (which in turn are also few in number and often remote) and import resources, and have to cope with low and irregular international traffic volumes: for instance, Vanuatu's capital city, Port Vila, receives about one container ship every three days, and only four companies provide regular shipping services to the country. In Kiribati, only one operator offers regular liner shipping services, with a single ship arriving every 10 days (Benamara and others, 2019). This translates into high costs for energy, infrastructure, transportation and communication. In addition, these economies face an increased incidence of natural disasters stemming from the high frequency of natural hazards and their low resilience to such calamities and other external shocks. Therefore, small island developing States tend to experience severe volatility in terms of their economic growth. This is likely to be confirmed once the impact of the COVID-19 pandemic on these economies becomes clearer. The combination of these factors also makes these States highly disadvantaged in their development. The development challenge is especially valid for five small island developing States that are also classified as least developed countries: Kiribati, Solomon Islands, Timor-Leste, Tuvalu and Vanuatu. In addition to the above-mentioned challenges, these economies are characterized by their low level of socioeconomic development due to weak human and institutional capacities, low and unequally distributed income and a scarcity of domestic financial resources. Most least developed countries suffer from a vicious cycle of low productivity and sparse investment. Moreover, most of them tend to rely on the export of a few primary commodities, which makes them highly vulnerable to external terms-of-trade shocks. All these characteristics act as further structural impediments to their development (see box I.1).

The COVID-19 pandemic also illustrates the vulnerability of small island developing States to external shocks. The pandemic has spread around the world rapidly. While data suggest that the number of persons affected is currently limited in the Asia-Pacific small island developing States, this may be due to a lack of testing and reporting of possible cases rather than the resilience of these economies. Once the true extent of the pandemic becomes apparent in these States, immense socioeconomic and humanitarian impacts may be revealed.

There is no doubt that the pandemic will have disproportionate impacts on the small island developing States, with potentially devastating impacts on human health, including through social and economic effects of the virus and containment policies through the months and years to come. The lack of domestic financial resources, elevated debt levels and fragile health systems present urgent challenges in these economies. Moreover, what presents a health crisis in the short term will have far-reaching impacts on education, human rights, food security and sustainable development in the long term for these economies.

The economic impacts of the pandemic on small island developing States will be particularly large due to their limited capacity and resources to develop effective countermeasures and responses, their small domestic markets, low levels of diversification and their dependence on remittances and official development assistance, as well as on trade as drivers of economic growth. All of these aspects increase their vulnerability to external shocks.

Box I.1
Economic vulnerability of least developed countries that are small island developing States

Least developed countries are classified as such according to three criteria: (a) their per capita gross national income (GNI); (b) their "human asset index" (a weighted index that captures five health and education-related indicators); and (c) their environmental vulnerability index (a weighted index capturing eight indicators related to structural issues).[a] To *graduate* from the category of least developed country and become a *developing* country, certain graduation thresholds must be met for any two of the three criteria in two consecutive triennial reviews: the per capita income must exceed the low-income threshold set annually by the World Bank by at least 20 per cent; (b) the human asset index must be 66 or higher; and (c) the economic vulnerability index must be 32 or lower. Alternatively, if the per capita income is at least twice the graduation threshold, the country is also eligible for graduation.

All Asia-Pacific small island developing States met the criteria for graduation at the most recent triennial review in 2018. However, as table A demonstrates, none of them met the economic vulnerability threshold, but rather met the income and human assets criteria.

Table A
Three least developed country indicators and graduation thresholds, Asia-Pacific small island least developed countries, 2018

Country	GNI per capita (average: 2014-2016)	Human assets index	Economic vulnerability index
Kiribati	$2 986	84.0	73.7
Solomon Islands	$1 763	74.8	51.9
Timor-Leste	$2 656	66.6	56.8
Tuvalu	$5 388	90.1	56.0
Vanuatu	$2 997	78.5	47.0
Graduation thresholds	≥ $1 230	≥ 66.0	≤ 32.0

Source: United Nations, Department of Economic and Social Affairs portal for least developed country data. Available at www.un.org/development/desa/dpad/least-developed-country-category/ldc-data-retrieval.html.

Small island developing States that are also classified as least developed countries are significantly more vulnerable than other least developed countries in the Asia-Pacific region. This is especially so in terms of their population size, remoteness and export concentration. Kiribati and Tuvalu also have the highest share globally of population living in elevated coastal zones. Indeed, computation of scores for the 8 indicators of the economic vulnerability index shows that many of their scores are far above the threshold of 32 (see cells highlights in red in table B).

Importantly, for small island developing States, most of the high values will remain so by default: small populations, remoteness from islands and the high share of populations living in elevated coastal zones will not be influenced by policy decisions. Also, given the characteristics of their smallness and their geographic location, their export concentration and their vulnerability to natural disasters is likely to remain high. As such, least developed countries that are also small island developing States are likely to remain economically vulnerable after their graduation and will need continued support from the international community.

Table B

Scores of the eight indicators of the economic vulnerability index, Asia-Pacific small island least developed countries, 2018

Countries	Economic vulnerability index	Population	Remoteness	Share of population in low elevated coastal zones	Export concentration	Shares of agriculture, forestry and fisheries	Victims of natural disasters (Percentage)	Agricultural instability	Export instability
Kiribati	73.7	100.0	83.0	100.0	90.7	37.9	91.3	73.9	38.5
Solomon Islands	51.9	78.7	84.6	36.8	60.0	43.9	73.7	16.5	36.5
Timor-Leste	56.8	67.2	68.7	2.7	57.3	11.4	61.8	19.7	100.0
Tuvalu	56.0	100.0	88.0	100.0	51.2	36.9	79.4	0.9	17.9
Vanuatu	47.0	90.9	90.0	3.4	50.3	44.1	95.3	31.9	8.6

Source: United Nations, Department of Economic and Social Affairs portal for least developed country data. Available at www.un.org/development/desa/dpad/least-developed-country-category/ldc-data-retrieval.html.

[a] Health-related indicators are the under-5 mortality rate, the percentage of undernourished people and the maternal mortality rate; and education-related indicators are the gross secondary school enrolment ratio and the adult literacy rate.

The international community pays significant attention to the development challenges of small island developing States and least developed countries. While many vulnerabilities could effectively be addressed through domestic/national policies and institutional arrangements, others will require subregional and regional coordination, cooperation and integration. Just as the policy response to the current COVID-19 pandemic underscores, building resilience against broadly defined external shocks necessitates the support of the international community and concerted international policy efforts and measures that are grounded in strong political will and commitment to sustainability. In this regard, it is important to highlight two particular action plans which are focused on addressing the development challenges of small island developing States and least developed countries respectively, namely the Small Island Developing States Accelerated Modalities of Action, or SAMOA Pathway, which specifically concentrates on small island developing States, and the Programme of Action for the Least Developed Countries for the Decade 2011–2020.[3] These programmes of action outline several priorities and goals that merit particular attention to further these countries' development (see box I.2).

Box I.2
SAMOA Pathway and Istanbul Programme of Action

The SAMOA Pathway acknowledges the existing and existential threats to small island developing States related to environmental vulnerabilities, such as climate change and violent weather patterns, and calls for building resilience and the capacity to mitigate the effects of climate change and to improve monitoring and sectoral awareness. It mentions marine pollution and degradation of the natural environment, including its biodiversity. It calls for more efficient efforts at disaster risk reduction through technology transfer, increased sectoral investment and adopting, mainstreaming and harmonizing adequate policies based on rigorous planning. However, it also goes further and specifically mentions that inherent development models need to be put into place to address development challenges of small island developing States – alluding to the necessity for a particular type of structural transformation – and these models need to underscore the importance of sustainable, inclusive and equitable economic growth and the policies aimed at generating decent employment, creating an enabling business environment to attract investment, and improving economic resilience. It also alludes to the concept of the "blue economy" (Chowdhury, 2019; ESCAP, 2019a), which is focused on the sustainable management of oceans and seas, ecosystems and coastal zones. Finally, the SAMOA Pathway emphasizes the importance of international cooperation and efforts in addressing challenges and providing financial resources. International partnerships, institutional support and more efficient connectivity are of key importance to improving the means of implementation of policies to address development challenges, enhancing capacity-building and statistics systems and enabling technology transfer.

The Istanbul Programme of Action for Least Developed Countries outlines eight priorities for these countries and development partners. In recognition of the particular structural impediments that least developed countries face, the international community has provided them with specific international support measures which are meant to foster their development. These measures include, for instance:

(a) Trade-related support measures – preferential market access for goods through a duty-free, quota-free mechanism as well as preferential tariffs and preferential and more flexible rules of origin for goods – the concept in itself being a response to the growing importance of the regional and global value chains and subsequent difficulty in identifying from where a given product comes; preferential treatment for services and service suppliers or the so-called services waiver for least developed countries, which essentially allows a non-reciprocity-based approach for members of the World Trade Organization (WTO); special and differential treatment provisions regarding obligations and flexibilities under the WTO rules to facilitate least developed countries' compliance in view of their limited institutional capacity and to protect policy space, as well as addressing supply-side constraints and supporting least developed countries' broader engagement in international trade as part of a development strategy;

(b) Development cooperation, which concerns commitments as far as bilateral official development assistance flows to least developed countries are concerned, multilateral cooperation and exclusive mechanisms, as many donors, national and international alike, define their obligations and eligibility and make decisions on their support based on a country's status and its membership in the least developed country category. Exclusive mechanisms include access to technology through the United Nations Technology Bank for Least Developed Countries, access to funds for mitigating climate change through the Least Developed Countries Fund and climate change-related expertise through the Least Developed Countries Expert Group, aid for trade through the Enhanced Integrated Framework to ease trade-related constrains, United Nations Capital Development Fund to provide access to microfinance and investment capital, as well as the Investment

Support Programme for Least Developed Countries by the International Development Law Organization and United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States to provide least developed countries with capacity;

(c) Support for participation in the United Nations and other international forums, which include caps and discounts in contributions to the United Nations system budgets, support for travel, capacity-building for participation in negotiations and flexibility in reporting requirements (United Nations, 2018).

Source: Bolesta (forthcoming).

A. Progress of small island developing States in implementing the 2030 Agenda

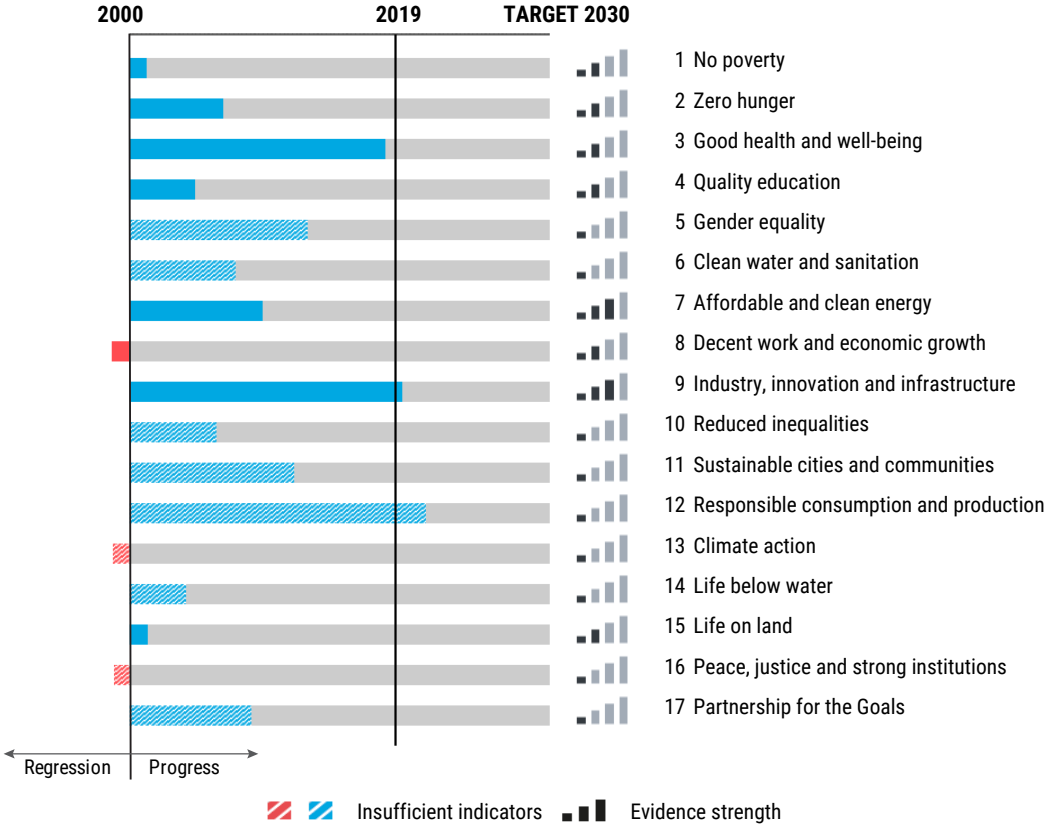
In addition to these programmes of action, small island developing States are signatories to the 2030 Agenda for Sustainable Development, agreed by all Member States of the United Nations in 2015, with a view to providing a road map for countries to ensure the world's current and future well-being. Indeed, the 17 Sustainable Development Goals and the corresponding 167 targets are reflected in several priorities of the programmes of action for small island developing States and least developed countries. Many of these Goals are closely linked to the programmes of action for these countries; thus, a mapping exercise undertaken by ESCAP (2016) revealed that the Istanbul Programme of Action covers all 17 Goals of the Agenda, with emphasis on Goal 2 (zero hunger), Goal 8 (decent work and economic growth), Goal 10 (reduce inequalities), Goal 16 (peace, justice and strong institutions) and Goal 17 (strengthen global partnerships for the Goals). Similarly, it revealed that the actions of the SAMOA Pathway cover most of the Goals, with emphasis on Goal 5 (gender equality), Goal 13 (climate action), Goal 14 (conserve and sustainably use life below water) and Goal 17. At the same time, these 17 Goals are inherently interconnected to each other (Le Blanc, 2015).

Small island developing States in Asia and the Pacific are on track to reach Goal 9 and have made progress towards meeting Goal 3. While the COVID-19 pandemic has led to a temporary shutdown in many activities, its economic and social impacts on the people of the Asia-Pacific region will be hard felt, even though they are not as yet fully known. However, with almost a third of the implementation period of the 2030 Agenda having passed, stocktaking of available data suggests that small island developing States are on track to reach Goal 9 which is aimed at building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation, and that significant progress has also been made by these States in reaching Goal 3 which is aimed at ensuring healthy lives and promoting well-being for all at all ages (see figure I.1).[4]

The success towards Goal 9 is mainly due to success in developing good-quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being with a focus on affordable and equitable access for all (target 9.1). Small island developing States have also been able to significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020 (target 9.C). They have not, however, been able to significantly raise industry's share of employment and GDP (target 9.2). This is no doubt due to fact that the services sector dominates in small island developing States, which is in part explained by a large government services sector, but is also a result of a lack of economies of scale that has prevented them from building a significant industrial sector (ESCAP, 2019a). Thus, as these economies have relatively limited room for gaining from reallocation factors of production across sectors, a more strategic approach would involve improving productivity within services. Meanwhile, significant progress that has been made towards reaching Goal 3, with small island developing States on track to meet seven of that Goal's targets. Yet, they need to accelerate progress for another five targets and need to reverse their regression in terms of ending communicable diseases (target 3.3).

Figure I.1

Snapshot of progress made by small island developing States towards achieving Sustainable Development Goals, 2019-2020



Source: Based on ESCAP data.

Yet, insufficient progress has been made for most other Goals. Of particular concern is the very little progress that has been made towards eradicating poverty (Goal 1) and towards preserving life on land (Goal 15). Moreover, for many other Goals, insufficient data are available to evaluate and monitor the progress made by small island developing States. Accelerated action is therefore required to implement the 2030 Agenda and achieve the Sustainable Development Goals in time. This is particularly important considering the negative impact that the COVID-19 pandemic will have on economies in 2020 and beyond. In particular, it is likely that the pandemic, through its economic and social impacts, may reverse years of development gains.

Small island developing States are grappling with providing their people with productive employment. Indeed, these States have regressed in promoting inclusive and sustainable economic growth, employment and decent work for all (Goal 8).[5] Moreover, while the COVID-19 pandemic is still under way, it already becoming evident that many of these economies will regress further from reaching Goal 8. This goal is important as without sustainable growth and the availability of decent work countries will not be able to reach many of the other Goals. Based upon available data for 6 of the 12 targets that have been identified for this Goal, progress needs to be accelerated in 5 of them to reach the Goal by 2030. Thus, per capita growth needs to be accelerated (target 8.1); levels of productivity need to be increased (target 8.2); policies are required to support job creation and growing enterprises (target 8.3); resource efficiency in production and consumption must be further improved (target 8.4) and access to banking, insurance and financial services must be made universal (target 8.10). Importantly, the trend in providing full employment and decent work with equal pay (target 8.5) needs to be reversed if this target is to be met.

One reason that may explain the lack of progress towards Goal 8 is the narrow resource base that small island developing States face and their smallness, as explained above. Indeed, these States have not been able to build a significant industrial sector and tend to be dominated by a large service sector; for instance, in Maldives, Samoa and Timor-Leste more than half the labour force is engaged in the service sector. On average, less than 15 per cent of the labour force is engaged in industry; in Papua New Guinea, less than 5 per cent is in industry.

B. Exclusive economic zones

Small island developing States have very large exclusive economic zones. Although these States generally cover small areas of land, often dispersed across hundreds of islands, many of them have large *exclusive economic zones* (EEZs), that is, areas over which they have exclusive rights for the "purpose of exploring and exploiting, conserving and managing the natural resources".[6] Through their EEZs, small island developing States control about 30 per cent of all oceans and seas (Halais, 2019). For almost all such States, the size of their EEZs is significantly larger than their land area and in several of them the EEZs exceed the land area by several thousand times. This is, for instance, the case in French Polynesia, Kiribati, Maldives, Marshall Islands, Nauru, the Northern Mariana Islands, Palau and Tuvalu (see table I.1). To put the size of EEZs into perspective, one may also consider them relative to the populations living in the small island developing States. For instance, the EEZ of Tuvalu, which has a population of less than 12,000 people, covers an area that is greater than the land area of continental France. The EEZ of Kiribati, which is home to fewer than 120,000 people, covers an area that exceeds the entire land area of India. Compared with their land areas, these EEZs truly are vast, as are the resources that are within these zones.

The abundance of ocean resources of small island developing States should be leveraged more effectively, based on the blue economy concept, to support their sustainable development. Using these resources can also help them overcome their narrow, land-based resource base. Yet, the vast ocean economy in these EEZs can be more than a catalyst for economic growth, especially considering that marine resources have been overexploited in many parts of the ocean with little regard to the health, productivity and long-term sustainability of those resources. While small island developing States have the most to gain from efficient use of ocean resources, they have the most to lose from the depletion of these resources. This situation has given rise to the concept of the *blue economy*, referring to a concept that encourages better stewardship of marine resources (see box I.3). Globally, several small island developing States have already adopted national blue economy strategies. For instance, Mauritius launched its oceans' economy road map in 2013 to tap into the potential of its EEZ by consolidating existing sectors, such as tourism, seaports and fishing, and its developing emerging sectors, such as aquaculture, marine biotechnology and renewable energy. The Cook Islands turned the country's entire EEZ of more than 1.8 million km^2 into the world's largest multiple-use marine protected area. Marae Moana, as it is called, can provide a framework for conservation and management of ocean resources, including support for coastal traditional marine protected areas and marine reserves.

C. Fisheries and tourism

As a companion report to the thematic study entitled *Changing Sails: Accelerating Regional Action for Sustainable Oceans in Asia and the Pacific,* which examines the importance of (a) marine debris and plastic pollution, (b) sustainable maritime connectivity and (c) sustainable fisheries for the Asia-Pacific region, the present report focuses how small island developing States can take better advantage of the blue economy. It focuses on those sectors that are closely linked to their vast ocean resources and that bear the potential to accelerate their progress towards the Sustainable Development Goals: fisheries and tourism. While box I.3 highlights that the blue economy comprises several additional sectors, fisheries and tourism are already among the most important in many small island developing States. The report does not explore the potential of deep-sea mining to foster sustainable development of small island developing States. This is primarily due to the uncertainty about environmental impacts of deep-sea mining and the lack of knowledge of the deep-sea environment and the technical challenge of conducting tests deep under water.[7]

The *blue economy* is closely linked to Goal 14 of the 2030 Agenda, which is aimed at conserving and sustainably using the oceans, seas and marine resources for sustainable development. Goal 14 recognizes the importance of these resources to small island developing States, with one of the targets being to

Table I.1
Population, land area and exclusive economic zones, most recent data

	Population (2018)	Land area (km²)	EEZ (km²)	Ratio of EEZ to land area
ESCAP member States				
Fiji	912 241	18 333	1 282 978	70
Kiribati	118 414	811	3 441 810	4 244
Maldives	444 259	298	923 322	3 098
Marshall Islands	53 167	181	1 990 530	10 997
Micronesia (Federated States of)	106 227	701	2 996 419	4 274
Nauru	11 312	21	308 480	14 690
Palau	21 964	444	603 978	1 360
Papua New Guinea	8 418 346	462 840	2 402 288	5
Samoa	197 695	2 934	127 950	44
Singapore	5 791 901	724	1 067	1
Solomon Islands	623 281	28 230	1 589 477	56
Timor-Leste	1 324 094	14 870	70 326	5
Tonga	109 008	749	659 558	881
Tuvalu	11 287	26	749 790	28 838
Vanuatu	282 117	12 281	663 251	54
Associate members				
American Samoa	56 700	199	404 391	2 032
Cook Islands	17 411	237	1 830 000	7 722
French Polynesia	285 859	3 521	5 030 000	1 429
Guam	172 400	541	221 504	409
New Caledonia	279 821	18 576	1 450 000	78
Niue	1 520	259	450 000	1 737
Northern Mariana Islands	56 200	457	749 268	1 640
Asia-Pacific small island developing States	19 295 224	567 233	27 946 387	49

Source: ESCAP, based on population data from the United Nations National Accounts Main Aggregates Database (accessed on 23 January 2020) and Statistical Process Control (SPC) statistics (accessed on 27 March 2020), land area from SPC statistics (accessed on 27 March 2020), complemented by several national sources, and EEZ data from the Sea Around Us – Fisheries, Ecosystems and Biodiversity (available at www.seaaroundus.org/data/#/eez) and national sources.

increase the economic benefits for such States and least developed countries obtained from the sustainable use of marine resources (target 14.7). This includes the sustainable management of fisheries, aquaculture and tourism, which is measured by the proportion of sustainable fisheries in GDP. Another target (14.b) is aimed at providing small-scale artisanal fishers with access to marine resources and markets.

The fisheries sector is one of the most important for small island developing States in the Asia-Pacific region, providing employment, government revenue and food, thereby contributing to reducing household poverty. In Kiribati, for instance, fish and fish products contribute as much as 16 per cent of output. Moreover, these sectors can help overcome the barriers that the geographic isolation and small size of their economies pose in terms of being largely unable to significantly integrate into regional and global value chains and production networks.

Similarly, the *blue economy* is also closely linked to Goal 8 for small island developing States, which is on promoting inclusive and sustainable economic

Box I.3
The blue economy

There is no universally accepted definition of the blue economy. Rather, many agencies and organizations are working on describing how they understand the concept. For instance, the World Bank refers to the blue economy as the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of the ocean ecosystem (World Bank and United Nations, 2017). The European Union has defined the blue economy as "encompassing all sectoral and cross-sectoral economic activities related to the oceans, seas and coasts, including […] those of landlocked countries" (European Commission, 2019).

While traditional ocean industries tend to comprise the fisheries sector, tourism and maritime transport, within the blue economy one would also include new and emerging activities, such as offshore renewable energy, aquaculture, marine biotechnology and bioprospecting, and seabed extractive activities. It also includes services provided by water ecosystems for which markets do not exist, such as carbon sequestration, coastal protection, waste disposal and the existence of biodiversity. The oceans are also home to millions of kilometres of fibreoptic cable without which there would be no Internet.

By encompassing all marine-based and marine-related activities, the blue economy is not only relevant for small island developing States, but also to all coastal economies and landlocked developing States. Indeed, the blue economy is an essential part of the global economy. The value of the global ocean economy alone has been estimated at $1.5 trillion per annum (2-3 per cent of the world's GDP) (OECD, 2016). Marine services (tourism and shipping) contribute the largest proportion ($880 billion). For small island developing States in the Indian Ocean, Hampton and Jeyacheya (2013) estimated that the economic value of coral reef-related tourism and recreation is $1.4 billion.

The concept of blue economy therefore refers to sectors and related policies that determine whether the use of ocean resources is sustainable. It is essentially about understanding and better managing the many aspects of water resources sustainably, ranging from sustainable fisheries to ecosystem health and preventing pollution. A policy handbook of the United Nations Economic Commission for Africa (2016) offers a step-by-step guide to help African member States to better mainstream the blue economy into their national development plans, strategies, policies and laws.

growth, employment and decent work for all, as it is also relevant to their significant ocean resources. This is particularly the case for target 8.9 which is to devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products; it is measured by the contribution of tourism to GDP (8.9.1) and by the number of sustainable tourism jobs (8.9.2).[8] Indeed, small island developing States in the Asia-Pacific region that have high tourism intensities (i.e. high capacity for tourist accommodation relative to the resident population) also have increased levels of income per capita, elevated Human Development Indices and lower mortality rates of children under 5 (Jiang and others, 2011).

Tourism can thus help implement the 2030 Agenda and achieve its 17 Sustainable Development Goals. It has already become the largest economic sector in the Cook Islands, Fiji, Maldives, Palau and Vanuatu; in 2018, tourism earnings exceeded 50 per cent of GDP in Maldives and Palau and approximately 30 per cent of GDP in Samoa and Vanuatu. The collapse of tourism resulting from restricting access to countries and halting international travel in order initially to contain and later mitigate the COVID-19 pandemic will have a profound impact on the development of these economies in 2020 and beyond. However, tourism remains a sector that can be oriented towards local communities and that is in many countries at the forefront of environmental preservation, and that can be linked to the whole local economy in small island developing States. It therefore clearly has the potential to support these economies in implementing the 2030 Agenda and achieving the Sustainable Development Goals. For instance, community-based tourism sustains inclusive employment (Goal 8); it can reduce all forms of inequality

by incorporating poor individuals, remote communities and women into the market (Goals 1, 5, 10). In addition, there are many examples where tourism has contributed to sustainable development through, for instance, corporate social responsibility for communities' well-being, education, access to clean water and sanitation, and promoting clean energy (Goals 3, 4, 6, 7). At the same time, taxation of tourism can provide important resources for financing environmental preservation and climate resilience (Goals 13, 14, 15). In addition, developing tourism requires a sound economic and social context with efficient infrastructure, peaceful societies and strong institutions (Goals 9, 16).

Greater regional cooperation to foster tourism through, for instance, common regional branding, is also important for the landlocked developing countries in Central Asia and beyond, where their unique geography of high passes and mountains, vast deserts, grassy steppes and rich cultures appeals to visitors.

Chapter II of this report examines how the fisheries sector can effectively contribute to sustainable development in Asia-Pacific small island developing States. It does so by documenting the structure and health of the fisheries sector in these economies and discussing some of the key challenges to the sustainability of the fisheries sector, such as overfishing, governance, climate change, environmental degradation and data issues. Chapter III highlights the importance of tourism as a driver of economic growth and sustainable development in Asia-Pacific small island developing States. In presenting the existing trends and opportunities arising from the growing number of tourists arriving in these States, the chapter discusses experiences and lessons learned from within and outside the Asia-Pacific region to address challenges and concerns. Chapter IV summarizes policy recommendations from chapters II and III and further presents ways forward for small island developing States in taking full advantage of their blue economy to foster their sustainable development.

ENDNOTES

1 The summit is formally known as the United Nations Conference on Environment and Development (UNCED). The recognition was made specifically in the context of chapter 17G of Agenda 21. See *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992, vol. I, Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

2 ESCAP has a total of 53 member States and 9 associate members. Members of ESCAP that are classified as small island developing States are: Fiji, Kiribati, Maldives, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Papua New Guinea, Samoa, Singapore, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu. Associate members of ESCAP that are classified as such States are American Samoa, Cook Islands, French Polynesia, Guam, New Caledonia, Niue and Northern Mariana Islands.

3 See *Report of the Fourth United Nations Conference on the Least Developed Countries, Istanbul, Turkey, 9–13 May 2011* (United Nations publication, Sales No. 11.II.A.1), chap. II, endorsed by the General Assembly in resolution 65/280. The Programme of Action is referred to informally as the Istanbul Programme of Action.

4 While figure I.1 indicates that countries are on track to reach Goal 12 on ensuring sustainable consumption and production patterns, data are insufficient to conclusively deem that this is so, with only 2 of the 11 indicators having sufficient data available.

5 They have also regressed in taking urgent action to combat climate change and its impacts (Goal 13) and in promoting just, peaceful and inclusive societies and strong institutions (Goal 16), although in both of these cases lack of comprehensive data needs to be highlighted. For instance, data are available for only 2 of the 5 indicators of Goal 13 and 2 of the 12 indicators of Goal 16.

6 See article 56 of the United Nations Convention on the Law of the Sea. Exclusive economic zones have been recognized by that Convention since 1982. EEZs typically extend to 200 nautical miles from the shore but can increase up to 350 nautical miles if countries can prove that the claimed area is a natural prolongation of their land territory. Beyond countries' EEZs, oceans are referred to as "high seas".

7 The International Seabed Authority (ISA), which was established by the United Nations Convention on the Law of the Sea, regulates all mineral activities in international waters. While it has granted 29 licences to explore the oceans, covering an area of 1.3 million km^2, mining cannot begin until it has developed regulations, including provisions relating to environmental protection, to govern exploration. Among the primary concerns for ISA is how to balance the societal benefits of deep seabed mining against the need to protect the marine environment.

8 Unfortunately, no data are available for these indicators, notwithstanding the importance of tourism in the small island developing States.

Chapter II

Fisheries as a driver of sustainable development in Asia-Pacific small island developing States

Fisheries have historically been one of the most important sectors for Asia-Pacific small island developing States; accordingly, Governments have tried to develop them. The first substantial initiatives by Governments to increase benefits from the fisheries sector started in the 1960s and 1970s and were mainly through coastal fisheries development. The derived benefits were mostly in the form of greater cash income and an increased supply of fish for growing urban areas.

Government income from the fisheries sector has expanded significantly since the late 1970s with the establishment of 200-nautical-mile Exclusive Economic Zones (EEZs) and their associated opportunity for negotiating and collecting fishing access fees. These access fees that vessels from distant-water fishing nations are charged for fishing in small island developing States' EEZs are by far the main source of public revenue for those Governments, and they have grown in importance, rising steadily from $15 million in 1982 to $515 million in 2017. Other activities for which Governments of small island developing States can collect public revenue from fisheries are transshipment;[1] the granting of: domestic fishing licences, fish-processing licences[2] and export certificates; domestic market table rents;[3] and the sale of ice.[4] The COVID-19 pandemic may jeopardize these income streams as a result of a slowdown in fisheries. Moreover, transshipments are likely to increase during the COVID-19 pandemic as a result of port closures and access restrictions in many of the region's member States, which may increase the risk of illegal, unreported and unregulated fishing.

The importance of fish and fish products is also visible in the GDP of small island developing States. The value of fisheries to GDP (not including the processing or service industries) ranges from 0.2 per cent in New Caledonia to 16 per cent in Kiribati (PIFS, 2018; Gillett, 2016). There are large differences in the resource endowment across countries, however. For instance, the value of fisheries production in Kiribati and Papua New Guinea was greater in 2014 than that of all other Pacific island developing States combined (Gillett and Tauati, 2018). Resource endowments depend on several factors, such as the size of EEZs and (for tuna in this part of the world) distance from the equator.

Households in Asia-Pacific small island developing States often depend substantially on fisheries, which provide food and income for more than 200 million people in the Asia-Pacific region as a whole. This can be very important in countries where economies are not very diversified. For instance, the Agricultural Census of Niue 2009 indicated that 62 per cent of households were engaged in inshore fishing. Reflecting this, average fish consumption in Pacific small island developing States is two to three times higher than the global per capita average (Gillett, 2016). Fisheries-related employment is also very important in Asia and the Pacific, which accounts for 84 per cent of the global population engaged in the fisheries and aquaculture sectors (FAO, 2016). In the midst of the COVID-19 pandemic, however, if fisheries activities are stopped for a prolonged period, operations could take longer to restart and the contribution of fisheries to employment could take even longer to recover.

The importance of fisheries for islanders in small island developing States goes beyond "direct" benefits, such as food, jobs and income or livelihoods. Indeed, indirect benefits of oceans for which there are not established markets may include biodiversity conservation, pharmaceutical research and biotechnology prospecting, or cultural identity.

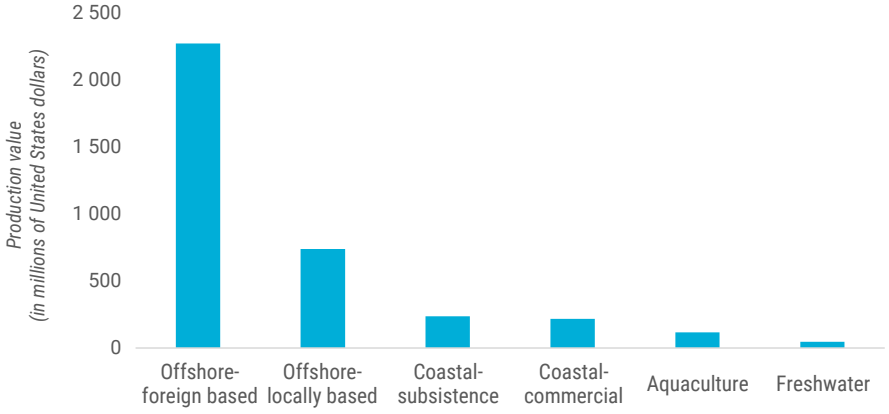
This chapter examines how fisheries can act as a driver for sustainable development in small island developing States in Asia and the Pacific. Section A briefly highlights the structure and health of the fisheries sector in these economies, drawing attention to the United Nations Convention on the Law of the Sea and explaining how fisheries can be categorized into freshwater, aquaculture, coastal and offshore fisheries. Section B examines the main challenges to the sustainability of the fisheries sector, such as overfishing, poor governance, climate change and environmental degradation, and lack of data. Section C discusses the experiences of and lessons learned by small island developing States. Section D provides recommendations on how to ensure effective contribution of fisheries to sustainable development in Asia-Pacific small island developing States. These recommendations are structured around the following pillars: fisheries conservation; data and statistics; legal frameworks; and multi-stakeholder engagement and regional cooperation, highlighting the various roles that small island developing States and the international community can play to ensure that fisheries contribute to sustainable development in these economies.

A. Structure and health of the fisheries sector

To understand the structure of the fisheries sector (and who owns offshore marine resources), it is necessary to understand its legal framework, the bedrock of which is the United Nations Convention on the Law of the Sea (UNCLOS). This sets out the legal framework within which all activities in the oceans and seas must be carried out, including the conservation and sustainable use of oceans and their resources. A key element of UNCLOS is the concept of EEZ,[5] whereby a coastal State can claim jurisdiction over the exploration and exploitation of marine resources, including fisheries and the seabed, in its adjacent section of the continental shelf up to 200 nautical miles from the shore.[6] While it arguably took small island developing States years to efficiently take advantage of their EEZs, those zones are a considerable source of wealth which has been increasingly used for sustainable development.

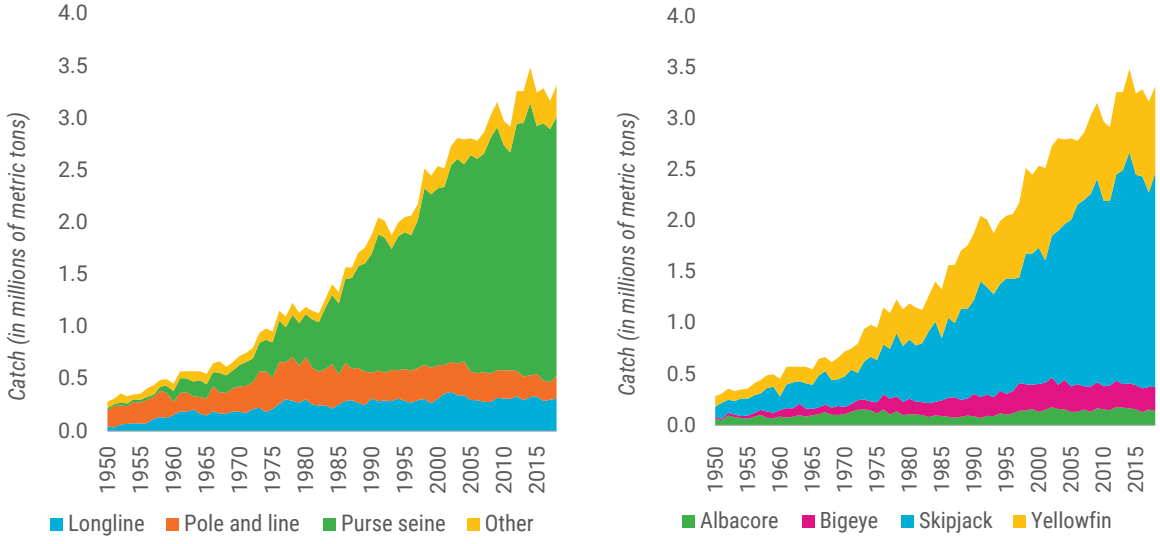
The fisheries sector can be categorized as: offshore (foreign based and locally based); coastal (subsistence and commercial); aquaculture; and freshwater. Figure II.1 presents their importance in the Pacific small island developing States, defined as the annual value of the catch within the countries and territories for the latest year with available comparative data. It shows that vessels that carry out offshore fishing in the Pacific are mostly foreign-based vessels (i.e. operating within the Pacific but based outside the subregion). The value of the fish caught offshore by locally-based vessels is only about one third that of foreign-based vessels. It also shows that the total value from other categories of fisheries, such as coastal, aquaculture and freshwater

Figure II.1
Value of fisheries production in Pacific small island developing States, by category, 2014



Source: Gillett (2016).

Figure II.2
Offshore catches in the Pacific, by gear type (left) and by species (right), between 1950 and 2018



Source: Williams and Reid (2019).

fisheries, is much less despite their importance to the local population in terms of food security and income generation.

Offshore. Offshore fishing in Pacific small island developing States is characterized by large-scale commercial fishing of high-value migratory tuna species. The fisheries production can be from foreign or domestic vessels but mostly production is by foreign-based vessels. Offshore tuna catch in the western and central Pacific Ocean, which covers EEZs of the Pacific small island developing States, was estimated to be 2.7 million tons in 2018, which was about 55 per cent of the global tuna catch that year. However, 90 per cent of the catch is exported outside of the Pacific subregion (William and Reid, 2019). The value of the offshore fisheries (almost all of it being tuna) is much greater than that of coastal fisheries, e.g. in 2014 it was worth more than six times as much.

The main methods of fishing tuna, while depending on the type of tuna species and their market values, are purse-seining (surrounding an entire school of fish with a net), longlining (a line with thousands of baited hooks attached at regular intervals) and pole-and-line fishing (catching fish with a pole having a single hook while

broadcasting live bait) (annex I). The four tuna species of major commercial importance in the Asia-Pacific region are skipjack, yellowfin, albacore and bigeye (annex II). Their catch proportions by landed weight in the Pacific subregion were 63 per cent, 26 per cent, 7 per cent and 4 per cent, respectively, in 2018 (see figure II.2). These fish behave differently, living in different parts of the ocean and at varying depths, which determines the main way in which they are caught, e.g. purse-seining is used to catch skipjack and small yellowfin tuna, while longlining targets bigeye, albacore and yellowfin tuna (FFA, 2019a). In Maldives, the main fishing method is by pole and line. The Maldivian skipjack pole-and-line fishery was in fact praised as one of the most eco-friendly operations (Toribau and Tolvanen, 2009) in the world and obtained the Marine Stewardship Council accreditation of sustainable fisheries in 2012 (Marine Stewardship Council, 2014). The evaluation concluded that (a) skipjack tuna stocks were healthy; and (b) good practices for fisheries management were implemented in the country (Marine Stewardship Council, 2014).

The volume of fish catch can be expressed by gear type or by species (see figure II.2) Important features of offshore fisheries are the very large (and growing) proportion of the catch that is taken by purse-seine gear, and the large and (growing) proportion of the catch that is made up of skipjack. It is therefore not surprising that purse-seine gear is used to catch mainly skipjack. Facilitated by the ever-rising demand for tuna, the increase in tuna production has largely been driven by increases in purse-seining technology. The proportion of catch taken with longline gear has remained steady in the last two decades but that by pole and line has contracted.

The profitability of offshore fisheries is important to keep in mind and depends heavily on catch rates, market prices, fuel prices and licence fees; the first two are rather volatile factors, while the last two are relatively stable. Broadly speaking, purse-seining is fairly profitable due to its economies of scale, while the profitability of longlining is much tighter, whereas pole-and-line fishing is hardly viable at current prices.

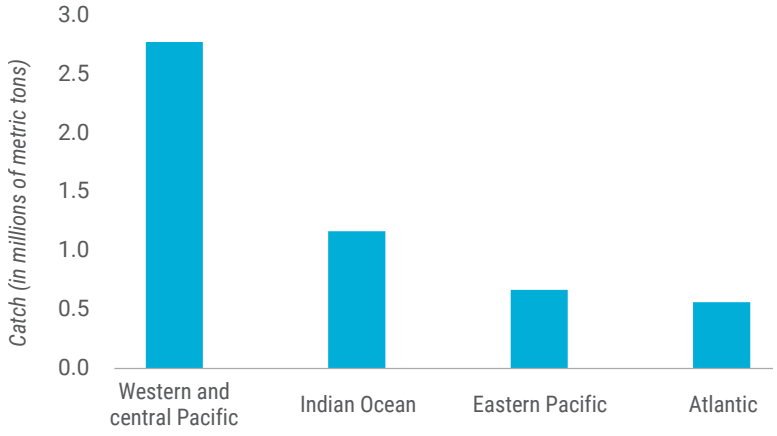
The total estimated delivered value of the tuna catch (i.e. the value of the catch at dockside) in the convention area[7] of the Western and Central Pacific Fisheries Commission was about $6 billion in 2018. The purse catch made up 54 per cent of the total value, while the longline fishery catch accounted for 29 per cent. These point to an important facet of tuna fishing in the region: purse seine fisheries catch most of the fish (almost all for canning) and the longline fisheries tend to catch fewer fish but of higher value, such as bigeye, albacore and yellowfin tuna. Longline is considered less damaging to the fish and thus the fish can be sold for sashimi or raw fish at higher prices.

Until recently, most offshore catch was by foreign industrial vessels, but this situation is slowly changing. The value of the tuna catch taken by fleets of Pacific island countries and territories in 2017 represented about 45 per cent of the value of the tuna catch in their waters, estimated to be $2.9 billion in 2017, a significant increase from the 31 per cent in 2014 (PIFS, 2018).[8] This may be positive considering that in the past the Governments of some small island developing States invested in acquiring offshore fishing fleets and setting up canneries but found that success was elusive (FAO, 2020c). Overall, the pattern is partly explained by Asian vessels reflagging in Pacific island countries, which is consistent with the fact that offshore fishing requires considerable investments in boats' capacity to take advantage of economies of scale (and small island developing States usually are at a disadvantage in this regard). Most of the offshore catch is exported outside the region; the volume of tuna processed in the Pacific subregion has been about 10 per cent of the total tuna catch (Terawasi and Reid, 2017) and mostly in the relatively larger small island developing States, such as Papua New Guinea and Solomon Islands. These elements illustrate countries' efforts, albeit with mixed results, to add higher value to the tuna caught in their waters.

Figure II.3 compares the recent annual offshore catches from the four main offshore fishing areas of the world. The western and central Pacific Ocean is responsible for about 55 per cent of the world's tuna catch. Factors contributing to this large share are that: the area is a very large one; it is located relatively close to major tuna fishing countries; and its tuna resources are not yet overexploited. Unlike in some other major tuna fishing regions of the world, most of the purse seine catch in the Pacific subregion is taken within the countries' EEZs, rather than on the high seas.

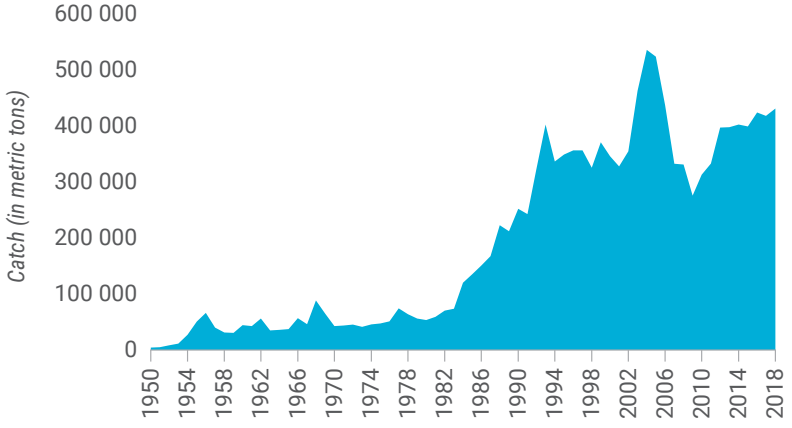
High seas. These are waters beyond EEZs, which means that fishing can be carried out there without having to pay for a licence. This translates into less control and more harmful fishing practices than within EEZs (the

Figure II.3
Offshore catches of the world's main offshore fishing areas, 2018



Source: WCPFC (2019).

Figure II.4
Catches of yellowfin tuna in the Indian Ocean between 1950 and 2018



Source: IOTC (2018).

true extent of this phenomenon is largely unknown due to low observer coverage). Indeed, while not radically different from EEZs, the health of biodiversity (according to the Ocean Health Index) in Asia-Pacific EEZs seems to be better than in the high seas.

The differences between segments of the fisheries sector also extends to the health of their fish stocks. All key commercial stocks of tuna in the Pacific – bigeye, skipjack, albacore and yellowfin – were assessed to have been managed and maintained above agreed sustainable levels (Brouwer and others, 2019). However, there is no room for complacency because the biomass of most stocks continues to decline and the western and central Pacific Ocean is the only area in the world where all four major tuna species are still in relatively healthy condition.

The situation is worse in the Indian Ocean, where overfishing of some marine species has become a severe problem in the last few decades. For instance, according to the Indian Ocean Tuna Commission, it is estimated that for yellowfin tuna "stock size is close to or has possibly entered an overfished state". Figure II.4 shows the evolution over time of the Indian Ocean's yellowfin tuna catches from 1950 to 2017. The total annual catch of yellowfin tuna has skyrocketed since the late 1980s due to better technology in purse seine and longline fisheries (Miyake and others, 2004).

Coastal fisheries. A wide variety of fishing techniques are used in coastal fisheries: the main ones are spearing, drop-lining, trolling, netting, reef gleaning and trapping. In terms of the volume of fish caught, the coastal fisheries catch in the Pacific is made up of 55.6 per cent demersal finfish, 27.8 per cent near-shore pelagic fish and 16.7 per cent invertebrates (SPC, 2013).[9] In terms of export value, the most important coastal fishery is bêche-de-mer (processed sea cucumber). Bêche-de-mer represents a highly profitable industry and is an important source of food and income for many coastal communities in Asia-Pacific small island developing States (e.g. Solomon Islands) due to the ease of harvesting and processing sea cucumber. Its increasing export demand, largely by the Asian seafood market, and the subsequent rise in prices, has, however, led to overfishing of stocks (Strachan and others, 2008). Overexploitation of sea cucumber has detrimental impacts on ecosystem health, as it contributes to the degradation of sediment health, reduction of nutrient recycling and decline in the biodiversity of associated symbionts (Purcell and others, 2016).

Coastal fishery resources of Asia-Pacific small island developing States are under significant stress and show signs of overexploitation, especially in areas close to highly populated centres and for fishery products in demand by rapidly growing Asian economies (e.g. bêche-de-mer and trochus (sea snails)). Coastal fisheries are also negatively affected by habitat degradation as a result of destructive fishing practices, urbanization, siltation from mining/logging and competing uses of coastal zones. The degree of exploitation of coastal finfish is a function of the distance to urban markets: the perishable nature of finfish has a limiting effect on fishing pressure in rural areas. By contrast, the products of commercial invertebrate fishing (crustaceans, molluscs, sea cucumbers etc.) are mostly non-perishable, so the resources are seriously depleted even in remote locations. The overexploitation of important coastal resources is one of the greatest fishery-related problems of the Asia-Pacific region.

Fresh water. Due to the limited size of small island developing States in Asia and the Pacific, production from fresh water is negligible in most countries, with the only exception being Papua New Guinea.

Aquaculture. Relative to the other categories of fisheries, production from aquaculture is negligible. In the Pacific subregion, it was about 4,000 tons in 2014.[10] About 93 per cent of it came from two French Territories (New Caledonia and French Polynesia) where subsidies play an important role. Aquaculture production consists of a limited range of activities:

- Large-scale private sector pearl culture and shrimp culture where there is a significant tourist trade
- Giant clams, especially in French Polynesia, Kiribati, Marshall Islands, the Federated States of Micronesia and Tonga
- Seaweed in Fiji, Kiribati and Solomon Islands
- Substantial amounts of tilapia in Melanesia with much smaller amounts elsewhere
- Small amounts of other commodities (e.g. milkfish, coral) in several countries

The main reasons for the insignificant development of aquaculture are the relative abundance of wild fish, the relatively low value of aquaculture species coupled with high transportation costs to deliver them to market, high maintenance costs of the required facilities and traditional community management tenure systems that complicate the settlement of disputes and in turn deter investment.

B. Challenges to the sustainability of fisheries

In Asia and the Pacific, the health of oceans in general and fisheries in particular is very fragile. There are several reasons contributing to this outcome. Some are structural, such as the very nature of fisheries and climate change, while others, such as pollution and illegal, unreported and unregulated fishing may arguably be deemed as transboundary. These are the root causes of the current challenges, and they must be understood in order to devise solutions that will enhance the sustainable management of fisheries and oceans.

1. Overfishing

Overfishing takes place in EEZs as well as on high seas, in coastal areas and offshore. Although EEZs are managed by countries, access to them by fishing boats is easy, which makes law enforcement difficult. Small island developing States, often possessing EEZs that are many thousands of times the size of their land territory, lack the capacity and resources to ensure adequate law enforcement to prevent overfishing. Furthermore, the

resources caught (i.e. fish) are a "rival good", that is, if a fisherman catches a fish, nobody else can catch it. This translates into incentives to catch as much fish as possible and as quickly as possible. Given that the high seas are not managed by individual countries, this phenomenon is more prevalent on the high seas, which explains why health biodiversity seems to be worse there than in countries' EEZs. This is a manifestation of the "tragedy of the commons". Deterioration of conditions happens also in coastal waters, especially in areas close to large population centres, and for fishery products that are in demand from rapidly growing Asian economies.

One underlying factor of overfishing is strong global demand for seafood products and their elevated prices, especially for commercially valuable fish such as tuna. The strong demand is fueled not only by global population growth but also by changes in consumers' eating habits: global per capita fish consumption increased by 10 per cent from 2000 to 2010 and is projected to increase by another 5 per cent by 2030 (World Bank, 2013). This is because rising income, demographic change, urbanization and higher rates of education in many developing countries will shift consumer preferences and disproportionately increase the demand for high-value food products.

Overfishing is threatening ecological integrity and food security, as the percentage of stocks fished at biologically unsustainable levels increased from 10 per cent in 1974 to 33.1 per cent in 2015 (FAO, 2018). Overall, commercial overexploitation of the world's fish stocks is so severe that it is estimated that up to 13 per cent of global fisheries have collapsed (UNESCO, 2017). The total amount of the fish catch matters; catching juveniles before they can reproduce or targeting such key species as sharks easily alters the overall ecological balance between species, which has very negative consequences for ecosystems' sustainability.

Illegal, unreported and unregulated fishing (IUU)[11] is a key concern accelerating overfishing. Decreasing the impacts of IUU fishing alone has been estimated to reduce losses worth $23.5 billion, or 20 per cent of all wild marine catches (FAO and UNESCO/IOC, 2017). A cross-cutting factor that has contributed to scaling up IUU and the deterioration of oceans more generally is the widespread use of specific technological improvements. Technological innovations in such areas as intensive fishing (through the use of GPS-controlled fish-aggregating devices, for example) have reduced the cost of working in areas that historically were not under threat, increasing operations and thereby their associated environmental risk. However, technological innovations are also being applied towards conservation, with an example being the use of electronic monitoring, i.e. use of video cameras and sensors, in several fisheries. Increased use of such monitoring would improve the capacity of small island developing States to tackle IUU.

Monitoring and observation programmes involve having observers on fishing vessels. They are vital, among other reasons, for assessing and verifying the quantities of the target catch, bycatch and discards. As much as 10.8 per cent of the global fish catch was discarded between 2010 and 2014 (Pérez Roda and others, 2019), which has significant implications for biodiversity if that happens to endangered species. Fisheries targeting tuna and other pelagic species had the lowest discard rates, while fisheries targeting crustaceans had the highest discard rates (Pérez Roda and others, 2019).

The COVID-19 pandemic may, however, create a small window for stocks to recover if it leads to a global slowdown of the commercial fishing industry as travel constraints, access restrictions and closed ports result in a decline in active fishing vessels. Moreover, if demand for fish declines due to less activity in restaurants globally and as a result of a global economic recession, resuming fishing operations may take time. This could be beneficial to stocks as fish would be able to go through their spawning cycle, allowing some species to flourish, during a sufficiently long slowdown. It may also provide a research opportunities to find better, more sustainable ways to monitor and manage the oceans in the post-COVID-19 era.

2. Climate change and environmental degradation

Another challenge for sustainable management of oceans is climate change. Globally, the sea level has risen due to a prominent loss of mass from ice sheets and glaciers (IPCC, 2019). In parallel, the ocean has taken up between 20 and 30 per cent of total anthropogenic carbon dioxide emissions since the 1980s, causing further acidification (IPCC, 2019). More than 50 per cent of the world's reefs have died already and over 90 per cent of the remaining reefs are projected to die by 2050. Oceans are also warming, which facilitates more frequent and more extreme hydrometeorological events. For the Asia-Pacific small island developing

States, there has been an ongoing decrease in the pH of seawater, and climate change is aggravating the lack of oxygen in oceans, which has negative effects on ecosystems. These effects exacerbate the vulnerability of communities that depend on coastal fisheries (due to both overfishing and natural disasters), which is disconcerting given that coastal fisheries are responsible for most of the sector's contribution to food and employment.

An element highlighting the "unfairness" of climate change and representing a central obstacle to mitigating it is the asymmetry of its effects: small island developing States are among the countries and territories having contributed the least to the onset of climate change yet are at the frontline of those suffering from its impact. Based on current projections, that asymmetry is expected to grow even wider: warmer air and sea surface temperatures, ocean acidification, rising sea levels and greater rainfall are expected to cause significant losses of the coral reef, mangrove, seagrass and intertidal habitats that provide shelter and food for coastal fish and shellfish. In the long run, this is likely to further deteriorate coastal fisheries. Climate change could also have impacts on offshore fisheries. Some tuna species are likely to move progressively towards the east (annex III), a slow transfer of resources that will have important implications: more of the tuna will be located in the high seas where there is less control and where distant-water fishing nations (which are also, in general, more responsible for climate change) do not need to pay fishing access fees. In parallel, contributions from tuna to the economies of small island developing States in the western part of the Pacific will decline, but increase in the central and eastern parts.

Marine pollution is another environmental challenge. Agricultural practices, coastal tourism, port and harbour development, urban development and construction, fishing gear, aquaculture and old, energy-inefficient ships are all sources of marine pollution that threaten coastal and marine habitats – which in turn has adverse impacts on the stocks of fish. When it comes to litter, plastic deserves special attention. Global production of plastics increased from 2 million metric tons in 1950 to 380 million metric tons in 2015, a compounded annual growth rate of 8.4 per cent that is roughly 2.5 times that of global GDP during that period (Geyer, Jambeck and Law, 2017). As a result, the share of plastics in municipal solid waste (by mass) increased from less than 1 per cent in 1960 to more than 10 per cent by 2005 in middle- and high-income countries (Geyer, Jambeck and Law, 2017). While it is difficult to assess how much plastic is in the oceans, it has been estimated that about 4.9 billion metric tons (60 per cent of all plastics ever produced) have been discarded and are accumulating in landfills or in ecosystems (Geyer, Jambeck and Law, 2017). The consequences of this volume of plastic are not yet fully known, but it is clear that the environmental, social and economic costs will be significant. For one, environmental impacts include threats to marine biodiversity, coastal and marine ecosystems and the services they provide, as well as direct physical impacts on marine animals and birds resulting from entanglement, ingestion and potential impacts from bioaccumulation of chemical compounds found in or transported by ingested plastic particles. Already, more than 800 species are known to be affected by ingestion, entanglement, ghost fishing, habitat effects and dispersal by rafting (UNEP, 2019). Given the importance of fish in the diet of the inhabitants of small island developing States, social impacts resulting from contamination of food by microplastics, including through micro and nano particles found in seafood and shellfish, will have adverse impacts on humans and animals. While the extent of harm that such plastic is causing is still being researched, it is clear that microplastics may cause harm to humans via both physical and chemical pathways (Smith and others, 2018). Economic impacts, such as damage to the tourism sector, fishing and shipping industries, are also significant. For example, the damage to the economies in the Asia-Pacific Economic Cooperation forum from marine debris has been estimated at $1.26 billion (McIlgorm, Campbell and Rule, 2011), while good management and recycling of plastic can save consumer goods companies $4 billion per year on the cost of recovery, health costs, costs for fisheries and cost of inaction – if this can be estimated.

Several economic sectors are closely linked to oceans and use the marine ecosystem as an "input". They consequently have direct impacts on its health. Marine transport (shipping) is one. Although shipping is one of the most environmentally friendly modes of transport, an estimated 80 per cent of the volume of global trade is carried by sea transport (UNCTAD, 2019), and it still causes a variety of risks to all components of the marine ecosystem, ranging from several types of air and water pollution to direct threats to marine flora and fauna. Such impacts have grown over time as oceans are more and more frequently "used": global

seaborne trade increased by an annual average rate of 3.4 per cent between 2000 and 2018, with China's economic growth being one of the major drivers.

3. Governance

Weak implementation of articles of UNCLOS constitutes a challenge. Churchill (2012) estimated that:

> (t)here are just over 160 parties to the UNCLOS, at least one-third of which (and possibly more) are in breach of at least one significant provision of the LOSC. The degree of non-compliance undermines the integrity and legitimacy of the LOSC. Furthermore, non-compliance provokes disputes, denies State parties some of their LOSC rights, threatens good order at sea, and harms the marine environment.

There are examples that show patterns of persistent infringement (Koch and others, 2015). For instance:

- Article 3, regarding the breath of the territorial sea, is challenged by several States which have requested to exceed the 12 nautical miles allowed
- Article 7, regarding straight baselines, is not fulfilled by some States
- Several States are acting against article 33 regarding the right of exercising control in their contiguous zone
- While article 121(3) stipulates that islands (i.e. rocks) that cannot sustain human habitation or economic life of their own do not have the right to have an EEZ or continental shelf, some States have attempted to make such a claim
- Article 61(2), regarding the preservation and management of fishing resources in an EEZ, is not properly fulfilled by many States as it is estimated that about 30 per cent of global fish stocks are either overexploited or depleted (FAO, 2008)
- Several States violate article 194(5) on the protection and conservation of rare and/or fragile ecosystems by using, for instance, blast fishing on coral reefs – a practice that is destroying marine habitats

Institutional or regulatory features may also have a considerable influence. For instance, climate change mitigation requires global collaboration among countries, which remains insufficient. Likewise, within countries, political interests can make it difficult to achieve the sustainable level of action needed to conserve oceans. For example, the resources needed for IUU surveillance may be raised through the elimination of harmful subsidies or increases in fees, fines and penalties, but these are often politically difficult to set and enforce.

4. Data availability

Despite the importance of fisheries to the economies and social well-being of Asia-Pacific communities, particularly those of small island developing States, substantial data gaps remain, preventing the effective management of fisheries. For instance, no data are available for fishery-related Sustainable Development Goal targets except for target 14.4 on sustainable fish stocks. While sources of data relating to oceans do exist, they are usually fragmented, unharmonized and siloed.

Little data are available for coastal fisheries, which results in the absence of management measures. One reason is that monitoring of coastal fisheries in most countries in the Asia-Pacific region is nascent. The diversity of species, gear and fleet characteristics mean that no single management approach is likely to be effective at all scales. Monitoring coastal fisheries is typically expensive, with vessel landing sites potentially in the thousands for many countries with extensive coastlines, and has historically been unaffordable for many countries in the region beyond the compiling of rudimentary statistics.

Another challenge is that data supporting the larger transboundary industrial-scale fisheries, such as tuna, are often compromised by national confidentiality rules which restrict the resolution that information be made available to third parties (ESCAP, 2020). Aggregation of limited fisheries information, for example, can lead to erroneous conclusions when estimating the depletion levels which a species can sustainably withstand. This lack of transparency in available information can also erode public confidence in government and industry analyses as third parties are not able to truly evaluate the conclusions presented by countries' Governments and fisheries commissions.

C. Experiences and lessons learned

The experiences of Asia-Pacific small island developing States illustrate the attempts to address the aforementioned challenges and policy actions undertaken to ensure the sustainability of fisheries.

1. Fisheries conservation

Given that coastal fisheries are responsible for most of the fisheries sector's contribution to food and employment in small island developing States, taking necessary measures to ensure that their conservation is of paramount importance – even more so when the health of coastal fisheries throughout Asia and the Pacific is in such a fragile state. However, lack of available data is hampering the assessment of the degree to which coastal fisheries are overfished. Regarding fishing in EEZs as discussed above, one driver of overexploitation of fish stocks is illegal, unreported and unregulated fishing (IUU). However, eradicating IUU entails considerable costly efforts towards increased surveillance, dispute settlement and the like. Hence, fully mitigating IUU in EEZs is not expected to bring about net windfall gains for small island developing States.

A second reason for overfishing is that coastal areas are not protected (i.e. tragedy of the commons). To address this situation, the designation of marine protected areas (MPAs) can be very valuable, as reflected in the Sustainable Development Goal indicator 14.5: "By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information". Currently, only about 4 per cent of the world's oceans are protected (WWF, 2020). The benefits of MPAs include the following (WWF, 2020):

- Maintain biodiversity and provide refuge for endangered and commercial species
- Protect critical habitats from damage caused by destructive fishing practices and other human activities so that those habitats can recover
- Provide areas where fish can reproduce, spawn and grow to adult size
- Increase fish catches (both in size and quantity) in surrounding fishing grounds
- Build resilience against damaging external effects, such as climate change
- Maintain local culture, economy and livelihoods linked to the marine environment

MPAs do make a difference. For instance, since its inception in 2005 the Misool Marine Reserve in Indonesia has experienced a huge resurgence in key species, including predators such as sharks, the presence of which is a sign of a healthy reef ecosystem (Langenheim, 2019). Between 2007 and 2013, the total biomass of the marine reserve increased by 250 per cent and in the case of some species, by as much as 600 per cent (WWF, 2020).

Of special interest (although not addressing overexploitation in coastal fisheries) could be large-scale MPAs, which have a surface area greater than 150,000 km^2 and are "actively managed for protection across the entire geographic extent of the area" (Wagner, 2013). The first large-scale MPA created was the Australian Great Barrier Reef in 1975. Since then, 17 large-scale MPAs have been established – some covering areas larger than 1 million km^2 (Lewis and others, 2017).

MPAs may not be silver bullets, however, and should be considered as only one of several tools that can be used. Furthermore, their design can involve difficulties: key conditions for them to be successful are that they be: (a) large enough; (b) close enough to one another; (c) representative of the different species intended for protection; (d) numerous enough; and (e) actively protected (Wildlife Trusts, 2020). Furthermore, Governments ideally should adopt a holistic approach and decide to designate MPAs based on their marine spatial planning (see box II.1). Indeed, such planning is important to guide decision-making relating to the conservation and use of ocean resources and may even be useful for precluding and resolving conflicts over ocean space.

Another approach to fisheries conservation has been to eliminate harmful fishing subsidies to the fisheries sector both in small island developing States and distant-water fishing nations. Target 14.6 of Goal 14 seeks to "prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, and eliminate subsidies that contribute to IUU fishing, and refrain from introducing new such subsidies…". The WTO Agreement on Subsidies and Countervailing Measures defines subsidies as "a financial contribution by government or an agency designated by government that confers a benefit" (Gillett, 2009), which can be:

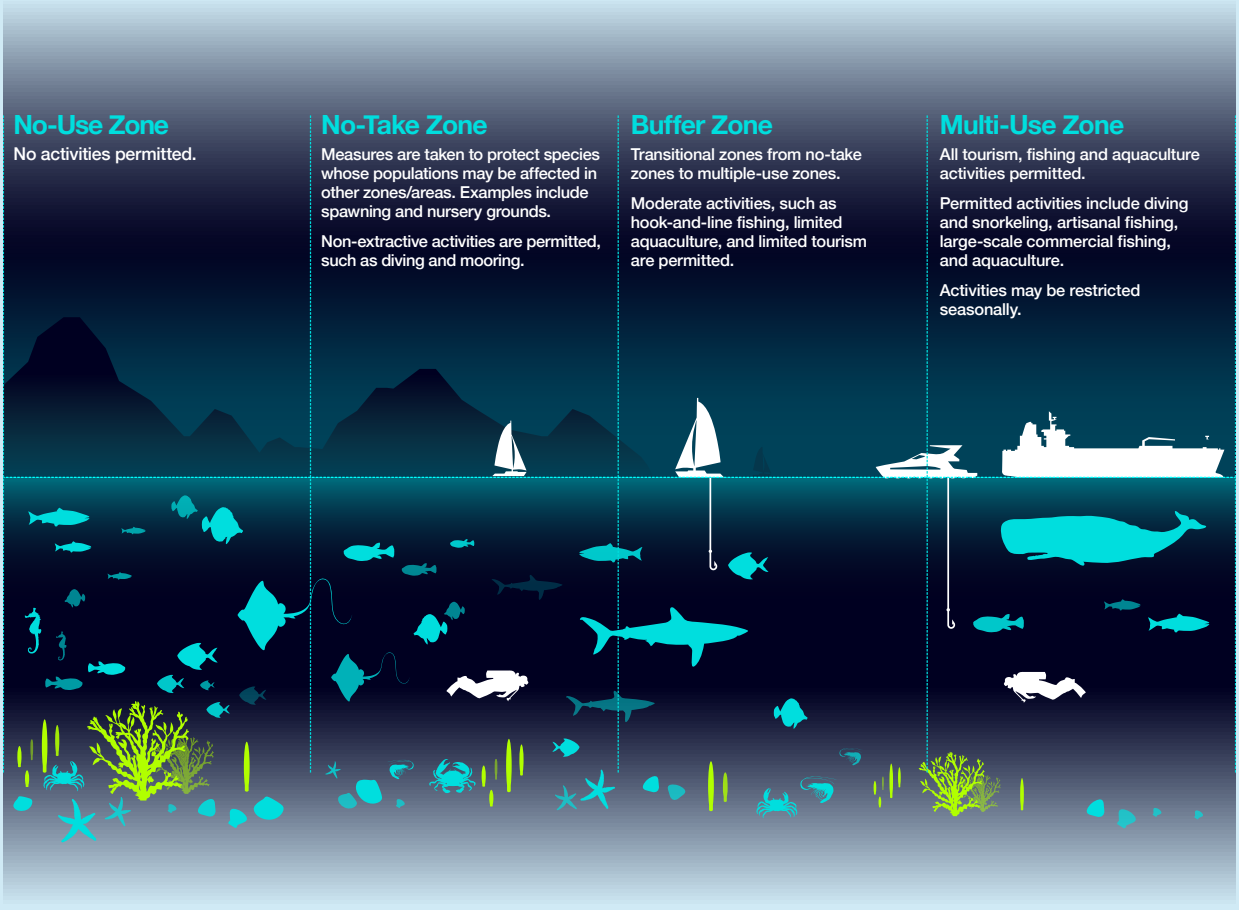
- Direct or potentially direct transfers of funds or liabilities (i.e. loan guarantees)
- Provision of goods or services other than general infrastructure
- Purchase of goods

Box II.1
Difference between marine spatial planning and marine protected areas

Sometimes such terms as marine spatial planning (MSP) and marine protected areas (MPAs) can be used interchangeably, which may lead to confusion because they are two different concepts. MSP can be defined as the process by which the use of marine space is identified and used to inform decisions made by regulators (Vaughan and Agardy, 2020). This is done by analysing and allocating the spatial and temporal distribution of human activities in a country's marine space to achieve ecological, economic and social objectives that typically have been specified through a political process (UNESCO, 2020).

On the other hand, MPAs are areas especially dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources; they are managed through legal and other effective means (IUCN, 1994). The starting point for establishing marine protected areas should be long-term research of populations of marine species and ecosystems (Simmonds and Hutchinson, 1996). MPAs can have very different degrees of protection, ranging from a no-use zone to multi-use zone (see figure A).

Figure A
Features of marine protected areas worldwide



Source: Orbach and Karrer (2010). Adapted from the Ocean Health Index website. Available at www.oceanhealthindex.org/Vault/VaultDownload?ID=8545.

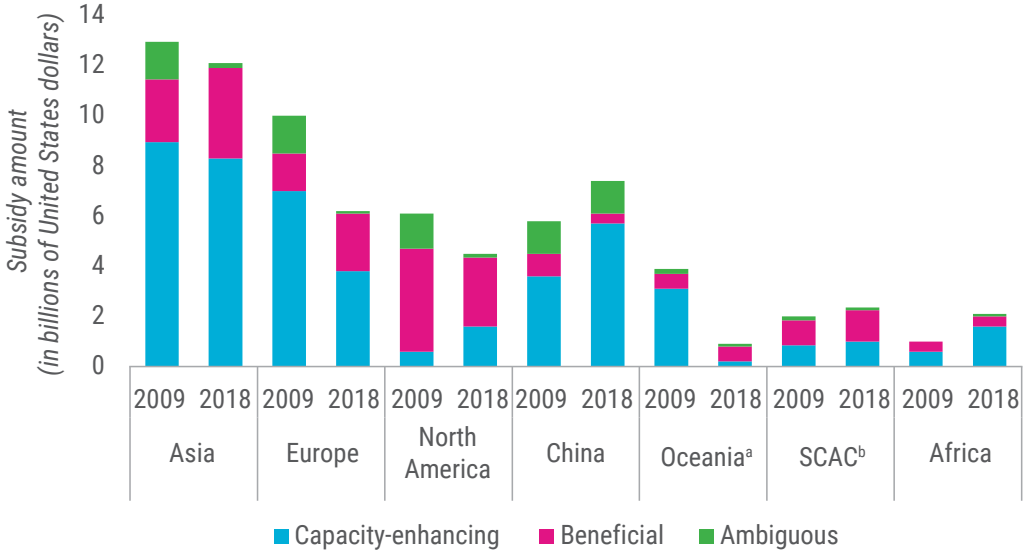
- Foregone government revenue (i.e. tax credits)
- Payments to a funding mechanism that carries out any of these functions
- Any form of income or price support

Unfortunately, subsidies usually remain a politically sensitive issue in most countries, making their alterations a difficult task.

Fisheries' subsidies can be classified according to their potential impact on fish stock as "beneficial", "ambiguous" or "capacity enhancing" (ICTSD, 2012). Beneficial subsidies are those investments that contribute to the sustainable conservation and management of fish stocks, such as funds allocated to research and development. Ambiguous subsidies, such as vessel buy-back programmes, may contribute either to the sustainable development of the fisheries sector or overexploitation of fishing resources.[12] Their effects depend on how and where they are implemented. Lastly, capacity-enhancing subsidies reduce the cost of fishing, unambiguously favouring overexploitation of marine resources beyond the maximum sustainable yield. Fuel subsidies to the domestic fishing community may be the clearest example of capacity-enhancing subsidies.

As figure II.5 illustrates, capacity-enhancing subsidies remain the highest category, and Asia has remained the most subsidized part of the world, accounting for 43 per cent of the total (Sumaila and others, 2019). The figure shows that subsidies in the fisheries sector remain a grave concern, although there have been considerable improvements in areas such as the Pacific subregion. In 2003, the total value of global subsidies granted to fisheries was estimated at $25 billion to 29 billion (Sumaila and others, 2010), which increased to $35 billion in 2009 (Sumaila and others, 2019). Since then, subsidies have decreased by about 15 per cent in the total amount of fisheries subsidies, and countries and territories in the Pacific subregion have shown the highest reduction. This means that there is relatively limited room for further reducing subsidies in the Pacific. Conversely, many distant-water fishing nations still maintain significant subsidies that could induce overexploitation. Hence, efforts should be made to reach international consensus for actionable and timed-framed subsidy-reduction plans.

Figure II.5
Comparison of fishery subsidy amounts, by area of world, between 2009 and 2018



Source: Sumaila and others (2019).
Note: Figures are reported in 2018 constant United States dollars. Previous subsidy data are adjusted using the consumer price index.

[a] Oceania includes the following countries and territories: Australia, Fiji, Kiribati, Marshall Islands, the Federated States of Micronesia, Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
[b] SCAC stands for South, Central America and Caribbean.

2. Financing for conservation

Financing conservation efforts has been an important challenge, as ensuring ocean health requires investments for the conservation of oceans and fish stocks. For this, Governments need fiscal space to mobilize those resources, which can be done broadly by generating additional resources or by reallocating public spending (e.g. eliminating subsidies to fisheries). To mobilize additional resources, countries can explore a wide variety of sources.

In the last decade, large increases in access fees have been achieved in the offshore segment of independent Pacific island countries, largely due to the purse-seine vessel day scheme (VDS) introduced by the Parties to the Nauru Agreement (PNA).[13] Equally large expansions in access fees are unlikely in the near term, but modifications to VDS may result in modest increases.[14] Longline fleets, less profitable than purse-seiners, do not have much margin either but there could be modest potential to increase transshipment fees if the process is well coordinated among countries.

Given the poor condition of many coastal fishery resources in the subregion, protection of the current benefits, rather than attempts to produce substantially new benefits, may be the focus of government interventions in coastal fisheries. Due to the small size of freshwater resources in most countries and territories of the subregion, an expansion of that subsector (and therefore its benefits) beyond its current size is not likely in the near future. Similarly, the expansion of aquaculture in the subregion seems unlikely to generate considerable additional government revenue in the near term.

Taxation in the fisheries sector has attracted interest at least since the early 2000s (Gillett, 2003). On the government side of small island developing States, in the past there seemed to have been the perception of an opportunity to tax the profitable tuna industry. However, in the private sector and in various countries, fisheries officers viewed the possibility of a change in tax regimes as a threat to recent progress in the development of the fisheries industry. In a similar fashion, more recently there have also been calls for clear and extensive tax concessions for developing fisheries industries. At the same time, several small island developing States in the Asia-Pacific region do not tax the incomes of fishers, presumably to increase production from small-scale fishing operations. Apparently in some countries the definition of a "fisher" is broadly applied and includes leaders of the domestic tuna industry. The government revenue implications of improved fisheries taxation are unknown, and the area is politically sensitive, which will likely undermine far-reaching tax reforms. An alternative would be to address inefficiencies in the tax system, which has room for improvement in most Asia-Pacific small island developing States (World Bank, 2019a). While not exclusive, staying abreast of changing conditions and associated opportunities may offer greater prospects than correcting perceived inefficiencies. Indeed, to take advantage of the emerging opportunities, government fishery managers must have current and intimate knowledge of industry developments, changing market opportunities, trends in resources and other aspects of the fisheries world.

Bonds can also be an effective instrument if debt is well managed, i.e. funds are effectively put into investments that add value and do not involve taking on excessive debt. Some small island developing States have already raised funds through so-called blue bonds. For instance, in 2018 the Seychelles was the first country to issue sovereign blue bonds, raising $15 million from international investors to finance blue economy projects, dedicated to the expansion of MPAs and improving the sustainable management of fisheries.

There are instruments that can combine several sources of finance. For instance, the Asian Development Bank's Oceans Financing Initiative catalyses financing for projects that will help protect and restore marine ecosystems and promote sustainable blue economies. The initiative leverages public sector funds to create investment opportunities able to attract financing from a range of sources, including the private sector (ADB, 2020). Technical assistance and funds, along with innovative financing instruments, such as revenue guarantees and credit-enhanced blue bonds, are used to reduce project risks and make them more attractive to investors (ADB, 2020).

An elaborate combination between debt and reallocation of expenditures is "debt for conservation swaps". When a country has debt, it can negotiate with its creditor to convert that debt. Instead of repaying it, the country must commit (and provide sufficient guarantees, which can involve additional institutional vehicles) that the funds that would otherwise be spent on repayments will be dedicated to conservation efforts. A remarkable example of this is the Seychelles, which in 2018 sold a

part of the country's sovereign debt to the Seychelles' Nature Conservancy, and in exchange, declared a third of the country's marine area as an MPA.

3. Efficiency

Improving efficiency remains crucial to the effective management of fish stocks and thus conservation. Efficiency in the fisheries sector may refer to several aspects. Two central ones are the use of technology and the creation of employment characterized by higher productivity.

The role of technology applications for higher efficiency in the fisheries sector cannot be understated. In the last few decades, technological improvements have been used to make fishing vastly more efficient. Such improvements can be used for conservation. For instance, there are new types of fishing gear designed to enable juveniles escape. Another noteworthy improvement has been satellite tracking via GPS, used by fishing authorities to track vessels, which helps keep overfishing IUU in check. For fishers, technological improvements have reduced the search time, which leads to lower fuel consumption (which would also make them more "carbon friendly") and the consequent increase in fish catch per unit of effort. A specific application of technology is a fish aggregating device (FAD), a permanent, semi-permanent or temporary structure or device made from any material used to attract fish (FAO, 2020a). Evidence shows that after a few days any device floating at sea will start attracting fish underneath it, first small fish and later larger fish (FAO, 2020a). Eventually, tons of fish can gather underneath a small device. Such devices have long been used, but the possibility of tracking them by GPS has given them a qualitative leap in their capacity to assist in harvesting fish, e.g. traditionally the devices would be anchored but now they can also be left drifting or under the surface. FADs are so efficient that they are useful to both small-scale and large-scale fishers.[15] However, they have raised concerns over the conservation of the fish stocks; fishing regulatory bodies have therefore introduced restrictions on their use. Any purse-seine vessel can easily be tracking hundreds of FADs at any time; thus, regulations that are "fit" to related conservation challenges must be in place and enforced.

Increasing regulatory pressure on fishing operations may be necessary. Technology can also be a powerful ally for the conservation of fish stocks. A promising area is to reduce by-catch and avoid catching juveniles. For instance, fishing nets have been designed with "escape rings" that light up to attract the fish which can go through them (White, 2016). This example illustrates that technological improvements can have both negative and positive effects.

Another way of enhancing efficiency is by generating productive employment in fisheries, which is connected to the processing of fish. This subsector is important in the context of absorbing the labour force employed in subsistence farming and fishing, which is characterized by low productivity, and transferring it to more productive jobs. Statistics shows that, of those employed in the processing sector, 62 per cent were so employed in Papua New Guinea, 16 per cent in Solomon Islands and 13 per cent in Fiji. Total employment related to tuna fisheries in member countries of the Pacific Islands Forum Fisheries Agency in 2016 was estimated at approximately 23,100 persons, an increase of about 2,300 (11 per cent) from that in 2015. Growth in onshore processing sector employment of 6 per cent saw the sector's contribution to employment rise to about 13,200 jobs.

Strategies to pursue this can also involve the creation of employment for the nationals of small island developing States; existing assets can be leveraged to do so. For instance, there have been initiatives to promote employment aboard tuna vessels either by requiring a minimum number of local crew or by facilitating employment (e.g. provision of crew training) (PIFS, 2017). By requiring domestic processing as a condition of access or by a reduction in access fees, some countries have also managed to create onshore jobs.

While it may not always be easy, small island developing States may consider pursuing higher added value activities in their fisheries. Research has been conducted to maximize the utilization of fish products and valuable lessons learned from the Asia-Pacific region and beyond.[16] For example, fish skins can be used as an alternative raw material for a variety of leather products. Collagen extracted from fish skins can be turned into cosmetics, food (e.g. gelatin), or high-end burn-wound dressing. Chitin and chitosan from fish scales and crustaceans are biopolymers with extensive applications in biomedical, food and agricultural industries. Minerals, such as phosphorus and calcium, in fish bones can be utilized as fertilizer for various crops (FAO, 2017). Iceland is well renowned for drawing high value added

from fish. Examples include fish bones that are made into Lego-like toys and fish eyes that are turned into collagen. Research to replicate these examples and find additional uses for fish products may make such applications more feasible, while regional cooperation for sharing good practices and research outcomes may effectively contribute to the efforts.

4. Legal framework and multi-stakeholder engagement

The effective implementation of UNCLOS, its Implementing Agreements and other relevant instruments are an important part of the institutional framework for the conservation and sustainable use of marine resources, which in turn determines investment and business innovation.

Beyond UNCLOS, there is an ongoing discussion in the international community on measures to alter the status quo, and thus to potentially help small island developing States increase benefits from their natural resource endowments. One such measure could be to increase the 200-nautical-mile limit that constitutes countries' EEZs. For example, EEZs can be increased if countries can prove that the claimed area is a natural prolongation of their land territory. This has allowed some countries to have a 350-nautical-mile EEZ.[17] While it is a costly process that puts small island developing States at a disadvantage in view of their weaker institutional capacity, it could contribute to ensuring more sustainable fish stocks in these zones. Indeed, the international community is working towards developing an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdictions.[18]

To successfully implement the legal framework, it is necessary to engage all ocean stakeholders. There is a heritage of traditional fisheries management in most small island developing States. Non-small island developing State Governments typically have taken and continue to use a "top-down" approach through their fishing regulatory bodies when it comes to controlling fishing through, for instance, fishing quotas, bans or moratoriums. This approach can be highly effective in cases where the State has a high capacity for surveillance, people are not poor (as poverty encourages overfishing) and/or the relevant areas are highly populated (the more people there are, the more likely the tragedy of the commons could occur).

In small island developing States, where local communities were historically involved in the management of natural resources, sustainability was usually not a problem. Indeed, many communities had also introduced bans and moratoriums. However, as demand for fishing products has risen over time, the probability of the tragedy of the commons has also increased and started to contribute to overexploitation. To address this challenge, Governments can create MPAs, as discussed in section C.1, and invest in surveillance to deal with IUU. However, doing so will require significant resources, may not solve the problem and may even create citizen resentment towards the State – especially for coastal fisheries and in countries and territories with high poverty rates.

An alternative approach is to ensure that all stakeholders involved in the conservation and use of oceans are considered as "partners". In this way, they are turned into the State's "allies" in the sense that the State benefits from their presence at the local level (often they are the first ones to spot IUU) and their reporting of destructive behaviour (as they are in control, they realize that marine resources are "theirs", so if those resources are lost, they will suffer from that loss). In some sense, it is as if State capacity increases with the assistance of stakeholders, which is valuable because turning international commitments into actionable strategies implemented at the local level is challenging for any country, especially for small island developing States where institutional capacity is often low. A powerful way to motivate local communities is to listen to them and involve them in decision-making processes.

While it should not be considered a panacea, the partnership approach can take several forms. For instance, for private firms it can be public-private partnerships (PPP), which can be a successful strategy to support fisheries and aquaculture for several reasons (Weirowski and Hall, 2008):

(a) Access to national and international markets: fishery enterprises usually need help from PPPs to enter the global supply chain;

(b) Food safety and quality: PPPs can be used for small-scale fishers and fish farmers to meet food and quality standards successfully;

(c) Infrastructure efficiency: PPPs can help with feed production and its distribution to producers. These arrangements can also be beneficial for the improvement of water systems management;

(d) Finance: often small-scale fisheries do not have access to credit, and PPPs can act as credit guarantors for rural banks; and

(e) Human skills and training: PPPs can support the creation of training centres, programmes and e-learning courses that support knowledge and learning.

A variant of PPP is public-private community partnerships (PPCP), which involve local communities in the area of intervention. The main advantage of PPCPs is that, by involving local communities, the emphasis shifts from profitability to sustainability. Initiatives such as Misool Marine Reserve in Indonesia (started by a tourism business and involving local communities for the sustainable management of the reserve area) exemplify the power of involving all stakeholders and demonstrate how a healthy environment can have positive spillovers effects, such as attracting more tourists, which in turn may enable workers in subsistence fishing to participate in a more integrated economy where more job opportunities are available.

Implementing these formulas may not be easy, however, as a country must have the necessary institutional framework, the most basic elements of which would be PPP and/or PPCP legislation, the definition of locally managed areas, enough capacity to formalize such arrangements with clearly defined communities and dispute settlement mechanisms that do not involve a top-down approach. Currently, clear gaps in these areas remain. For instance, as of 2017 only two small island developing States in the Pacific (Fiji and Papua New Guinea) had public entities dedicated to support PPP programmes and the implementation of PPP projects (Verougstraete, 2017).

Beyond marine resource conservation, stakeholders at large must be involved as well, including international organizations, academia and civil society, among others, because this raises awareness and responsibility towards marine conservation. Furthermore, international organizations also "spread the word" about successful practices, which increases the chances of them being replicated in other areas. However, with a likely impact of the COVID-19 pandemic being an exacerbated offshore law enforcement gap, there is the possibility that illicit, unregulated and unreported fishing may increase in the short term, highlighting that less secure oceans are less well managed and are less able to sustainably provide resources over the long term.

5. Regional cooperation

Regional cooperation is especially important given the nature of fisheries as common property depletable resources, and it can greatly enhance some of the policies already in existence, such as ongoing agreements between countries to monitor IUU. This is explicitly recognized in UNCLOS and reflected in the number and importance of regional fishery bodies (RFBs) (annex IV).

RFBs are a mechanism through which States or organizations which are parties to an international fishery agreement or arrangement work together towards the conservation, management and development of fisheries. Some RFBs, especially if they have an ecosystem mandate, can also work on species that relate to fisheries but are not fish stocks per se (e.g. seabirds). Mandates vary considerably: those with an advisory mandate provide advice, decisions or coordinating mechanisms that are not binding on their members. Others, called regional fisheries management organizations have a management mandate: they adopt fisheries conservation and management measures that are binding on their members. In turn, the Regional Fishery Body Secretariats' Network facilitates information exchange among RFB secretariats.

Regional cooperation in fisheries has led to greater regional solidarity on fisheries issues. Especially in the Pacific, this has resulted in substantial benefits for small island developing States. Two initiatives are particularly noteworthy: the harmonized minimum terms and conditions for foreign fishing vessel access, which, in the mid-1980s, specified consistent conditions across the Asia-Pacific region, and the Parties to the Nauru Agreement (see box II.2), which introduced the vessel day scheme (VDS) and was largely responsible for a noteworthy increase in access fees between 2007 and 2017.

In looking forward, countries may build on successful experiences from the past, such as PNA, and replicate those agreements in new segments (for example, tuna longliners) or products (e.g. bêche-de-mer). Efforts to explore these options are ongoing. For example, at the Forty-sixth Pacific Islands Forum Leaders' Meeting in 2015, participants affirmed the central importance of increasing the economic returns from and ensuring the sustainable management of fisheries in the Pacific subregion. A joint task force composed of the Pacific

Box II.2
Parties to the Nauru Agreement

Created in 1982, the Parties to the Nauru Agreement (PNA) controls the world's largest sustainable tuna purse seine fishery, with about 50 per cent of the global supply of skipjack tuna, the most commonly used type for canned tuna. The members of PNA are Kiribati, Marshall Islands, the Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu. The main mechanism of PNA to sustainably manage tuna is the vessel day scheme (VDS), introduced in 2007 to redesign the negotiation process to sell fishing licences to distant-water fishing nations in the Pacific's tuna fisheries to coordinate as one block. VDS proceeds as follows: first, PNA members agree on a limited number of fishing days for the year, based on scientific advice about the status of the tuna stocks. Then, fishing days are allocated by country and sold to the highest bidder. This increased small island developing States' bargaining power and as a result, enabled some Pacific small island developing States to dramatically increase their government revenues. Fishing licence fees increased from $220 million in 2012 to $470 million in 2017, accounting for as much as 75 per cent of government revenue in such countries as Kiribati. As for other remarkable features, PNA has spearheaded the implementation of many tuna conservation measures, such as high-seas closure to fishing, controls on fish aggregating devices (FADs), protection for whale sharks and the 100 per cent coverage of purse seine fishing vessels with observers. In 2011, PNA skipjack tuna caught without using FADs was certified by the Marine Stewardship Council as sustainable, creating the world's largest sustainable tuna purse seine fishery.

There have been several suggestions for altering the purse seine VDS to create more economic rent in the fisheries. One of these involves providing vessels with more durable fishing rights (i.e. making the purchased vessel days valid for more than one year). Another suggestion is to create a VDS pool so that vessels could purchase vessel days which could be used for fishing in several EEZs instead of being required to purchase vessel days for specific zones. In theory, these changes would create more economic rent in the fisheries by increasing vessel efficiency. The fact that these proposals have been around for a while (and have undergone considerable analysis) without being agreed and implemented could suggest that any increases in access fees that flow from these changes would be moderate rather than significant. Another view is that these modifications to the VDS system would not result in more access fees, but rather keep the relatively high current fees from falling.

Source: PNA (2019) and www.pnatuna.com/about-us.

Community (SPC), Pacific Islands Forum Fisheries Agency (FFA), PNA and Pacific Islands Forum Secretariat was commissioned to develop a programme to increase the sustainable economic returns from fisheries. At the Pacific Islands Forum Leaders' Meeting in 2016, participants endorsed the work of the fisheries task force and highlighted four areas under the agreed work programme: (a) reform of the management of the longline fishery; (b) increasing the value of employment and ensuring that effective labour standards are in place; (c) facilitating investment and trade; and (d) value chain participation (PIFS, 2018). Several outputs of the task force are of special interest:

- The PNA Longline Vessel Day Scheme (an arrangement similar to the successful purse seine VDS) is being implemented, with several member countries moving to allocate and sell days to fishing companies or vessels, instead of annual licences[19]
- FFA has explored the feasibility of establishing a regional processing hub, including how countries can formulate and develop strategic partnerships between themselves and with appropriate commercial partners
- There is potential for further development of the offshore fisheries sector, including through optimization and domestication of services sectors ancillary to the fisheries sector (e.g. bunkering,

provisioning, insurance, financial services, dry-docking, transportation/trans-shipment). There is also potential for increasing the domestic value-added component of the fisheries sector, potentially by as much as the value of the region's total 2015 fisheries exports

- Members of the task force are trying to develop eco-certification and eco-labelling, also noting the success and benefits from the PNA approach to branding and the progress achieved in small-scale, locally based canning

While RFBs have made great strides, having broader Asia-Pacific-wide platforms for collaboration should also be useful in building a shared understanding of opportunities and challenges. This will be particularly useful if all relevant stakeholders, both public and private entities and both small island developing States and distant-water fishing nations, are engaged. For example, since 2018 ESCAP has held annually the Asia-Pacific Day for the Ocean, the first event of its kind at the regional level that is designed to take stock of progress made by countries in the region on the targets of Sustainable Development Goal 14, expand the Communities of Ocean Action and catalyse new commitments for a healthy ocean in Asia and the Pacific (ESCAP, 2019b).

D. Policy recommendations

Fisheries have been, are and will continue to be vital for Asia and the Pacific, especially for small island developing States. Policymakers are aware of this, as proven by repeated efforts to increase benefits from the fisheries' sector. This can be done by catching more fish, through a more equitable sharing of fishing rents and by adding higher value to the fish caught. Catching more fish was historically the first approach. Spurred by ever-increasing demand from the rising income and population in Asia and the Pacific, this has been greatly facilitated by technological improvements that have made fishing more efficient. As a result, fish can now be caught with much less effort in offshore fisheries. However, catching more fish has resulted in the creation of a victim: the fish itself. Coastal fisheries are largely overexploited, as are some species in offshore fisheries in the Indian Ocean and in South-East Asia. Even in the Pacific where stocks of the four major tuna species are still considered healthy, the biomass of most stocks continues to decline. Hence, greater efforts are required to ensure that fisheries serve as an effective driver of sustainable development. Indeed, the challenges faced by Asia-Pacific small island developing States in terms of sustainable fisheries, their experiences and the lessons discussed above lead to the following policy recommendations.

First, overfishing can be addressed through **adequate conservation efforts,** such as the creation of marine protected areas and the improved monitoring of IUU fishing. For the latter, recent technology development may prove an important instrument. Moreover, effective mechanisms for mobilizing financial resources must be improved or put into place. While a boost in fishing access fees is unlikely in the near term, modifications to existing schemes may result in modest increases. Innovative instruments to mobilize resources, such as blue bonds and debt for conservation swaps, may have some potential if the Governments of small island developing States can be successfully engaged in negotiations with development partners and conservation agencies. Other possible sources of finance include: taxes for ecosystem services (e.g. eco-taxes to access marine parks); private obligations (e.g. fines); and loans and grants from multilateral/bilateral donors or foundations (e.g. the Ocean Foundation). Taking into consideration their degree of contentiousness, taxes and subsidies must be adequately tailored.

Second, the effective management of fisheries requires **factual, transparent and harmonized data and information**. Data for coastal fisheries are particularly scarce, resulting in the absence of management measures. Monitoring coastal fisheries is typically expensive in countries with extensive coastlines and has historically been unaffordable for many countries in the Asia-Pacific region beyond the compiling of rudimentary statistics. The application of remote sensing technology, e-reporting, and e-monitoring, for example, would present potential as new sources of data for improved monitoring in this regard. Data for offshore fisheries also suffer from a lack of transparency because the data supporting the larger transboundary industrial-scale fisheries are often compromised by national confidentiality rules, which restricts the resolution that information be made available to third parties.

Countries could therefore increase efforts to share data across both private and public data holders as this would provide an opportunity for integrated and nuanced analysis of fisheries. This could be done by introducing relevant national laws and providing incentives so that access to current "confidential" data becomes open. Harmonized national statistical systems would

assist with ensuring that the quality control associated with fisheries data is consistent and the data robust. This would reduce data processing costs associated with analyses when the public domain is used and/or confidential data is shared by a particular country for a specific purpose (e.g. stock assessment).

While national statistical systems, such as those in the Pacific subregion, face the compounded challenge of an increasing range of data to be collected and limited capacity in place, infrastructure to assist with cloud-based storage of information would assist remote communities and countries with the housing of processed information.

Third, **improved governance** must result in the effective implementation of global conventions, such as UNCLOS, and ensure **multi-stakeholder engagement**. The latter has a long tradition in the Asia-Pacific small island developing States; the involvement of local communities can, for example, be implemented as a public-private community partnership. More effective and intense involvement of local communities will allow for increased sustainability of the fisheries sector as it will enable a diffusion of benefits into local populations. Part of the solution lies in creating productive employment for local populations in the fisheries sector by reorganizing processing activities.

Finally, **regional cooperation** and broader international cooperation are of paramount importance. Climate change is already being felt extensively and, considering that it is expected to result in some tuna species moving away from current fishing areas, the projected impact of climate change on fisheries highlights the asymmetry between those who suffer its effects and those who caused it. Only through international cooperation and concerted efforts of all countries can the consequences of climate change be effectively mitigated. Regional cooperation will also be essential for addressing overall environmental degradation and marine pollution. Ocean plastic waste could significantly threaten the health of marine species. Regional cooperation is also needed to monitor harmful behaviour that contributes to overfishing, such as IUU fishing. Efforts should also be put into reaching international consensus for their actionable and time-framed subsidy-reduction plans. Finally, only broad regional and international cooperation can ensure that fish stocks are maintained at sustainable levels in EEZs and high seas, where monitoring is limited.

To ensure the sustainability of the fisheries sector, it is important to note that this cooperation must include all Asia-Pacific countries and territories, not only small island developing States, as the degree of the sector's sustainability will also depend on the policies followed by States which are factual owners of the large commercial fleets fishing in EEZs and the high seas and, at the same time, are the largest consumer markets for fish products. The United Nations Economic and Social Commission for Asia and the Pacific has the unique platform to enable such close cooperation, as all engaged parties are ESCAP member states. Particularly, conservation efforts and indeed climate change and marine pollution issues must be addressed through close regional cooperation.

Indeed, the challenges related to the sustainable management of fisheries so that they are a driver of sustainable development must be fully grasped, as they are intricately linked to the sustainable conservation of oceans. Without an adequate response, the nature of fisheries as common property will lead to the tragedy of the commons. Making fisheries more sustainable will require concerted actions, including those listed above. Importantly, a healthy fisheries sector, particularly the coastal fisheries sector, will add to the health and strength of communities and will have other positive spillovers through, for example, attracting more tourists to communities. This will in turn capitalize on rich ocean resources in a sustainable manner and create jobs other than subsistence farming and fishing, lifting many out of poverty.

ENDNOTES

1 The transfer of fish from the catching vessel to a transport vessel. Small island developing States prefer that transshipment should take place at the port so that they can have better control over the volume of fish caught and charge transshipment fees. To encourage that approach, they generally ban transshipment at sea (within their EEZs), so when this process is done at sea, it takes place on the high seas (outside any EEZs).

2 These are for the various activities necessary to process fish, such as "loining" at canneries. (The loin is considered the prime, highest-quality part of a large round fish; it is taken from the part of the fillet which is above the spine where the meat is thickest. Loins are typically cut from such fish as marlin, swordfish and tuna.)

3 These are for selling the fish in the domestic market.

4 This is often for small-scale fishers; sales may not be very profitable.

5 The concept of an exclusive economic zone is rooted in unilateral declarations of sovereignty by various countries. While the first such declaration was the United States Presidential Proclamation of 28 September 1945 on the continental shelf (known informally as the Truman Proclamation), it was developing countries that pursued it, initiated by a few Latin American States, refined by Caribbean States and defined explicitly by African States. Eventually, it was codified into law under UNCLOS in 1982 (Nandan, 1987).

6 The reason why it is 200 nautical miles seems to have nothing to do with conservation of marine resources. As pointed by Nandan (1987), in reference to an earlier work by Pilar Armanet, the legal precedent was derived from a map in a magazine article discussing the Panama Declaration of 1939 in which the United Kingdom and the United States agreed to establish a zone of security and neutrality around the American continents in order to prevent the resupplying of Axis ships in South American ports. The map showed the width of the neutrality zone off the Chilean coast to be about 200 miles. This became the basis for the 200-nautical mile limit.

7 This term refers to all waters of the Pacific Ocean bounded to the south and to the east by certain latitudes and longitudes.

8 These statistics can be misleading because ships from distant-water fishing nations have been known to adopt the flag of small island developing States.

9 Pelagic fish live in the open ocean, while demersal fish live at or near the bottom of the ocean and reef fish live on or near coral reefs.

10 This is the latest year for which comparable production information is available for the subregion.

11 IUU covers many different types of illegal activities, often so different as poaching and misreporting. However, the use of the term IUU related to coastal fisheries in the Pacific may be misleading because most coastal fishing in the Pacific, including that which is entirely legal, is unreported (Gillett, 2014).

12 These subsidies are ambiguous because on one hand, new vessels are sometimes more energy-efficient and environmentally friendly. On the other, they can also be more efficient in catching fish, which could contribute to overfishing. However, overfishing does not depend only on the ship; there may also be subsidies, poor enforcement of IUU, etc. Hence, the net effect could be either negative or positive.

13 Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.

14 Recent analysis in an unpublished benchmark paper by PNA in 2019 shows that the current price of a purse seine day ($12,500) is approximately equal to the average economic rent per day. Five years earlier the price of a purse seine day ($7,000) was about half of the average economic rent per day, which suggests that currently little or no remaining rent exists in the purse seine fishery to pay for any increase in access fees. This is supported by the fact that some of the PNA countries are currently experiencing difficulties in selling all their available purse seine days.

15 There are two very different types of FAD: nearshore (for small-scale fishers) and offshore (for large-scale fishers).

16 For example, in South-East Asia, see Heng and others (2003).

17 For instance, after a six-year deliberation by the UNCLOS 21-member commission of experts, Pakistan's EEZ was extended to 350 nautical miles (DOALOS, 2015). When EEZs are increased to 350 nautical miles, however, the additional 150 nautical miles do not include rights to fishing.

18 Through General Assembly resolution 72/249, it was decided to convene an intergovernmental conference under the auspices of the United Nations to consider the recommendations of the preparatory committee established by General Assembly resolution 69/292 on the elements, and to elaborate the text of such an international legally binding instrument.

19 Informal discussions with experts have noted that the success of the longline VDS may be more elusive than the purse seine VDS due to the lower profitability of longlining and the fact that longlining exclusively on the high seas is more viable than purse-seining.

Chapter III

Tourism as a driver of sustainable development in Asia-Pacific small island developing States

Due to their geographic isolation and small size of their economies, small island developing States are often unable to integrate into regional and global value chains and production networks and thus fully participate in the global economy. Consequently, the solution to their developmental challenges and in some cases persistent poverty may lie in structural transformation, targeting niche products and high-end and environmentally sustainable tourism services (ESCAP, 2019a).

Fortunately, notwithstanding the COVID-19 pandemic, the long-term global context is generally supportive of the development of tourism in Asia-Pacific small island developing States, due to the increasing demand from the emerging middle class of developing countries in Asia and the ageing society in the developed countries on the Pacific rim. Furthermore, among new travellers there is a strong sense of environmental and cultural responsibility and a growing desire to give back to the destination and local communities (Cocker, 2017). If pursued in a sustainable manner, tourism development can potentially raise significant revenue, which in turn may accelerate progress towards achieving the Sustainable Development Goals.

Tourism is one of the fastest-growing sectors in the global economy. Globally, tourist arrivals grew by an average of 4 per cent annually from 2008 to 2018, reaching 1.4 billion arrivals and generating total receipts of $1.3 trillion and accounting for 300 million jobs in 2018. The number of tourists travelling across borders is expected to reach 1.8 billion a year by 2030 (UNWTO and UNEP, 2019). There has also been significant growth in the number of international tourists visiting small island developing States since the start of the new millennium. Arrivals increased from 28 million in 2000 to 41 million in 2013 (UNWTO, 2019). Such growth can bring significant benefits to economies and societies,

including socioeconomic development and job creation, in recipient countries and territories.

The current long-term trend of fast-growing tourism in Asia-Pacific small island developing States is no surprise. Such States, especially in the Asia-Pacific region, are naturally endowed with good weather, beautiful scenery, abundant nature, and distinctive and rich cultures. From colonial times, the South Pacific has inspired the ubiquitous image of a tropical paradise with untouched scenery, swaying palm trees, warm crystal-clear waters and golden sandy beaches, coupled with welcoming, happy islanders (Pratt, 2013b). This image has been reinforced through modern destination marketing campaigns.

Due to their geography, Asia-Pacific small island developing States have a comparative advantage in tourism, which has grown into a leading economic sector. Moreover, it is a key sector in these States as there are few economic alternatives (Pratt, 2015a). This chapter illustrates how tourism in Asia-Pacific small island developing States can be advanced in a sustainable way to provide a greater development impact in the region, particularly for local economies and local populations. Large proportions of these populations are still living in poverty, as illustrated by the fact that five of the Asia-Pacific small island developing States still belong to the category of least developed countries. Linking them more closely to tourism and its benefits will therefore be an important aspect of strengthening these countries' development and making it more sustainable.

It is important to note, however, that the impact of the COVID-19 pandemic, the extent of which is not yet known, could result in a significant contraction of tourism activities if the current pandemic situation is prolonged and if fiscal and monetary policy measures fail to support affected local businesses within the tourism sector and the local populations employed therein. Box III.1 in section C.2 discusses the impact of the COVID-19 pandemic on tourism of the Asia-Pacific small island developing States.

The rest of the chapter is organized as follows: section A briefly highlights the importance of tourism as a driver of economic growth and sustainable development. Section B discusses the current status of tourism in the Asia-Pacific small island developing States as far as the number of tourists and their economic impact are concerned. Section C shows the existing trends and opportunities stemming from the growing number of tourists arriving from Asia-Pacific emerging markets. It then identifies the main challenges to tourism development, including high exposure to such sudden demand shocks as the COVID-19 pandemic, and discusses their sustainability concerns. Section D presents experiences and lessons learned from within and outside the Asia-Pacific region to address the challenges and concerns. For the purpose of increasing receipts from the tourist sector, it discusses green taxes, fees and other mechanisms to generate revenue. It also illustrates how to better link tourism with the rest of local economies, partly through development of various types of tourism, such as marine-based tourism, cultural tourism and sports tourism. Finally, it points to regional cooperation as an indispensable mechanism to facilitate sustainable tourism development in Asia-Pacific small island developing States. Section E contains policy recommendations.

A. The importance of tourism for small island developing States

The World Tourism Organization (UNWTO) defines *tourism* as "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited" (United Nations and UNWTO, 2010). The term can be applied to domestic, inbound and outbound visitors. A *visitor* (domestic, inbound or outbound) is classified as a *tourist* (or overnight visitor) if his/her trip includes an overnight stay, or as a *same-day visitor* (or excursionist) otherwise.

However, in general, tourism not only refers to the activities of visitors (i.e. "tourism demand"), but also includes the production units supplying goods and services, particularly to visitors (i.e. "tourism supply"). In this regard, tourism can be measured from both the demand and the supply side. From the demand side, tourism can be measured by tourism expenditure, which is "the amount paid for the acquisition of consumption goods and services, as well as valuables, for own use or to give away, for and during tourism trips" (United Nations and UNWTO, 2010). Tourism expenditure can be further decomposed into (or be a function of) three elements – the number of visitors, length of stay and average spending. Measuring tourism supply is, however, more complicated as the distinction between

tourism and non-tourism activities is difficult. This usually requires counting accommodation facilities and catering companies, which excludes from national statistics many components of the tourism system (Cooper and Hall, 2008).

1. Tourism and economic growth

Tourism is generally found to be a good driver of economic growth (Carmignani and Moyle, 2019). The economic benefits of tourism are well recognized. Tourism can increase economic activity, create and sustain jobs, attract investment, contribute to balance of payments, help keep local businesses viable, regenerate and restructure economies where industries are in decline and reduce poverty (Cooper and others, 2008; Lin, Yang and Li, 2018). However, these benefits are not guaranteed automatically but require relevant policies to make them happen. For many small island developing States, tourism has become the backbone of their economies, often as there is little other economic activity in such States.

There are at least six ways or channels in which tourism has impacts on the economy (Brida, Cortes-Jimenez and Pulina, 2016). First, tourism generates foreign exchange for the host economy. This increase in foreign exchange can help offset imports and contribute to the level of international reserves (Nowak, Sahli and Cortés-Jiménez, 2007).

Second, tourism can help stimulate investment in human resources. Investment in training programmes and tourism and hospitality-related education can increase the productivity and efficiency of those employed in tourism-related sectors (Blake, Sinclair and Soria, 2006). Tourism can also stimulate physical investment, such as in roads, bridges, airports, ports and railways. These increase access to destinations and help reduce transportation costs, which can also lead to productivity and efficiency gains (Sakai, 2009). Such dual-use infrastructure benefits the local population.

Third, tourism stimulates the economy through backward and forward production linkages. Tourist expenditures spent directly in the tourism-oriented sectors flow through the economy as indirect expenditures. The direct spending impacts are the money spent by tourists and the tourism businesses in the services sector for such purposes as accommodation, food, shopping and visiting attractions, while indirect spending impacts are the expenditures of the tourism businesses spent in providing the tourists with these goods and services (Page and Connell, 2009). Direct visitor expenditure generates additional economic activity as subsequent rounds of spending spread throughout the economy. The degree to which the initial tourists' expenditures have impacts on the rest of the economy depends on how much tourism-oriented sectors are connected with other sectors in an economy and on the proportion of imported goods that tourists purchase (Pratt, 2013a; 2015a). As tourism is considered a component of exports, this increase in aggregate demand increases GDP.

Fourth, tourism can influence the host economy through induced multiplier effects. This is where local residents who work in the tourism-related sectors earn wages and salaries that are spent in the host economy (Khoshkhoo, Alizadeh and Pratt, 2017). Creating more employment opportunities for local residents will generate more tourism activity.

Fifth, as tourism businesses grow, they can take advantage of economies of scale and scope; average per unit costs will decrease, making tourism businesses more competitive (Andriotis, 2002; Croes, 2006).

Lastly, a general income effect kicks in as an expansion of national income generates further tourism demand both internationally and domestically.

2. Tourism and the Sustainable Development Goals

Tourism can directly and indirectly contribute to sustainable development and to achieving the Sustainable Development Goals. It is referred to in target 8.9 on promoting sustainable tourism that creates jobs and promotes local culture and products; target 12.b on monitoring development impacts on sustainable tourism (sustainable consumption and production); and target 14.7 on increasing the economic benefits to small island developing States from the sustainable use of marine resources, including through tourism.

As a fast-growing sector, tourism can help progress towards "decent work and economic growth" (Goal 8). Tourism increases economic activity, creates and sustains employment and can contribute to regenerating and restructuring economies (Pratt, 2015a). Across the 13 Asia-Pacific small island developing States (excluding Papua New Guinea), tourism employees comprise 14.6 per cent of the total workforce.[1] If oriented towards

local communities, tourism can be a powerful instrument for eradicating poverty (Goal 1) and reducing inequalities (Goal 10), providing inclusive work opportunities and improving workers' capabilities through investments in capacity-building. Pro-poor tourism – broadly defined as tourism that benefits the poor – focuses on families and enhances provision of community benefits, including access to water, sanitation, health, education and training. Indeed, a range of small-scale, community-owned and (often) indigenously owned initiatives have been effective in alleviating poverty as reported in a wide range of case studies from the Pacific (Gibson, 2015; Movono, Pratt and Harrison, 2015). Extending tourism to remote areas can provide for additional inclusive employment opportunities. In fact, there are many examples in the Pacific in which community-based tourism has contributed to a more equitable distribution of economic benefits and has encouraged local involvement in decision-making processes in a way that has been able to meet the needs of local communities and indigenous peoples (Gibson, 2015).

Similarly, tourism can also promote gender equality (Goal 5) by providing employment opportunities for women. In the Pacific, women's participation in business has gained momentum in several communities (Movono and Dahles, 2017). For instance, in the village of Vatuolalai, along Fiji's Coral Coast, women have been empowered through participation in the tourism sector's employment and their position has been enforced through entrepreneurial success. They have subsequently gained greater autonomy and control over their affairs (Movono and Dahles, 2017).

Tourism in Asia-Pacific small island developing States has increasingly contributed to progress in health and well-being (Goal 3), education (Goal 4) and clean water and sanitation (Goal 6). For instance, in Fiji, paying particular attention to corporate social responsibility (CSR) has enabled tourism facilities to benefit local communities (Scheyvens and Hughes, 2015; Hughes and Scheyvens, 2018). Contributions that have been made to the Sigatoka Hospital by the Coral Coast Hotel Association in Fiji have benefited the local community which uses the hospital's facilities. The Octopus Resort in the Yasawa Islands of Fiji has been providing students and schools in the local community with financial support. CSR-linked initiatives have also resulted in improved water supply by providing villages with water tanks or undertaking grey water recycling to maximize the use of scarce water resources by tourism businesses.

Linkages between tourism and other sectors of the economy are imperative for Asia-Pacific small island developing States. Tourism can be a driver for a local agricultural sector as it can facilitate its integration into value chains. Creating closer links between tourism and agriculture can help reduce food import bills by increasing local food production and thus the incomes of local farmers. This, in turn, can lead to a more advanced and resilient agricultural sector, thereby helping to reduce malnutrition (Goal 2).

Moreover, sustainable, innovative and resource-efficient infrastructure, which is often built to serve the tourism market in Asia-Pacific small island developing States, contributes to sustainable industrialization (Goal 9). Local communities use the same airports, ports and roads to transport goods and residents as tourists do. As tourism can rely on customary lands and the resources of local communities, it can strengthen the local communities, making them more sustainable (Goal 11). Tourism can also promote the preservation of cultural and natural heritage by, for example, marketing actions to help create a unique destination image (Pratt, 2013b).

An effort to increase the links between the tourism sector and the local economy can be illustrated by the case of Maldives. Tourism-led growth in Maldives until recently followed the "enclave" model, to a large extent separating tourists from local inhabitants and relying on imported goods, labour and finance, which had limited backward linkages that could otherwise have spurred growth in local jobs. Recently, however, the number of mid-range tourist guest houses located on locally inhabited islands has been increasing, which has provided opportunities to link tourism to local communities, including but not limited to local providers of fish and agricultural products. Indeed, the guest house subsector has grown rapidly since the Government's tourism policy changed in 2010 and has the potential to grow further as global travel trends shift from luxury towards mid-level travel services, with the growing use of self-catering accommodation instead of traditional large hotels. Moreover, the Internet's expansion and its increasing availability is changing the nature of tourism by putting suppliers of accommodation into direct contact with clients through online platforms that arrange for lodging and tourism experiences. This creates opportunities for local homeowners who would like to enter the tourism sector and subsequently strengthens backward linkages and the contribution of tourism to inclusive growth.

As far as environmental issues are concerned, tourism both contributes to and is affected by climate change. Hence, it is imperative that the sector play an important role in mitigation, adaptation and resilience-building efforts (Goal 13), particularly in Asia-Pacific small island developing States (Klint and others, 2015), which are extremely vulnerable to climate change-related shocks. Tourism in small island developing States relies, to a significant degree, on the natural environment. Hence, a healthy marine and terrestrial ecosystem is of primary importance (Goals 14 and 15). Tourism's contribution to addressing environmental challenges can be through, for example, using energy-efficient technologies and replacing fossil fuels with renewable or carbon-neutral energy sources (Goal 7). Through a fees and tax policy imposed on tourism-related activities, tourism can also contribute to increasing access to affordable and clean energy by local communities. Those fees can also finance local projects aimed at development of infrastructural resilience. The contribution towards addressing environmental challenges can also take the form of promoting sustainable consumption and production (Goal 12), following, for example, a responsible tourism code for the Pacific. Moreover, Pacific communities have been active in setting up marine protected areas (see discussion in chapter II) to preserve the natural environment, flora and fauna; this is the case of the Micronesia Challenge, an intergovernmental initiative of Guam, Marshall Islands, the Federated States of Micronesia, Northern Mariana Islands and Palau, which has the goal of protecting 30 per cent of near-shore coastal waters and 20 per cent of forest land by 2020.

B. The status of tourism in Asia-Pacific small island developing States

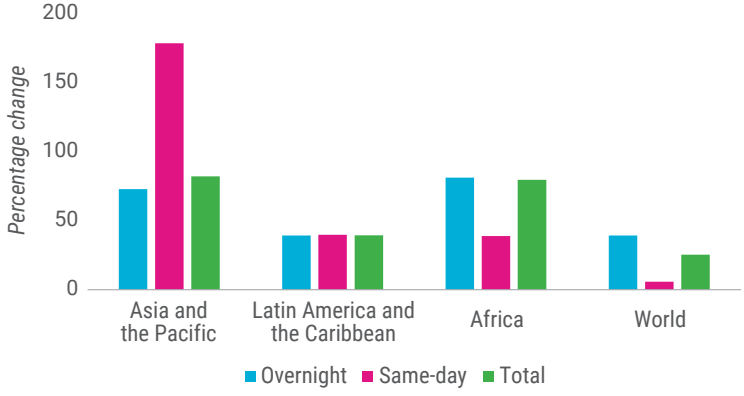
For Asia-Pacific small island developing States, tourism is one of the most economically viable sectors. It has already become the largest economic sector in the Cook Islands, Fiji, Maldives, Palau and Vanuatu, and has the potential to become a key source of employment and income growth, as well as poverty alleviation, in others. The exception seems to be Papua New Guinea where tourism accounts for less than 2 per cent of employment and GDP; nevertheless, the country does possess extensive potential for tourism development (see section B.2 for details). Indeed, Asia-Pacific small island developing States in their goal of fostering economic and social development can rely on the tourism sector as one of the main, if not the main, possible contributors. Perrottet and Garcia (2016) reported that "in 2040, transformational tourism opportunities could bring an additional $1.7 billion in revenue and 116,000 jobs" to the Pacific island countries.

1. International arrivals

International arrivals of overnight and same-day visitors to the 14 Asia-Pacific small island developing States (excluding associate members of ESCAP) [2] reached 3.6 million in 2018, which is 1.6 million more visitors compared with 2008. This marked an 82 per cent increase, which is on par with African small island developing States (also 80 per cent) and is significantly higher than small island developing States in Latin America and the Caribbean (40 per cent) and the global average of 25 per cent (figure III.1). Same-day visitors,

Figure III.1

Percentage increase in visitor arrivals in small island developing States and world from 2008 to 2018



Source: ESCAP, based on data from UNWTO Compendium of Tourism Statistics (accessed on 16 Dec 2019) and SPTO (2019).
Note: The numerical data reported refer to percentage changes between 2008 and 2018 or the latest year available.

mostly cruise ship passengers arriving in Asia and the Pacific, almost tripled over the same period.

However, there is a large degree of heterogeneity across small island developing States in terms of tourist arrivals (table III.1). For example, while the 14 small island developing States in the Asia-Pacific region hosted a total of 3.1 million overnight tourists in 2018, Maldives accounted for 47 per cent of that number. For the Pacific small island developing States, Fiji had the highest number of international tourists with more than 870,000 visitors. At the other end of the spectrum, Tuvalu hosted just over 2,700 visitors in 2018. Similarly, nearly 90 per cent of the same-day visitors were concentrated in only three small island developing States: Fiji, New Caledonia and Vanuatu.

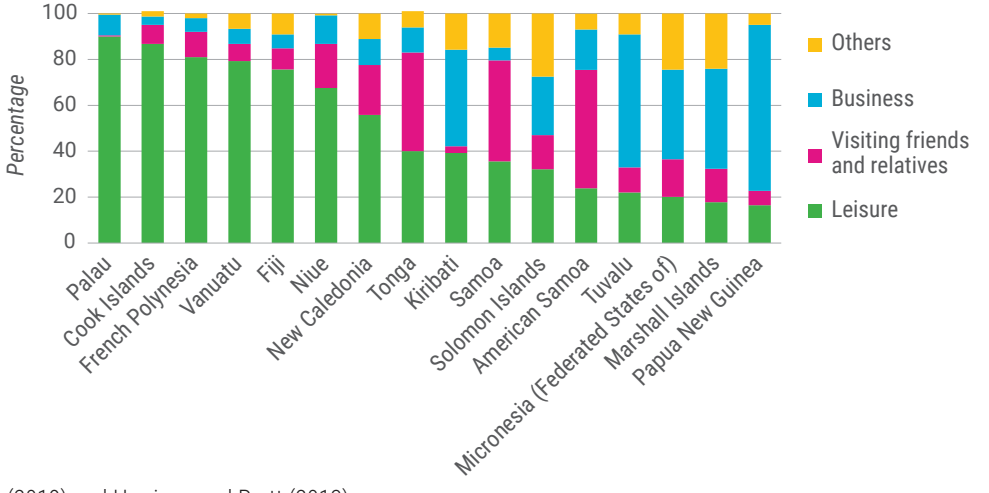
A large disparity is also observed in the ratio of tourists to local residents, which can be used as an indication of potential pressure on natural and social resources (see section C.2 for further discussion on sustainability of tourism development). Small island developing States with high visitor-to-population ratios attract predominantly leisure tourists (see the rightmost column of table III.1 and figure III.2). These States tend to have close links in the form of traditional alliances or geographic proximity to large source markets (see also figure III.3 and further discussion below).

In contrast, small island developing States with low visitor-to-population ratios serve mainly business tourists. For example, 72 per cent of international visitors to Papua New Guinea (where the visitor-to-population ratio is 0.02) are business tourists. Other destinations with a high business tourist segment include Tuvalu (58 per cent), Marshall Islands (44 per cent), Kiribati (42 per cent) and the Federated States of Micronesia (39 per cent). These business tourists are often consultants and aid workers who are often engaged in projects that last a considerable amount of time. Hence, in general the average length of stay in these Asia-Pacific small island developing States tends to be higher than the average for destinations dominated by leisure tourists.

Source markets for Asia-Pacific small island developing States are driven partly by relative distance (McKercher and Lew, 2003) and partly by historical and colonial ties (Harrison and Pratt, 2013). Australia is by far the largest source market for the Melanesian countries of Fiji, Papua New Guinea, Solomon Islands and Vanuatu. New Zealand is the largest source market for the Polynesian small island developing States. Asia, especially China and Japan, provides most international arrivals for Micronesian island States (see figure III.3). Maldives attracts many tourists from large markets, such as China, Germany, Italy and the United Kingdom of Great Britain and Northern Ireland. Box III.3 in section E discusses the success of Maldives in tourism development.

While geographical proximity is an important explanatory factor for source markets, past and current political relationships indeed also contribute to explaining international tourist flows to Asia-Pacific small island

Figure III.2
Purpose of trip, 2018



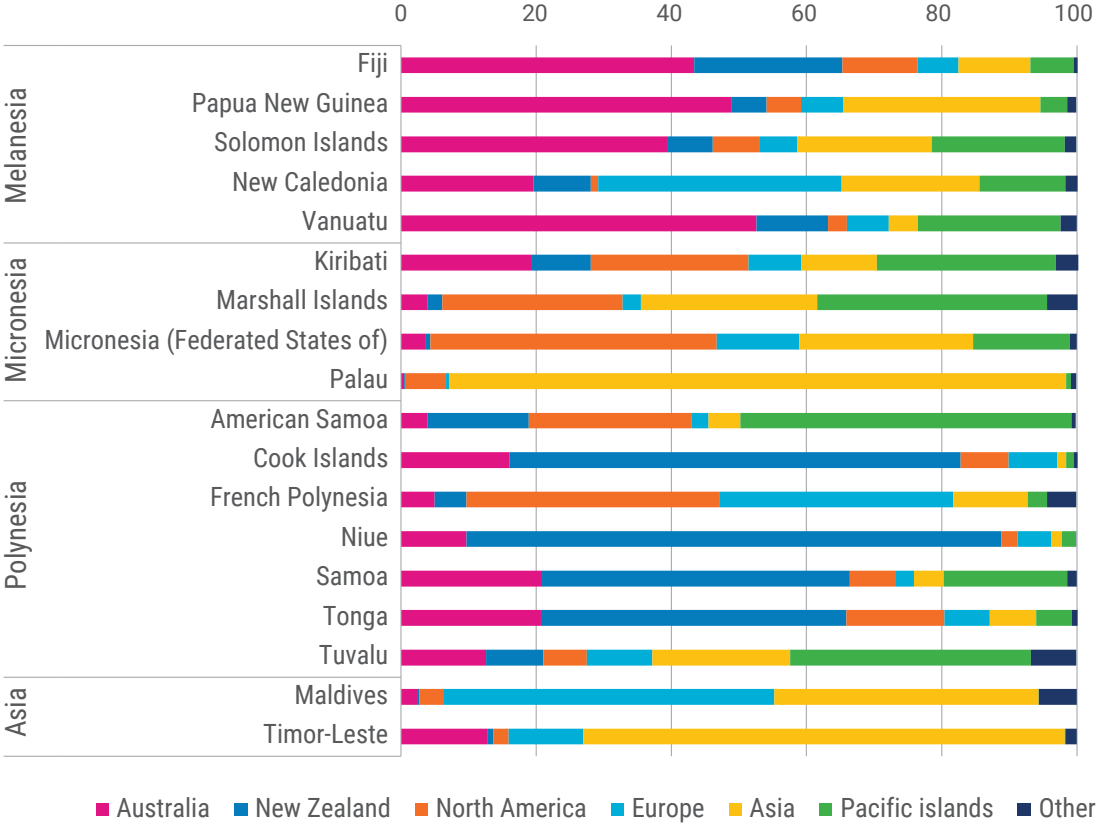
Source: SPTO (2019) and Harrison and Pratt (2013).
Note: The figures reported refer only to overnight visitors. Data reported are for 2018 or the latest year available.

Table III.1
International arrivals of overnight and same-day visitors, 2008 and 2018

	Overnight visitors			Same-day visitors			Total visitors			
	Arrivals (Thousands)		Percentage change	Arrivals (Thousands)		Percentage change	Arrivals (Thousands)		Percentage change	Visitor-to-population ratio
	2008	2018	2008-2018	2008	2018	2008-2018	2008	2018	2008-2018	2018
ESCAP member States										
Fiji	585	870	49	42	188	348	627	1 058	69	1.16
Kiribati	4	6	49	..	2	..	4	8	92	0.06
Maldives	683	1 484	117	..	..	..	683	1 484	117	3.34
Marshall Islands	6	6	0	..	2	..	6	8	32	0.15
Micronesia (Federated States of)	26	30	15	..	..	..	26	30	15	0.28
Nauru	..	3	..	..	..	..	..	3	..	0.27
Palau	81	106	31	..	1	..	81	107	32	4.86
Papua New Guinea	114	179	57	6	19	217	120	198	65	0.02
Samoa	118	164	39	4	8	100	122	172	41	0.87
Solomon Islands	16	28	71	..	5	..	16	33	102	0.05
Timor-Leste	36	75	108	..	..	..	36	75	108	0.06
Tonga	50	63	25	15	24	61	65	87	33	0.79
Tuvalu	2	3	47	..	..	..	2	3	47	0.22
Vanuatu	91	116	28	106	234	121	197	350	78	1.24
Associate members										
American Samoa	24	20	- 18	..	22	..	24	42	74	0.76
Cook Islands	95	169	78	..	..	..	95	169	78	9.71
French Polynesia	196	216	10	31	47	53	227	264	16	0.92
Guam	1 142	1 549	36	..	..	..	1 142	1 549	36	9.33
New Caledonia	104	120	15	152	456	200	256	576	125	2.06
Niue	5	10	109	..	2	..	5	12	147	5.80
Northern Mariana Islands	388	656	69	9	4	- 56	397	660	66	11.58
Small island developing States in:										
Asia and the Pacific (ESCAP member States)	**1 811**	**3 131**	**73**	**173**	**482**	**179**	**1 984**	**3 614**	**82**	**0.29**
Latin America and the Caribbean	17 806	24 792	39	14 030	19 621	40	31 836	44 413	40	1.00
Africa	1 407	2 551	81	54	75	39	1 461	2 626	80	0.56
World	847 185	1 180 243	39	607 278	642 874	6	1 454 463	1 823 117	25	0.24

Source: ESCAP, based on tourism arrival data from UNWTO Compendium of Tourism Statistics (accessed on 16 December 2019) and SPTO (2019); population data are from the United Nations National Accounts Main Aggregates Database and the ESCAP Statistical Database (accessed on 23 January 2020).
Note: Two dots (..) indicate data are not available. Data reported are for 2008 and 2018 or the latest year available.

Figure III.3
Tourism arrivals, by source market (Percentage)



Source: ESCAP, based on data from SPTO (2018), FSM Statistics (accessed on 6 March 2020) and *Statistical Yearbook of Maldives 2019* (accessed on 6 March 2020).

developing States. For example, the Cook Islands and Niue are in a free association agreement with New Zealand; visitors from New Zealand represent 67 per cent and 79 per cent of arrivals, respectively. Marshall Islands and the Federated States of Micronesia have a similar arrangement with the United States. French Polynesia and New Caledonia are overseas territories of France; hence, they receive substantial numbers of French tourists every year, despite the significant distance between Europe and the Pacific (Harrison and Pratt, 2013).

2. Tourism receipts

Total direct international tourist receipts are by construction a function of two variables: the total number of tourist arrivals and the average receipt per arrival. Table III.2 reports these values by country for 2018 or the latest available years. The total value of international overnight visitor receipts across the 14 small island developing States (excluding associate members of ESCAP) was $5.4 billion, which is equivalent to 13.0 per cent of their aggregated GDP. Maldives received 54 per cent of the total receipts, followed by Fiji (17 per cent). Receipts per arrival are useful for comparative purposes. For example, receipts per trip for the 14 small island developing States ranged from $1,071 for Fiji to $3,284 for Tuvalu, mainly reflecting the visitors' purpose of trip; 76 per cent of overnight visitors to Fiji were leisure tourists, while 58 per cent of visitors to Tuvalu were business tourists. As discussed above, business tourists to the Pacific small island developing States include consultants and expatriate aid workers who tend to stay a considerable amount of time in their destinations. It should also be noted that the French territories of French Polynesia and New Caledonia had high per tourist receipts of $3,432 and $3,018, respectively. However, many goods therein are imported from France, which means that input costs are high, thus contributing to higher tourism receipts.

Table III.2
Tourism receipts, 2018

	Tourism receipts (Millions of United States dollars)	As a percentage of GDP	Receipts per arrival (in United States dollars)
ESCAP member States			
Fiji	932	16.8	1 071
Kiribati	14	7.3	2 386
Maldives	2 886	54.2	1 945
Marshall Islands	13	6.2	2 200
Micronesia (Federated States of)	52	14.1	1 766
Nauru	3	2.6	1 086
Palau	170	59.9	1 604
Papua New Guinea	370	1.6	2 067
Samoa	248	29.8	1 513
Solomon Islands	82	6.4	2 922
Timor-Leste	226	8.8	3 020
Tonga	95	18.8	1 519
Tuvalu	8	17.8	3 284
Vanuatu	282	31.7	2 427
Associate members			
American Samoa	22	3.4	1 114
Cook Islands	253	69.8	1 498
French Polynesia	742	12.2	3 432
New Caledonia	362	3.6	3 018
Niue	8	33.3	847
Asia-Pacific small island developing States	**5 381**	**13.0**	**1 719**

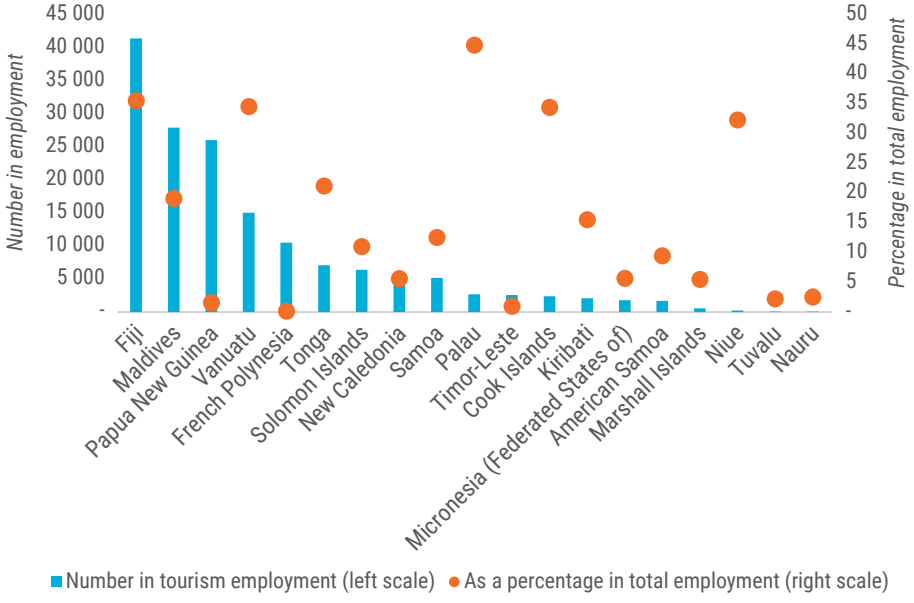
Source: ESCAP, based on tourism receipt data from SPTO (2019), GDP data from the United Nations National Accounts Main Aggregates Database and the World Bank World Development Indicators databank (accessed on 6 March 2020) and arrival data from the UNWTO Compendium of Tourism Statistics (accessed on 16 December 2019) and SPTO (2019).

Note: Visitor arrivals refer only to overnight visitors. Data reported are for 2018 or the latest year available.

Moreover, French Polynesia was named as one of the 50 top romantic destinations around the world (SPTO, 2018) and has continuously attracted high-spending wedding and honeymoon tourists.

Tourism receipts as a percentage of GDP are a measure used to show the scope of tourism in relation to the rest of the economy. This can also be demonstrated through the number of employees in the tourism sector and the number of tourism employees as a proportion of total employees. As illustrated by table III.2, tourism receipts as a percentage of GDP averaged 13.0 per cent, even though they varied widely. For Nauru and Papua New Guinea, they constituted less than 3 per cent while for Fiji, Palau and Vanuatu, more than 30 per cent. On an absolute level, Fiji had the highest number of employees in the tourism sector at more than 41,000 people (figure III.4); as a proportion of the total workforce, tourism employees comprised 45 per cent of Palau's workforce.

Figure III.4
Tourism employment, 2018



Source: SPTO (2019) and Pratt (2019).

C. Opportunities and challenges

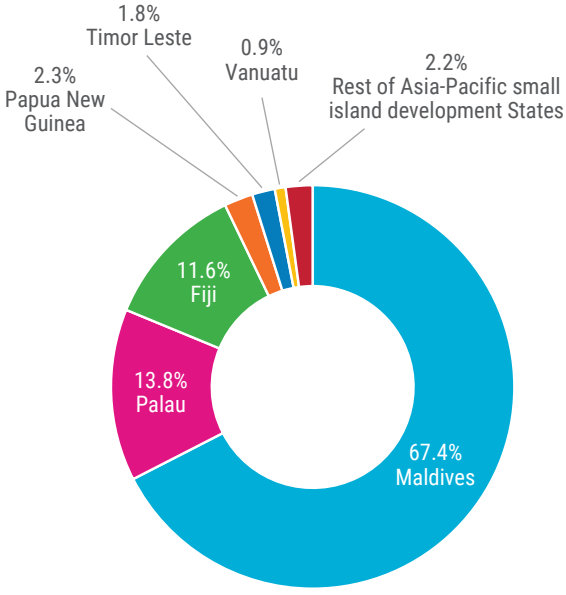
1. Opportunities

Long-term global trends are generally supportive of the development of tourism in Asia-Pacific small island developing States if the current pandemic situation dissipates without altering long-term global growth prospects, despite the short-term disruptions of tourism activities. This is because of the increase in disposable incomes in the developing countries in Asia, especially China, which is creating a growing middle class. China's middle class[3] is projected to increase from 54 million people in 2005 to 1 billion by 2030 (World Bank, 2017), and there has been a significant increase in Chinese visitors worldwide. The number of Chinese outbound tourists increased from 4.5 million in 2000 to 150 million in 2018, with an average annual growth rate of 16 per cent (UNWTO and CTA, 2019). However, Chinese tourists to the Asia-Pacific small island developing States comprised merely 0.28 per cent of total Chinese outbound tourists. Of that small percentage, approximate two thirds visited Maldives (see figure III.5). In considering long-term trends, this suggests that the number of Chinese visitors to the Pacific subregion will increase. Similarly, the World Bank (2017) estimated that China could provide more than a quarter of all visitors to the Pacific by 2026, which represents a significant boost from the average of 7.3 per cent of all international tourists to the Pacific subregion in 2016.[4]

The question remains whether Asia-Pacific small island developing States can take advantage of the Chinese tourist market's potential, both in terms of being able to meet their needs (Vada-Pareti, 2015) and ensure that the types of tourism offered to the Chinese market is managed sustainably. Along with increased investments in infrastructure, both tourist and non-tourist, and other development projects, such as public infrastructure and utilities, industry export development and interventions in health and education, the growing importance of China as a source market for international tourism arrivals can influence the economic contribution of tourism in the Pacific subregion. At the same time, growing reliance on individual countries can open markets to vulnerabilities, as seen in the most recent case of the novel coronavirus, SARS-Cov-2, which causes COVID-19 disease.

Another trend favourable to small island developing States is the strong outbound tourism demand from Australia and New Zealand. Representing the largest share of demand for tourism in the Pacific subregion (see section B.1 of this chapter), Australians and New Zealanders visit Pacific small island developing States

Figure III.5
Share of outbound tourists from China within Asia-Pacific small island developing States, 2017



Source: ESCAP, based on data from SPTO (2018; 2019) and the UNWTO Compendium of Tourism Statistics (accessed on 16 December 2019).

looking for beach leisure and resort-based tourism. They are also one of the key contributors to the expansion of the cruise industry in the Pacific. Since 2006, outbound Australian cruise-ship tourists recorded an average growth rate of 19.2 per cent per year. Additionally, the number of New Zealanders taking international cruises increased by 65 per cent between 2012 and 2017. As a result, approximately 384,000 Australians went for a Pacific cruise in 2015 (Everett, Simpson and Wayne, 2018). Strong tourism demand from Australia and New Zealand also presents an opportunity for small island developing States to develop niche and high-end tourism services, such as fishing tourism. These two countries together account for 70 per cent of inbound fishing tourists (SPTO, 2015).

Prospects are also promising from long-haul markets, such as Europe and North America, as warm weather outdoor activities and indoor cultural events and attractions, such as marine-based tourism and culture-based tourism, are popular vacation options among travellers from these markets. These types of tourism are also the areas in which the Asia-Pacific small island developing States have strong advantages over other potential competitors due to their indigenous cultures and abundant nature. Worldwide, cultural heritage tourism is the largest market, representing about 360 million trips annually (SPTO, 2014). The largest share of tourists from Europe, and Canada and the United States looking for cultural heritage tourism are aged 39-60, with middle to high income, and aware and conscious of environmental and social issues (SPTO, 2014). Promoting their cultural heritage will not only attract tourists from these long-haul markets but also protect their cultures.

2. Challenges

The tourism sector of Asia-Pacific small island developing States faces several challenges related to its sustainability.

Economic sustainability

Economic sustainability is not related exclusively to profit but is also about the principles of equity and fair trade. For sustainability, the key questions are how tourists spend their money, where they spend it and what they spend it on.

In terms of how tourists spend their money, a relatively high proportion of tourist expenditures is channelled through tour operators and online bookings. For example, in Fiji, Rosie Holidays has become a multi-million-dollar

international business that serviced more than 85,000 visitors to that country in 2013 (Vada-Pareti, 2015), representing about 13 per cent of total overnight visitors. Although Rosie Holidays is a Fijian-owned business so the tourist expenditures initially stay in Fiji, the most recent Fiji International Visitors Survey reported that half (51 per cent) of all tourists to Fiji booked their accommodation through travel agents predominantly in the source market, whereas more than a third (37 per cent) booked directly with hotels, including by telephone, email or website (Fiji, Ministry of Industry, Trade and Tourism, 2016). More direct bookings result in more revenue staying in the host economies. In Niue, for the period April–September 2019, 56 per cent of the tourists surveyed booked their own travel using the Internet (NZTRI, 2019a). Prepaid expenses were for airfares and accommodations, but also local transportation and food. Although prepaid expenses are contributing significantly to these economies, NZTRI surveys conducted in several Pacific small island developing States show that they are not entirely absorbed by the domestic economies. For example, for the period 2018-2019 only about 40 per cent of the prepayments remained in the Cook Islands (see table III.3). The remaining 60 per cent of prepaid spending was kept by foreign operating companies.

In terms of where tourists spend their money, for the smaller island developing States economic benefits tend to be thinly spread over their countries and territories, while for such larger States as Fiji, particular enclaves tend to receive a concentrated proportion of tourism expenditures. For instance, almost three quarters (73.7 per cent) of Fiji's tourist expenditures are spent in four areas, which are all located in the western and southern parts of the country: Denarau (23.5 per cent), Coral Coast (18.5 per cent), Mamanuca (15.9 per cent) and Nadi (15.7 per cent) (Fiji, Ministry of Industry, Trade and Tourism, 2016). Such concentrated expenditure limits the geographic dispersion of the economic benefits of tourism. This is further compounded by expensive domestic air transportation, which often makes it unaffordable for tourists to travel to outer regions. A vibrant tourism sector therefore is not necessarily inclusive in terms of the population that benefits from it.

What tourists and operators spend their money on is a key issue for sustainability as the extent to which tourists buy locally made goods and services determine their economic footprint. Thus, locally made handicrafts and other souvenirs provide local artisans with income. They also enable skills and knowledge to be maintained and passed down to younger generations, potentially providing important employment opportunities in economies that face significant challenges in developing local industries, especially manufacturing. Indeed, small island developing States tend to have minor manufacturing sectors, which means that many goods need to be imported. However, operators could spend more on local agricultural produce. For example, Berno (2006) found that FJ$ 30 million annually was spent on importing food products for the tourism industry

Table III.3
Percentage of prepaid expanses flowing back to selected economies

	Year	Flowing back (Percentage)
Cook Islands	January-June 2019	40
Fiji	January-June 2019	69
Niue	2018	40
Papua New Guinea	2018	65
Samoa	2018	55
Solomon Islands	2018	60
Vanuatu	2018	63

Source: Fiji, Ministry of Industry, Trade and Tourism (2020), NZTRI (2019a; 2019b; 2019c; 2019d; 2019e) and Papua New Guinea Tourism Promotion Authority (2019).

that could be grown in Fiji. Research has noted, however, that local food items are often not available in sufficient quantity. Also, locally produced food can be more expensive, may be of lower quality than imported items and may often not be supplied as consistently as imported goods. In 2017, hotels and resorts in Fiji's main tourism areas spent FJ$ 74.4 million ($36.4 million) on procurement of fresh produce. Of this amount, 52 per cent was spent on imported items (IFC, 2018). In recognizing this, several initiatives across the Pacific are being implemented to strengthen the supply chain.

Indeed, the questions of how and where tourists spend their money and on what goods and services reveal that one of the most pertinent structural issues undermining economic sustainability of tourism in small island developing States is a weak linkage between tourism and local economies. Tourism development must create links to the local economy in order to support local populations. Norbu, Tateno and Bolesta (2019) illustrated the importance of the backward and forward linkages within a given economy for sustainable development, particularly in countries with severe development challenges, such as least developed countries and small island developing States. They showed the role of the multiplier effect, pointing to the existence of significant deficiencies in the area. The indirect economic impact through multipliers constitutes a solution to making the tourist sector more sustainable and with greater developmental impact.

Tourism is often considered as an enclave industry, with few backward linkages with other domestic economic activities. A weak linkage between tourism and local economies (and the lack of local capacity to meet tourists' demand for goods and services) limits job creation and promotion of local culture and products. One source of the weak linkage (or a source of leakage) is ownership and the management structure of many tourism-related businesses. Although large-scale foreign-owned businesses do provide local communities with a range of benefits that small local operators are generally unable to provide, foreign ownership of tourism businesses is directly linked to economic leakage (Pratt, McCabe and Movono, 2016).

Indeed, tourists' direct expenditures on tourism-oriented products, such as accommodation, transportation, and food and beverages, lead to a series of successive or indirect economic impacts through the domestic supply chain (Khoshkhoo, Alizadeh and Pratt, 2017). The secondary sectors feature firms that provide goods and services to tourism-oriented sectors, such as agricultural and manufactured goods that are supplied to hotels and restaurants. The strength of these linkages between the tourism sector and its supply chain determine the size of the multiplier effect (Pratt, 2015b). Another factor that determines the size of the multipliers includes the local share of goods and services purchased by tourists vis-à-vis the import component. The degree to which capital and labour are provided by the host economy will also contribute to the size of the multipliers. The majority of labour tends to be provided by residents (although not at the senior management level) but often major capital investments are foreign owned. Hence, the capital/labour ratio of these sectors and its ownership are important, as is the overall ownership of tourism operations. Foreign ownership of tourism products may result in profit being repatriated to the overseas headquarters rather than reinvested in the host economy (Pratt, 2015a).

The linkages between the tourist sector and the local economy can be seen through the prism of the particular sectoral role to be played by local businesses and populations or through the development and promotion of new tourism activities with a significant local content. As far as the former is concerned, several Asia-Pacific small island developing States are trying to reduce the amount of imported food used in hotels and restaurants. Agricultural programmes that train local farmers on how to produce a reliable supply of food for restaurants and hotels are being rolled out (Cheer and others, 2018). However, it is the latter, namely the development of new tourism activities, which should be perceived as the preferred option to ensure that long and stable links between tourism and local economies are established.

Naturally, given the constraints of Asia-Pacific small island developing States and the varied resources they have, there cannot be a one-size-fits-all approach as there is a large degree of heterogeneity in island countries. For some, their small land mass means marine-based tourism is, for the most part, the predominant option. For Asia-Pacific small island developing States with significant land resources, other types of tourism can also be further developed. All, however, must be extensively linked to the local economy through backward and forward linkages.

Environmental sustainability

Environmental sustainability in small island developing States is associated with climate change and related

weather conditions and natural disasters, environmental degradation, waste management, and water and marine pollution. While the tourism sector can be a contributor to climate change and pollution, it also suffers negative impacts from these phenomena, as the tourism sector's stakeholders are adversely affected by rising sea level, extreme weather events, coral bleaching (Cheer and others, 2018) and accumulation of waste, including plastics and the nano and microparticles in various marine species. Limited financial and human resources, infrastructure and on occasion a lack of effective institutions means that enforcement of regulations to protect and preserve the natural environment, especially fragile marine habitats, is a challenge. For instance, in 2019 the environmental damage inflicted by a resort developer on Malolo Island in Fiji caught the attention of New Zealand media. Subsequent investigation revealed that the construction of a resort there was being conducted without the required permits and was causing destruction of local fishing grounds and mangroves. Their rehabilitation is said to consume significant financial means (Reid and Jennings, 2019).

Another factor that significantly undermines environmental sustainability of tourism is severe and extreme weather events, including tsunamis and cyclones. Small island developing States are particularly vulnerable to environmental disasters. Recent severe weather events in the Pacific that have negatively affected tourism include the earthquake and tsunami (2009) in Samoa, Cyclone Pam in Vanuatu (2015), drought in Marshall Islands (2015-2016), Cyclone Winston in Fiji (2016), Cyclone Gita in Tonga (2018) and Cyclone Harold (2020) in Fiji, Solomon Islands, Tonga and Vanuatu. Category 5 tropical Cyclone Pam was estimated to have caused damage and losses in Vanuatu that amounted to almost $450 million, equating to about 64.1 per cent of GDP (Government of Vanuatu, 2015), while category 5 tropical Cyclone Winston inflicted damage in the order of $1.3 billion or 31 per cent of GDP in Fiji (Fiji, Strategic Planning Office, Government of Fiji, 2016). In Vanuatu, the tourism sector accounted for 20 per cent of the total damage and losses to the economy, with accommodation representing almost 90 per cent of sector's damage and losses (Vanuatu, Prime Minister's Office, 2015).

Severe weather events not only deter tourists from visiting Pacific islands but also damage hotel inventory and transportation infrastructure, which then need repairing or rebuilding. It is expected that, with the advance of climate change, the frequency and intensity of extreme weather patterns will continue to increase (ESCAP, 2019c). Indeed, Bolesta (forthcoming) stated:

> Environmental degradation impacts the availability of resources, particularly for development of the so-called "Blue Economy" or the "Ocean Economy", which relies on the natural environment and biodiversity, as it reduces fish stock, pollutes sea water and degrades the overall natural habitat, which otherwise could have served as an important economic asset. It affects services such as tourism and contributes to the depletion of human capital due to deteriorating living conditions and the spread of diseases.

In this regard, the urgent need is to secure sufficient resources to build a resilient tourism sector, especially through developing climate-resilient tourism infrastructure, which would prevent disasters from undermining development gains (ESCAP, 2019c).

Sociocultural sustainability

Sociocultural sustainability is important, particularly for Pacific small island developing States where cultures are diverse, indigenous and unique to small populations. Culture serves as a major attraction and interest in it can help preserve or revive cultural practices (Tolkach and Pratt, 2019). However, tourism, particularly overtourism, can also contribute to negative cultural impacts through increased globalization and the homogenization of cultures. Indeed, globalization is often perceived as a threat to the preservation of traditional culture. For instance, in the Cook Islands, Fiji and Tonga, while residents are aware of the external pressures on their societies, they nevertheless want to be part of the global community and enjoy many benefits from modern technology and being connected with the rest of the world (Tolkach and Pratt, 2019). Tourism is also perceived as a way to re-evaluate traditional culture among youth. While it is recognized that cultural performances maybe less authentic when performed for tourists, it is also recognized that this option is better than losing entirely the skills and knowledge of cultural expressions.

Other challenges

Asia-Pacific small island developing States have a comparative advantage in tourism due to their endowments in pristine natural environment and their

cultural heritage. However, they face worldwide and regional competition. A pristine natural environment is not exclusive to Asia-Pacific small island developing States as other island destinations, such as Caribbean islands, are also well endowed and can represent direct competition. Moreover, islands in the Asia-Pacific region can also represent direct competition with each other. Tourism in Asia-Pacific small island developing States is characterized by strong marketing campaigns that compete among themselves (Tauaa, 2010). As a result, the sector has a core-periphery structure, with an uneven spread of tourism activities across the region. This competitive nature of tourism in the subregion is visible, with clear gaps in terms of tourism market size; very competitive countries and territories, such as Fiji, Maldives, New Caledonia and Vanuatu, attract most of the arrivals in the subregion, while such countries as Kiribati, Marshall Islands and Tuvalu attract fewer visitors.

One of the challenges that small island developing States also face is a shortage of financial resources for major new tourism development and for the refurbishment and upgrading of facilities. While such States in the Pacific attract investors primarily from Australia, New Zealand and more recently from China, there is little other investment from outside the subregion. Properties in Fiji, Papua New Guinea and Samoa have benefited from investment funded by national pension funds. However, funding future growth will continue to face challenges (ADB, 2018). In addition to high interest rates in many countries, the issues of customary land tenure systems and land fragmentation pose an additional challenge to attracting investment.

This situation is coupled with the high cost of transportation due to long distances and limited transport connectivity, factors which increase the cost of operating commercial flights and cruise ships and decrease market competitiveness. Inadequate domestic infrastructure limits the number of visitors to be accommodated in some islands (shortage in terms of electricity supply, air connectivity, waste management and visitor facilities).

High vulnerability to external shocks (such as economic crises in other countries and the COVID-19 pandemic of 2020) and adverse circumstances (such as political and social tensions) have also negatively affected tourism in several Asia-Pacific small island developing States, particularly those with high reliance on tourism. While the full impact of the ongoing COVID-19 pandemic is still largely to be determined, tourism is expected to be one of the most severely affected sectors, with the wider social impact of the crisis going far beyond tourism (see box III.1).[5] Micro, small and medium-sized enterprises, which make up about 80 per cent of the tourism sector globally, are expected to be particularly affected. As for social and political tensions, Asia-Pacific small island developing States experienced several incidents in the past. For instance, the 1987 and 2000 coups d'état in Fiji contributed to sharp (20-30 per cent) declines in international tourist arrivals as well as international tourism receipts (Harrison and Pratt, 2010). Solomon Islands was the site of ethnic violence between 1998 and 2003, which saw fighting between militants from Guadalcanal Island and neighbouring Malaita Province. In 1997, Solomon Islands welcomed almost 16,000 international tourists, but their numbers dropped to 2,400 in 1999. The limited contribution of tourism to Papua New Guinea's GDP could also be explained by a degree of instability in the past years in addition to the lack of adequate infrastructure for tourism.

Finally, limited data availability makes it difficult for policymakers to evaluate the performance of tourism-related activities that are complex and fragmented in nature. An ongoing attempt is being made to provide more robust measurement of tourism as an economic activity, notably through the use of the Tourism Satellite Account (TSA), which is a statistical framework developed by the United Nations, UNWTO, Eurostat and the Organisation for Economic Co-operation and Development (OECD) as a way of measuring the direct contribution of tourism consumption to a national economy in a manner that is consistent with a country's system of national accounts (United Nations and others, 2010). It does this by contrasting data from the demand-side (the acquisition of goods and services by visitors while on a tourism trip) with data from the supply-side of the economy (the value of goods and services produced). In this way, tourism economic data become comparable with other economic statistics.[6] However, the construction and timely release of a TSA is not easy, particularly for small island developing States, partly due to its heavy data requirements, such as counting of travel agencies/tour operators and measuring of business travel consumption and tourism-specific durable goods. As a result, a TSA does not exist in or is not publicly available for many small island developing States. The challenge therefore for these States is to devote resources, time and funds to producing required data so that future analyses can aid policy decision-making (Pratt, 2015a).

Box III.1
Impacts of the COVID-19 pandemic on tourism in Asia-Pacific small island developing States

The current COVID-19 pandemic has rapidly spread around the world. While the number of persons affected is currently limited in the Asia-Pacific small island developing States, these States will suffer economically significant consequences due to their high reliance on rents from the tourism sector. Cook Islands, Maldives and Palau seem most vulnerable with the highest dependence on tourism and tourists from China and Europe, whereas other countries, such as Fiji, Samoa, Vanuatu and Tonga, are also exposed to sudden shocks in tourism demand.

The impact of the pandemic has been already felt through a sharp decline in the number of international inbound visitors to these States due to quarantine measures, travel bans and border closures both in tourist source countries and destinations. This has resulted in temporary suspensions of commercial flights from major tourist markets. According to the latest UNWTO estimates, international tourist arrivals could decline by 60-80 per cent globally in 2020, down from an estimated growth rate of 3–4 per cent forecast in early January 2020 (UNWTO, 2020). This would translate into a loss of $910 billion to 1.2 trillion in tourism receipts globally, putting an abrupt end to a 10-year period of sustained growth since the 2009 financial crisis (UNWTO, 2020). According to Sen and Kenny (2020), as a result, double-digit contractions in GDP are possible in Cook Islands, Fiji, Palau, Samoa and Vanuatu. Unemployment figures are likely to be staggering, as close to 40 per cent of Vanuatu's formal workforce is expected to be out of a job (Pryke, 2020), with even greater impacts on the informal sector. In comparison, during the 2003 SARS outbreak, tourist arrivals to the entire Asia-Pacific region fell by as much as 44 per cent on a month-on-month basis (UNWTO, 2020). It was only eight months after WHO had declared a global public health emergency due to SARS that the monthly growth in tourist arrivals turned positive. However, at the same time, the arrivals to Asia-Pacific small island developing States were not affected in the long term. The main tourist destinations among them, namely Fiji and Maldives, recorded a steady growth on a year-on-year basis between 2003 and 2004.

As far as international connectivity is concerned, which is crucial for the tourism sector in Asia-Pacific small island developing States, many States allowed only a limited number of flights, mostly for their citizens and permanent residents to return. Some States delinked from the international air transport system entirely as airlines suspended services: Marshall Islands and the Federated States of Micronesia isolated themselves after the only international airline servicing their airports, United Airlines, suspended its regular island hopper service between Guam and Honolulu, Hawaii. Cruise ships have also been increasingly turned away from various ports in the Asia-Pacific small island developing States. Many cruise lines temporarily shut down their operations in a bid to help reduce the spread of the coronavirus. As of April 2020, all major cruise ship destinations in the Asia-Pacific small island developing States, namely Fiji, New Caledonia and Vanuatu, had closed their cruise ports. While the benefits of cruise tourism for local populations of the Asia-Pacific small island developing States are much lower than those with air arrivals (see further discussion in section D.1), many micro, small and medium-sized enterprises (MSMEs) depend on the cruise industry as they provide various services, including selling handicrafts and souvenirs to cruise ships passengers.

As is often the case with severe economic downturns or natural disasters, by affecting the tourism sector, the COVID-19 pandemic will significantly affect the lives of the poorest and the most vulnerable, including workers in the informal sector. Many people living just above the poverty line are now facing an elevated risk of falling into poverty. For example, in Tonga, where one third of households rely on earnings from tourism, the poverty rate of those households could increase from 49 per cent prior to the pandemic to two thirds if faced with an income loss of 50 per cent over a 6-month period (World Bank, 2020).[a] In Maldives, migrant workers from neighbouring countries that make up about one fourth of the country's

population are especially vulnerable to the COVID-19 pandemic as they live in congested areas and work under conditions in which practicing strict social distancing is difficult (Grossman, 2020). Micro, small and medium-sized enterprises, which make up about 80 per cent of the tourism sector globally, are expected to be particularly adversely affected.

Moreover, the limited domestic financial resources, high debt levels and weak health systems constitute a significant challenge, which makes mitigating pandemic consequences in the tourism sector an even more arduous task. Additionally, in Fiji, Solomon Islands, Tonga and Vanuatu, the current pandemic coincided with the severe tropical Cyclone Harold, which caused dozens of deaths and significant damage to buildings, trees and crops, adding pressure to already overstretched budgets of local authorities. Moreover, what presents a health crisis in the short term will have far reaching impacts on education, human rights, food security and sustainable development in the long term for these economies.

Most of the policy responses by Asia-Pacific small island developing States must fall within broader recovery actions and mitigating policies to ensure that negative economic and social trends are reversed. However, specific actions should also concern the tourism sector and address the consequences of the collapse of inflows of inbound tourists.

Targeted fiscal and monetary support measures will be necessary in the short term to support affected local businesses within the tourism sector and local populations employed therein. Tourism-dependent Asia-Pacific small island developing States are likely to need fiscal stimulus of significantly more than 10 per cent of GDP (Sen and Kenny, 2020), and this stimulus should be directed at ensuring the well-being of local populations and local MSMEs and prevent the former from falling into poverty. A compensation package for employees in the informal sector, which often provides supplies to the tourism sector, should be considered (Sen and Kenny, 2020; World Bank, 2020). As Governments of small island developing States are unlikely to have sufficient capacity to respond to this economic downturn, development partners, such as multilateral development banks and bilateral donors, could provide concessional budget support loans or emergency financing facilities. At the same time, the international community should address the stagnation of official development assistance and further strengthen South-South cooperation, while creditors should suspend debt payments from those requesting forbearance (United Nations, 2020).

[a] Poverty rates are measured using a poverty threshold of $5.50 per person per day in 2011 PPP terms.

D. Experiences and lessons learned

1. Blue and green economies

One way to address sustainability concerns is by selectively promoting types of tourism that fit both the concept of the blue economy – referring to the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of the ocean ecosystem (World Bank and United Nations, 2017) – and the comparative advantages of Asia-Pacific small island developing States. The sustainability issues can also be addressed through the green economy, defined as an economy that is aimed at achieving sustainable development without degrading the environment while reducing environmental risks and considering ecological scarcities. This is a slightly broader concept of the blue economy and can also develop extensive links to the local economy and local populations.

Marine-based tourism

Marine-based tourism, or marine and coastal ecosystem services, represent an important area for creating effective linkages to local economies and is where Asia-Pacific small island developing States have a key comparative advantage. Types of marine-based tourism that already exist in some countries and could be further developed in Asia-Pacific small island developing States are, for example, whale and dolphin watching, game fishing, scuba diving, including shark diving, parasailing, surfing, wind surfing and kite surfing.

Several studies have been conducted estimating components of marine-based tourism in Asia-Pacific small island developing States. For example, in Vanuatu a total of approximately 47,000 dives were undertaken in 2013, equating to about 9,000 divers. In addition, 9,000 snorkel trips were recorded. The corresponding value added of the dive shops is estimated at approximately $1.6 million in 2013 (Pascal and others, 2015). In total, the annual economic value of marine and coastal ecosystem services devoted to tourism and recreation in Vanuatu in 2013 was estimated to be $9.59 million, representing 1.2 per cent of GDP.

In Kiribati the economic value of marine and coastal ecosystem services was estimated at $3.9 million or 2.3 per cent of GDP in 2015 (Rouatu and others, 2017). Within the same Marine and Coastal Biodiversity Management in Pacific Island Countries project, the economic value of tourism marine and coastal ecosystem services in Tonga was estimated to be between $2.0 million and $4.9 million, which translates to 0.5-1.1 per cent of the country's GDP (Salcone and others, 2017). Whale watching is an important tourism attraction and motivator for Tonga, where the whale-watching industry has grown markedly in the last 10 years. The number of whale-watching operators, the number of visitors, the average number of trips per visitor and the cost per trip have all increased significantly in the past decade (Orams, 2013). In Vava'u (Tonga), an estimated $665,000 was spent directly across the 2,400 whale-watching trips taken in 2009, resulting in more than $5 million in total economic activity, including all travel, food and accommodation expenditures, tourism wages and expenditures by tourism-related businesses (Rouatu and others, 2017). In Solomon Islands, the tourism component of the economic value of tourism marine and coastal ecosystem services was estimated to be $15.8 million, equivalent to 1.4 per cent of GDP (Arena and others, 2015).

In Palau, the shark-diving industry attracts 8,600 divers each year or approximately 21 per cent of all the divers visiting that country. The value of sharks, in terms of tourism, to the Palauan economy was estimated to be $18 million per year, which is approximately 8 per cent of Palau's GDP (Vianna and others, 2010). An individual reef shark in Palau was estimated to have an annual value of $179,000, extrapolated up to a lifetime value of $1.9 million, to the tourism industry. The annual income in salaries paid by the shark-diving industry to the local community was estimated to be $1.2 million. A fishery targeting the same 100 sharks that are interacting with the tourism industry in Palau would account for a maximum of $10,800, or 0.006 per cent, of the lifetime value of these fish as a non-consumptive resource (Vianna and others, 2010).

Besides the significant economic value that marine-based tourism can bring to the subregion, these marine and costal ecosystem services can be developed with a significant and leading role played by the local communities, natural experts and protectors of the subregion and its resources, also being more determined to preserve the local natural environment. In addition, many of these activities, especially shark diving, can have important consequences for wildlife preservation. This is already taking place in many countries. It is of paramount importance that policies are in place to ensure local participation in tourism development, making it the leading force of the industry. This, however, cannot be sustained by pure regulation but must be underpinned by adequate training programmes and broader education-related efforts.

Cruise tourism

Cruise tourism is an expanding market in Asia-Pacific small island developing States. Cruise arrivals in 11 Pacific small island developing States reached 1 million in 2018. This sector has the potential to be expanded further in a sustainable manner to produce a better developmental impact. It can bring business opportunities to local economies if backward linkages are strengthened. However, cruise tourism may not necessarily fit the concept of the blue economy and may even be associated with negative impacts on the environment. For example, many cruise ships are registered in a country offering a "flag of convenience", meaning also that they could avoid the destinations' environmental standards and labour laws. Large vessels such as cruise ships use heavy fuel oil for their engines and often discharge pollutants into oceans. Indeed, on occasion cruise ships are responsible for polluting waters and contributing to degrading of natural environments. Moreover, accommodation of large cruise ships at ports requires a great deal of initial capital investment in infrastructure as well as maintenance costs (Brida and Zapata-Aguirre, 2009). This is something that small island developing States may not be able to afford.

Nevertheless, if sustainability concerns are addressed and financial resources to build infrastructure are mobilized, various types of cruise tourism can bring significant economic value to some small island

developing States. For instance, the sheer value of financial benefits can be illustrated by the yachting sector in Fiji. The value of yachting and its supporting industries has contributed an estimated $28 million to the Fijian economy annually (AMSTEC Pty Ltd, 2018). While this segment is relatively small, the average spending per person is one of the highest-yielding segments at $3,554 per person. The yachts spent a total of FJ$ 34.9 million on a range of different goods and services, including fuel, maintenance, dockage, food provisioning, restaurants and a range of other tourism activities. The length of stay for each super yacht was 81 nights, spending an average of FJ$ 435,000 while in port. In 2017, 554 cruising yachts and 65 super yachts arrived at the Port of Denarau in Fiji. This increased in 2018 to 667 cruising yachts and 54 super yachts. In 2017, the average super yacht remained in Fiji for 82 days, while the average yacht under 24 metres in length stayed 137 days. Those yachts and super yachts brought in 4,473 persons, of whom 2,510 were travellers and 1,963 were crew.

One of the debates surrounding the benefits of cruise tourism is how much of the generated revenues are shared with local populations. For example, cruise tourism in Vanuatu is estimated to have generated very scant resources that go to the grass roots (Cheer, 2016). A series of reports have catalogued the cruise industry's contribution to four Pacific small island developing States: Fiji (IFC, 2019); Papua New Guinea and Solomon Islands (IFC, 2016); and Vanuatu (IFC, 2014). These studies were all conducted using the same methodology and so provide a useful comparison. As can be seen from table III.4, Fiji and Vanuatu account for the docking of larger cruise ships, especially compared with Solomon Islands. Vanuatu has the highest average expenditure per call at $85 while the port calls in Papua New Guinea vary widely from $5 to $52.[7] Although the average expenditure per call in Fiji is only about half that in Vanuatu, that number corresponds to 46 per cent of Fiji's average daily spending of overnight travellers compared with 34 per cent of that of Vanuatu and 8 per cent of that of Solomon Islands. As such, Fiji

Table III.4
Indicators of cruise industry in selected Asia-Pacific small island developing States

	Fiji 2018/19	Papua New Guinea 2016	Solomon Islands 2016	Vanuatu 2014
Number of calls at researched ports per year	145	60	13	201
Cruise ship calls	..	136	47	..
Average number of passengers per call	2 073	1 311 – 1 927	530	2 081
Average passenger spending per call (in United States dollars)	44	5-52	14	85
Direct economic impact per ship (in United States dollars)	..	71 923	35 153	..
Direct economic impact per year at researched ports (in millions of United States dollars)	21.4	4.3	0.4	25
Indirect economic impact per year at researched ports (in millions of United States dollars)	22.7	0.1	0.03	14
Leakage (percentage of total economic impact)	2	6	10	41
Employment opportunities (number)	4 593	203	21	3 250

Source: IFC (2019).
Note: Two dots (..) indicate data are not available.

and Vanuatu have a relatively larger direct economic impact. Fiji also has a relatively larger indirect economic impact compared with Vanuatu because Fiji has a lower leakage rate: 2 per cent for Fiji compared with 41 per cent for Vanuatu. Leakage has been estimated based on the findings of face-to-face interviews and business surveys as well as understanding of the ownership structures of key industries. Leakage comes from four sources: (a) cruise operator supply chains for goods and services; (b) cruise operator-organized tours and excursions; (c) a high proportion of cruise passengers going ashore but returning early; and (d) foreign-owned businesses (IFC, 2019). A higher leakage rate in Vanuatu means more cruise tourist expenditure is exiting the economy with less remaining for local businesses and communities.

Differences in the economic impacts, especially the employment impacts of cruise tourism across different Pacific small island developing States, can be attributed to their underlying tourism economies. Compared with Fiji and Vanuatu, both Papua New Guinea and Solomon Islands have limited tourism infrastructure, such as road transport and retail destinations. Additionally, there is a higher incidence of subsistence farming and fishing. This means that the informal economy is difficult to capture and has limited indirect impact on the wider economy as revenue is kept by the family producing the good or the service. The supply chains when assessing indirect impacts are very short, involving only one supplier, if any; hence, the indirect and induced impacts of tourism are limited.

The above analysis reveals that there is room to further increase the benefits of cruise tourism for local populations. Even in Fiji, where the cruise industry already has a large economic impact, the IFC survey (2019) found that 47 per cent of cruise passengers wanted to spend more but were constrained by the insufficient supply of goods and services. This will require that local communities build in the long term the capacity needed to provide a stable supply of goods and services of international standards to mitigate the unmet spending opportunities. Significant expansion of infrastructure and preventing negative impacts on the environment will also be required. However, if leakage remains substantial, overreliance on cruise tourism could turn into a threat to economic sustainability. The ongoing pandemic of the novel coronavirus, SARS-CoV-2, and the COVID-19 disease it causes, as reported by a number of cruise ships, also pose additional significant risks.

Culture-based and sports tourism

Culture-based tourism, in particular community-based cultural heritage tourism, is one of the land-based tourism development possibilities for Asia-Pacific small island developing States that fit the green economy concept.

Promoting culture-based tourism is an effective way to address concerns over sociocultural sustainability while also being instrumental in generating links to the local economy. The Asia-Pacific small island developing States have unique cultures. This segment of tourism has great potential, with about 360 million tourism trips taking place annually worldwide. Tourists in this segment tend to spend many days, typically between 7 and 16 days in a country, producing sizeable receipts of between $4,000 and $9,000 per arrival, with Papua New Guinea having the highest average receipts per arrival at $12,000. Other countries and territories in the subregion with great potential for promoting culture-based tourism include the Cook Islands, Fiji, French Polynesia, Samoa and Vanuatu (SPTO, 2014).

Culture-based tourism could be leveraged further through event-based cultural festivals that might attract general international tourists as well as diaspora to return to their homelands to attend cultural events. One example of this is the Festival of Pacific Arts and Culture, which is the world's largest celebration of indigenous Pacific islanders. The event has been held every four years, with the first one having been held in Fiji in 1972. Hawaii will host the 2021 edition. Apart from spectators, there is also an influx of performers from around the Pacific subregion. In 2016 in Guam, more than 3,000 artists from 27 countries and territories attended the event to share their art and cultural practices.

Indeed, some Asia-Pacific small island developing States focus their tourism development on cultural links to local communities. For example, Samoa's tourism development strategy is centred on sustainability concepts, promoting community-based cultural heritage tourism. It promotes both intangible cultural heritage (dances, craft production and performances) and tangible cultural heritage (monuments and archaeological sites). One example is beach *fale*[8] tourism where tourists are hosted in local communities and participate in such activities as handicraft workshops, cooking demonstrations and performances (Ford and others, 2019).

Community-based cultural heritage tourism can protect and preserve communities' culture by adding economic value to the existing historical and sociological value. More access to the tourism sector is given to local populations, as a significant part of cultural heritage is located in customary lands. In addition, targeting this niche market requires mainly the utilization of existing assets, local cultural heritage, lowering the costs of access to the industry and transmitting benefits directly to the communities, all of which helps to address challenges related to employment, schooling and medical needs. In this way, tourism can benefit directly the communities involved, help in the preservation of the cultural heritage, facilitate inclusion of remote communities in economic and social activities, lead to strong interactions between the communities and visitors, share cultural knowledge, give self-value to the local communities and reward the tourists with a genuine cultural experience. It also is a way for Pacific islands to help promote more widely a common brand of Pacific cultures with their similarities and diversities across countries and territories (see section D.4 on regional cooperation for the existing "Pacific brand").

Sports tourism is another tourism type that could be expanded to strengthen links to the local economies and to address concerns over sociocultural sustainability. Fiji, Samoa and Tonga already have good brand associations with rugby (Pratt, 2013b). Sports centres for excellence, starting with Pacific-dominated sports, such as rugby and outrigger canoeing, could be established for attracting sports teams as well as interregional tourism as athletes could train and perform at these centres. Large-scale events, such as sporting competitions and festivals, attract visitors from outside the subregion (Prayag and others, 2013) and raise the profile of the destination, thereby changing its image (Gibson, Qi and Zhang, 2008; Pratt and Chan, 2016). For example, the 2019 Pacific Games held in Samoa contributed to a 28.1 per cent increase in the number of tourists over that recorded for the same period in the previous year.

2. Green fee/tax initiatives

Several Asia-Pacific small island developing States have implemented green tax initiatives and fees on tourism-related activities to raise revenues for environmental management and conservation. Although precise data are often lacking, the revenues raised are intended to offset visitor impacts and protect marine and coastal ecosystems, at the same time contributing to the socioeconomic development of local communities. For example, Maldives collects a $6 green tax per day from tourists at resorts and hotels and $3 from tourists staying at guest houses. In this way, the Government raised $59 million in 2019, part of which was used for developing waste management mechanisms and sewage facilities. In Palau, a so-called green fee of $15 was introduced in 2009 and added to the departure tax. It was subsequently increased to $30 and then to $50. Effective 1 January 2018, Palau legislated the Pristine Paradise Environmental Fee; each visitor is assessed a fee of $100 which is included in the price of an inbound international airline ticket into Palau (Palau Customs, 2018). The ticketing airline is responsible for collecting the fee. Palauan passport holders are exempt. In addition, international visitors are required to sign a pledge to respect the environment and culture. The objective of the tax is to protect 80 per cent of Palau's exclusive economic zone as the Palau National Marine Sanctuary. The fund is also intended for development of tourism-related infrastructure, such as the international airport (see table III.5 on the allocation of the collected

Table III.5
Allocation of Palau's Pristine Paradise Environmental Fee

	Percentage of total
Protected Areas Network	30
Security, operation, maintenance, and improvement of the Palau International Airport	25
Bureau of National Treasury	22.5
State governments	12.5
Fisheries Protection Trust Fund	10

Source: Palau Government, RPPL 10-02, 2017. Available at www.palaugov.pw/wp-content/uploads/2017/04/RPPL-No.-10-02-re.-Amendments-to-Environmental-Impact-Fee.pdf.

fees). A small share goes to the general fund of the national treasury and local governments. A total of $9.1 million was raised through this funding mechanism in 2018 and is expected to be used for, among other things, the conservation of protected marine reserves as well as for the management of fishery and aquatic resources.[9] The green tax/fee mechanism is managed by an independent non-profit organization, the Protected Area Network Fund.

Fiji introduced an environmental levy in 2015, which was broadened and renamed as the Environment and Climate Adaptation Levy in 2017. Under the levy, taxes are applied to prescribed services, items and income, with the aim of funding projects to protect the natural environment, reduce the carbon footprint and develop infrastructure to reduce the impact of climate change on communities. It is levied as follows: 10 per cent tax on prescribed services offered by tourism-oriented businesses[10] with a turnover of FJ$ 1.5 million; 10 per cent income tax on individual earnings of more than FJ$ 270,000; 10 per cent tax on importation of luxury vehicles; 20-cent levy on plastic bags; and miscellaneous (inclusive of a 10 per cent charge on super yacht charters and docking fees). The 10 per cent tax on prescribed services is added to the 9 per cent value added tax (VAT) on all goods and services and 6 per cent service turnover tax on all services. Taxes on tourism-related services add up to 25 per cent overall of prices. The funds collected under the levy during the first three quarters of the 2018/19 fiscal year totalled FJ$ 119.7 million, of which FJ$ 105.5 million was spent. Table III.6 shows the amount of funds raised by different sources of the levy: 92 per cent of the levy's tax revenues are derived from the tax on prescribed services. In terms of how the levy's tax revenues are spent, 65 per cent of the tax revenues go towards infrastructure development and a further 19 per cent to water management projects (figure III.6). It is not clear how much is spent directly on sustainable tourism development.

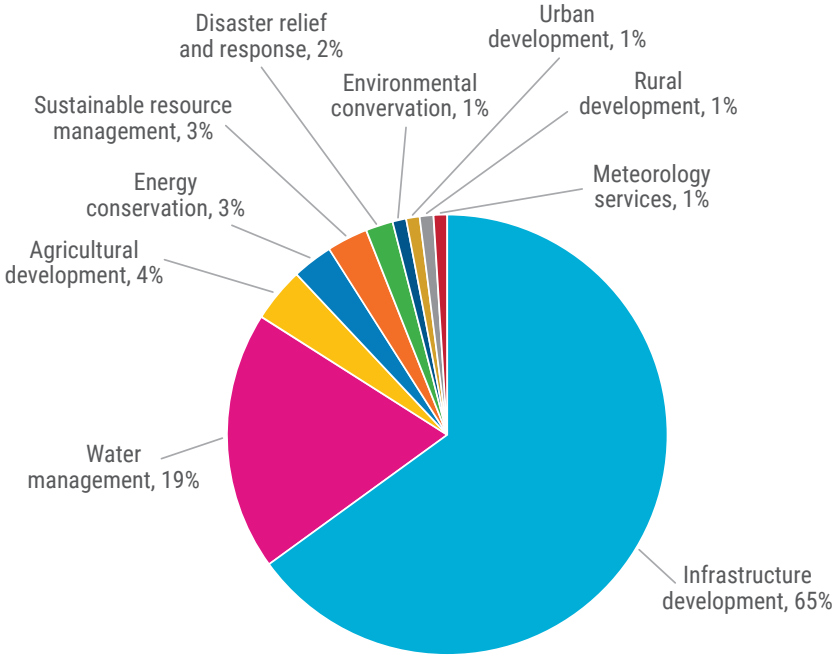
While most Asia-Pacific small island developing States are already collecting tourism-related taxes in the form of hotel, departure and services taxes, green tax initiatives could be considered for the purpose of generating additional financial resources to promote environmental sustainability, as well as to manage the flow of tourists, particularly to areas with fragile ecosystems and inhabited by endangered species. This may also be effective in targeting high-end tourism markets as they discourage low value-added tourism activities. With their intrinsic features, such taxes have been employed in Bhutan, the Galapagos Islands in Ecuador and other places (box III.2). However, a transparent and inclusive use of the collected resources is the key for successful implementation of green fees/taxes in Asia-Pacific small island developing States.

Table III.6
Sources of the Environment and Climate Adaptation Levy, Fiji (Fijian dollars)

Levy categories	August 2018 – April 2019
10% levy on prescribed services	110 371 472
20-cent levy on plastic bags	5 527 412
10% income tax on chargeable income of more than FJ$ 270,000	3 320 212
10% tax on importation of luxury vehicles with engine capacity exceeding 3000 cc	126 997
Miscellaneous – inclusive of 10% levy on super yachts	363 159
Total receipts	**119 709 251**

Source: Fiji Revenue and Customs Service (2019).

Figure III.6
Environment and Climate Adaptation Levy utilization, by thematic area, Fiji



Source: Fiji Revenue and Customs Service, *ECAL Bulletin* 01/2019.

Box III.2
The Galapagos Islands entrance fee and Bhutan's minimum daily package scheme

The Galapagos entrance fee

In the Galapagos, Ecuador's archipelago under the status of a national park, a $100 entrance fee is charged to inbound tourists. The collected fee is distributed as follows: the Galapagos National Park and Marine Reserve ($45), local municipalities ($25), the provincial council ($10) and other governmental institutions ($20). While this $100 fee has remained the same since 1991, Ecuador's Ministry of Tourism plans to increase it to $200 for tourists staying three nights or more on the mainland of Ecuador and $400 for those staying only a night or two on the mainland.[a] The goal of the fee is to make tourism sustainable, control increasing tourist arrivals (i.e. to address overtourism), reduce impacts on the environment, finance the conservation of the protected areas, finance local communities' economic and social development and improve services related to tourism.

Studies revealed that the Galapagos fee policy is a broadly acceptable measure. Approximately 75 per cent of surveyed foreign visitors felt the fee of $100 was "reasonable and a good value", with more than 5 per cent finding it "too low" (Epler, 2007). Similarly, the Charles Darwin Foundation (2008) found that 60 per cent of the tourists were willing to pay more, of which proportion, 66 per cent were willing to pay between $150 and $200. The report further suggested that an increase in the fee, even if doubled, would not adversely affect the revenues as the potential loss of revenues caused by the decreasing number of tourists would be offset by the increased entrance fee. Because the Galapagos are endowed with unique ecosystems and considered a "must-see destination", it was argued that, in the long term, the number of tourists would continue to grow

despite the raised fee. However, the Galapagos Report also highlighted the importance of accountability in the use of generated revenues and the redistribution mechanisms. The increase in entrance fee would have to be followed by clear policies by the Government, as illustrated by the management of tourist arrival levels, environmental conservation efforts and the funds' redistribution within local communities. Otherwise, rather than being a contribution to the sustainability and conservation, tourists may interpret the increases as additional economic benefits for the Government only.

This policy represents a powerful instrument to tackle overtourism and manage tourist flows through limiting and increasing the numbers of tourists where necessary, ensuring that local communities are properly supported and that ecosystems are protected and conserved. It is being implemented under the premise that, with careful planning, limiting the number of tourists may not necessarily decrease receipts, which is an important lesson for those destinations that are already under the threat of overtourism.

Bhutan's minimum daily package scheme

Bhutan is a landlocked least developed country, bordered by China and India. Tourism is one of Bhutan's major sectors, and a sustainable framework of "high-value, low-impact" tourism was created to ensure that its culture and natural environment are protected while the tourism sector is being developed.[b]

Bhutan's minimum package scheme costs $200 or $250 per person per night depending on the season. The package is inclusive of accommodation at a 3-star hotel with the option to upgrade at an additional cost, all meals, a Bhutanese tour guide, transportation within the country, equipment for trekking and camping tours and a sustainable development fee (SDF) of $65. Additional surcharges apply to visitors travelling in small groups: solo travellers pay an additional $40 per night, whereas couples are charged an extra $30 per person per night. Tourists from Bangladesh, India and Maldives are considered "regional tourists" and are exempt from the minimum daily package.

In 2018, Bhutan's total receipts from tourism amounted to $85 million. Of this amount, $22 million was collected as sustainable development fees and directly allocated to the local populations through funding free education and free health care and implementing poverty reduction projects (Bhutan, Tourism Council of Bhutan, 2019). From July 2020, "regional tourists" will also pay SDF but at a reduced rate of $16.80 (1,200 ngultrums) per night.

The uniqueness of the Bhutan tourism experience has been an important factor for the success of the minimum daily package; the country is a cultural tourism hotspot. Having rejected low-yield mass tourism, Bhutan values its reputation for authenticity, remoteness, protected cultural heritage, pristine landscapes and preserved natural environment, which attracts high-end international tourists willing to pay a premium price. According to the Bhutan visitor survey (Bhutan, Tourism Council of Bhutan, 2019), more than 91 per cent of the people surveyed were aware of the package and 98 per cent claimed to be satisfied with the good "value for money".

The minimum daily package scheme is also designed to benefit the local economy as it requires international tourists to use local tour operators. The total revenue of tour operators reached $59 million in 2018 (Bhutan, Tourism Council of Bhutan, 2019). This type of package scheme, or the sustainable development fee mechanism, may be considered as a policy instrument for countries seeking to contain the overflow of inbound tourists, build strong linkages between the local economy and the tourism sector and generate additional resources for environmental and cultural conservation.

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[a] For further information, see www.nytimes.com/2019/09/26/travel/galpagos-island-park-fees.html.
[b] For details, see www.tourism.gov.bt/about-us/tourism-policy.

3. Infrastructure

Tourism development is dependent on infrastructure, such as ports, airports, roads, water, wastewater management, communications and energy, among public sector responsibilities, as well as accommodation, retail and leisure service infrastructure as a private sector role. However, most small island developing States do not have the capital base to invest in large-scale projects; implementing tourism-driven infrastructure priorities is, in many cases, dependent on multilateral or bilateral aid. The limited capital resources also impede the growth of private sector facilities, which has led to the involvement of national pension funds financing large-scale tourism development in Fiji and Samoa. The accommodation sector in many small island developing States is not as well developed as they are in a few tourism-intensive ones, such as Fiji and Maldives.

Lack of infrastructure negatively affects tourism. For instance, when the infrastructure at Vanuatu's Bauerfield International Airport deteriorated, carriers reduced their services, which had negative impacts on international tourism arrivals. In response, the World Bank funded megaprojects to upgrade the runway, taxiway and aprons of the airport to boost the economy and rebuild the country's aviation market. Also in Vanuatu, a new cargo wharf at a cruise port in Port Vila was funded by Japan to reduce cruise/cargo vessel conflicts common in small island developing States. In parallel, New Zealand funded a major waterfront project to provide a recreation zone for visitors and locals alike, relieving pressures on the main street of Port Vila. At Luganville, on the northern island of Espiritu Santo, a concessional loan from the Export-Import Bank of China funded a replacement wharf suitable for cruise ships.

Provision of infrastructure facilitates development. For example, the Government of Fiji has often provided road access to major new resort developments, enabling resort complexes to operate. For the Cook Islands, a major upgrade of water supply and reticulation, the Te Mato Vai project on Rarotonga, funded by China, the Cook Islands and New Zealand, will assist in sustaining tourism growth. A significant wastewater management project will protect Muri lagoon, improve conditions for residents and facilitate further development in this prime tourist location.

Infrastructure must also evolve to enable tourism to grow. Tourism is the major contributor to Fiji's GDP. Nadi, a main hub airport for the Pacific, recently completed an internally funded terminal modernization project, easing passenger-handling pressures. Airports Fiji Limited subsequently announced a FJ$ 3 billion masterplan for Nadi, including a new runway and operational facilities. In Samoa, Faleolo International Airport near Apia recently underwent a terminal redevelopment project as well as a further upgrade to the runway and terminal facilities funded by the World Bank. Henderson Field, on Guadalcanal, Solomon Islands, is the next Pacific island airport to be upgraded to enable the country to meet the demands of the growing tourism sector.

Across the Pacific, tourism-driven demand for new infrastructure contributes to GDP through ongoing construction programmes. As new transport and service infrastructure comes online, continued tourism growth is being facilitated through easier access, improved ground transport and more reliable services.

4. Regional cooperation

Regional cooperation is of paramount importance for making tourism an effective driver of sustainable development in Asia-Pacific small island developing States. In view of the remote location of these States, tourists are more inclined to visit at least several destinations as part of one visit to the Pacific subregion. This is also partly because different countries offer various tourist attractions: for example, shark diving in Fiji, whale watching in Tonga, volcano trekking in Vanuatu and wreck diving in Solomon Islands and Papua New Guinea. Adequate legal and physical infrastructure must be in place to facilitate this type of tourism.

Indeed, Pacific small island developing States have various tourism-related regional cooperation and integration mechanisms. For example, the Pacific Tourism Organisation (SPTO, formally known as the South Pacific Tourism Organisation) is an intergovernmental body for the tourism sector in the Pacific subregion, responsible for marketing, research and statistics and sustainable tourism development. SPTO promotes innovative partnerships in the areas of cruise sector development, human resources development and training, air access and route development and investment and product development that will further support regional cooperation in the sector. In 2016, SPTO launched a new Pacific brand, with the slogan "Ours is Yours", to promote Pacific tourism globally. The brand intends to evoke the welcoming nature of

the Pacific peoples, the Pacific spirit of sharing and the unique cultures and the pristine natural environment in the subregion.[11]

Another initiative has been the Pacific Islands Air Services Agreement (PIASA), which is aimed at increasing air access to Pacific small island developing States and bringing efficiency to their national airliners by creating an open sky, a free market for aviation in the subregion. To date, however, the agreement has not yet delivered improved air connectivity in the subregion. For one, PIASA took time to be signed by only 8 of the 16 Pacific Islands Forum Countries due to concerns over fierce competition that could be harmful for national and regional airlines relative to international airlines. In addition, PIASA was created in a context of many bilateral agreements among Pacific small island developing States, international airlines and some key regional markets, such as Australia and New Zealand.

Partnerships have also been launched to protect natural assets. For instance, the Secretariat of the Pacific Regional Environment Programme (SPREP) oversees cooperation in the Pacific subregion for protecting and improving the environment and to ensure sustainable development. Other subregional organizations are also active in protecting the environment. The Oceania Regional Office of the International Union for Conservation of Nature in partnership with SPREP and Governments are working to support the implementation of multilateral environmental agreements. The Micronesia Challenge is another example of subregional cooperation, with five Micronesian Governments committed to conserve by 2020 at least 30 per cent of their near-shore marine resources and 20 per cent of the terrestrial resources across Micronesia.

Due to economic (i.e. limited financial resources) and geographical (i.e. remoteness) factors, these types of cooperation are indispensable for Asia-Pacific small island developing States. While the question may arise whether tourism development would increase competition among them, the larger concern is whether these economies have the capacity to facilitate greater flows rather than that they are competing for tourists. Thus, in considering their varied attractions, cooperation could bring more benefits than competition. It is also important to consider that cooperation and competition can take place simultaneously. Inevitably, the development of the cruise sector, as examined above, should be supported by closer regional cooperation among Asia-Pacific small island developing States, whether in terms of infrastructure development or harmonization of regulations, in order to facilitate regional tours. However, there are also other areas or indeed trends which call for closer cooperation.

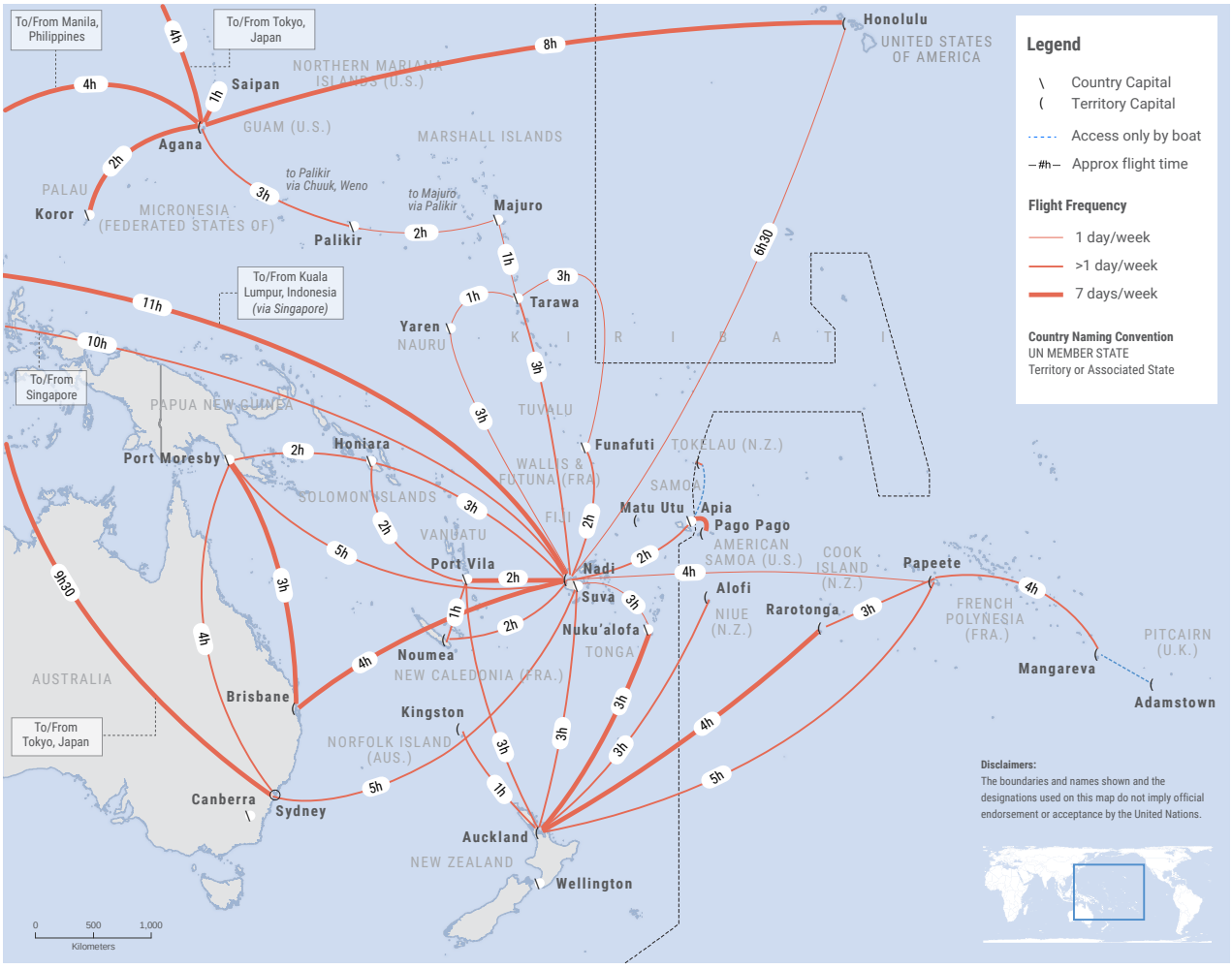
One area is in the aviation sector. Given the remote location of Pacific small island developing States and the distances between them, greater regional cooperation in the aviation sector could reduce air transportation costs and may contribute to enhancing the prospects for sustainable tourism development. Thus, while until the mid-2000s the aviation industry of most small island developing States was highly regulated, "open skies" agreements, which allow any number of airlines to fly between the participating countries without any restrictions on the number of flights, number of destinations, number of seats and prices, have resulted in some destinations, such as Cook Islands, Samoa, Tonga and Vanuatu, being opened to low-cost carriers. These low-cost carriers are providing more frequent flights, capacity and secondary routes at much lower fares than what the traditional airlines offered over the preceding one to two decades (Taumoepeau, 2013). However, while this has contributed to an increase in visitors, it has also contributed to many national Pacific airlines struggling to become economically sustainable as the smallness of their markets translates into low-load factors and "thin" sectors. Clearly, the remoteness of islands cannot be overcome and the lack of direct flights between islands (see figure III.7) adds time and expense to intraregional connections. Additional economic costs include high airport charges and soft local regional currencies earned by subregional airlines, which must be converted into United States dollars for payment of major operational items, such as spare parts, fuel and aircraft leases (Taumoepeau, 2010).

An alternative option may be for the Governments of Asia-Pacific small island developing States to work with airlines to underwrite potentially profitable routes. For instance, the Cook Islands Government has agreed to underwrite Air New Zealand's non-stop services between Los Angeles and Rarotonga and its services between Sydney and Rarotonga to maintain direct air links with key markets. In return for Air New Zealand undertaking to provide a minimum level of service on each route (currently one flight per week in each direction), the Government guarantees that Air New Zealand will not make losses on these routes. Although both services are currently making losses, thus requiring the underwriting of payments (about NZ$ 7.7 million and NZ$ 4.4 million respectively), the net effect of the

Los Angeles to Rarotonga route on total economic activity in the Cook Islands is just under NZ$ 6 million per year (about 1.8 per cent of Cook Islands' GDP); the net effect of the Sydney to Rarotonga route is marginal (Schiff, 2013).

Regional cooperation should go beyond the Pacific subregion and be underpinned by greater cooperation of the entire Asia-Pacific region. Asia-Pacific emerging economies possess all the ingredients to facilitate further development of the tourism sector in Asia-Pacific small island developing States, particularly considering that rising levels of income usually go hand in hand with greater demand for international travel. Asia-Pacific small island developing States can utilize existing trends, as discussed above, and benefit from new waves of potential tourists. For example, China's outbound international tourism market has grown exponentially in recent decades. As previously mentioned, the emerging middle class of Asia bears significant untapped potential for Pacific small island developing States. Examples include beautiful scenery and pristine, untouched nature, which Asia-Pacific small island developing States have in abundance (Pratt, 2013b). The subregion is perceived as also having friendly and welcoming people.

Figure III.7
Map of flight connections between Pacific islands



Source: United Nations Office for the Coordination of Humanitarian Affairs, 2019.

E. Policy recommendations

To enhance the developmental impacts of tourism, small island developing States need to address existing barriers, bottlenecks and challenges. This involves carefully balancing an increase in receipts from tourism by increasing the number of tourists, increasing per capita spending of tourists and increasing the socioeconomic impact of tourism on local populations.

Tourist arrivals in Asia-Pacific small island developing States can be increased, for example by targeting such fast-growing markets as China (Everett, Simpson and Wayne, 2018; UNWTO and CTA, 2019) and other emerging economies, as the case of Maldives illustrates (see box III.3). Indeed, considering that Maldives captures almost 50 per cent of the tourist market of Asia-Pacific small island developing States and two thirds of the Chinese tourists travelling to such States, this would suggest that there is significant scope for increasing tourism flows to other small island developing States in the Asia-Pacific region. Increasing the number of tourists, provided that such obstacles as limited infrastructure are addressed, may be the easiest way forward. However, this must take place in a sustainable manner, as overtourism and rapid development can pose serious threats to fragile ecosystems and natural environments.

The per capita spending of arriving tourists can be increased by targeting high-end consumers, increasing average lengths of stay, offering new types of tourist attractions and devising other mechanisms which will enhance revenue generation. The key to strengthening tourism's positive developmental impact, however, lies in policies that generate additional revenues which can subsequently be used for development of these countries and territories and to more effectively link the tourist sector with the local economy. In sum, the following policy recommendations are proposed as means to leverage tourism to promote sustainable development in Asia-Pacific small island developing States.

First, **links between local populations and the tourism sector should be strengthened so that local communities benefit more. This can be done, for example, by offering more green, blue and community-based tourism activities** and by providing training programmes to increase employability of local workers in the tourism sector as well as in agriculture and other services from which forward linkages with tourism can be strengthened. This community-based approach will not only contribute to enhancing sociocultural sustainability but also to strengthening production linkages between the tourism sector and the rest of the economy, and offering more decent, stable job opportunities, thereby enhancing economic sustainability.

Second, Asia-Pacific small island States could consider generating additional revenues by **introducing green taxes, fees and other special mechanisms with the explicit objective of supporting environmental conservation as well as sustainable livelihood of the local populations**. These taxes and fees could be useful for countries and territories seeking to increase revenues from tourism or to address the risk of overtourism. Those States that are already collecting enough fees from tourism through departure tax or service tax could consider **greening their tax systems** by reallocating funds towards projects and activities that enhance environmental sustainability or correct for externalities caused by tourism. However, although the global supply of tourists has been rapidly expanding, this sector is vulnerable to external shocks, as natural disasters and the ongoing COVID-19 pandemic have demonstrated. Thus, a careful assessment of tax changes is needed to ensure the right balance between additional revenues raised and the impact on the number of inbound tourists. This also requires a process of transparent and inclusive stakeholder engagement in designing and implementing green tax/fee initiatives and a robust conservation fund and associated management rules and systems.

Finally, in the case of Pacific small island developing States, **regional cooperation should be enhanced to promote a common Pacific brand to raise the global profile of the subregion**. In particular, long-haul tourists are inclined to visit several destinations as part of one visit to the Pacific, benefiting from complementary attractions, such as shark diving in Fiji, whale watching in Tonga and wreck diving in Solomon Islands, or volcano trekking in Vanuatu and cultural and nature trekking in Papua New Guinea. Currently, tourists tend not to visit multiple locations due to limited transportation across islands and the lack of information or promotion of opportunities offered in other locations. For instance, in 2018 only 21 per cent of visitors to Solomon Islands also visited other Pacific islands.[12] Common branding, such as the SPTO "Ours is Yours", with a clear marketing strategy promoting Pacific cultures as a whole, could raise the attractiveness of the Pacific subregion as a

Box III.3
Maldives success in tourism development

Maldives is a good example of how tourism can foster economic development in small island developing States. The country's tourism sector was central to its graduation from least developed country status in 2011 (Perrottet and Garcia, 2016). Its tourism receipts were equivalent to 54.1 per cent of GDP in 2018 (see table III.2 in section B.2), making tourism the single largest sector of the economy. International tourist arrivals more than doubled from 683,000 in 2008 to 1,484,274 in 2018 (see table III.1 in section B.1). Tourism goods and services tax accounted for 30 per cent of Government's tax revenue in 2018 (Maldives Monetary Authority, 2018). In 2019, 873 tourist accommodations were operational, with an overall occupancy rate of 62 per cent and 75 per cent for resort-based accommodations.[a]

The country's strategy towards tourism development has been oriented towards high-end resort tourism. Indeed, Maldives developed the unique concept of "one island, one resort", with overwater villas and spas offering a first-class experience, thus making Maldives a premium destination (Perrottet and Garcia, 2016). Maldives attracts mainly tourists from Asia and Europe looking for resort-based holidays, beach holidays, wedding-honeymoon holidays and water sports, such as diving and snorkelling. This has been made possible through the original Tourism Act of 1979 and multiple well-targeted tourism master plans. The Government has created a suitable business environment to attract foreign investment, set measures to account for environmental and social sustainability of the tourism sector and tries to encourage local communities to be part of the sector in terms of employment and investment. While tourism activities used to be concentrated around the capital city of Malé, the Second Tourism Master Plan 1996-2005 decentralized tourism activities away from the capital to spread the benefits across the country (Perrottet and Garcia, 2016).

Air connectivity played a major role in tourism development, with Maldives benefiting from bilateral air service agreements with 29 countries.[b] The country has about 40 direct flight connections per week with Europe, 55 with the Middle East and more than 200 with Asia. It has invested in domestic transport infrastructure and is now equipped with four international and eight domestic airports. To access the most remote atolls, Maldives has the world's largest seaplane fleet, with 49 aircraft reaching nearly 1,200 islands, servicing more than 60 resorts, transporting about 960,000 passengers in 120,000 flights annually.[c] The country continues to improve its connectivity through new infrastructure development, such as the expansion and upgrading of Velana International Airport.

The composition of source markets for Maldives has changed over time. Europe represented 73 per cent of inbound tourists in 2008 and 49 per cent in 2018, while the Asian and Pacific share increased from 21 per cent in 2008 to 42 per cent in 2018.[d] This shift has been driven mainly by China, the largest source market since 2010, representing 19 per cent of the total tourist arrivals in 2018. Maldives has clearly targeted tourists from China through various marketing strategies – for instance, through Internet and social media (70 per cent of bookings in China are made online) and through trade fairs in China to promote Maldives among tour operators. In addition, air connectivity with China played an important role with direct flights from seven Chinese cities, including Shanghai and Beijing (Perrottet and Garcia, 2016).

The experience of Maldives may offer a possible model of tourism development for other small island developing States, particularly its successful targeting of high-end segments and the diversity of its source markets, as well as the revenues obtained from the tourism goods and services tax which allowed for a rise in government revenues. Nevertheless, for the model to be effectively applied to other small island developing States, the existing externalities need to be integrated and adapted to their specific situations.

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[a] For details, see www.tourism.gov.mv/downloads/arrival_updates/2019/December.pdf.
[b] For specific information, see www.aviainfo.gov.mv/transport.php.
[c] More information on this aspect, see www.jll.com.sg/en/trends-and-insights/research/global-resort-report-2019.
[d] For further details, see www.tourism.gov.mv/pubs/tourism_yearbook/tourism_year_book_2009.pdf and http://statisticsmaldives.gov.mv/yearbook/2019/.

destination with a variety of attractions. Indeed, the unique and diverse cultural heritage of the countries and territories is one of the main comparative advantages that differentiate Asia-Pacific small island developing States from similar and competitive destinations in the global market (Perrottet and Garcia, 2016). Marketing and promotion of a single Pacific brand could be used to gain bargaining power and share best practices and market research among the Pacific small island developing States (Everett, Simpson and Wayne, 2018). Countries could, for example, collectively negotiate with transit countries to provide transit passengers travelling from and to the Pacific small island developing States with visa exemptions. They could also explore implementation of a Pacific-wide common sustainable development fee on inbound tourists, particularly cruise visitors, whose positive impact on local economies has so far been limited. This could lessen the fear of tax competition.

In view of the remote location of Pacific small island developing States and the distances between them, connectivity issues must be effectively addressed. Sectoral cooperation should therefore go beyond the Pacific subregion and be underpinned by greater cooperation within the entire Asia-Pacific region.

In sum, polices must be tailored towards specific conditions of each country and contain a wide pallet of the options discussed above, such as new fees and mechanisms to generate revenue, diversifying types of tourism, ensuring effective links to the local economies in order to generate new employment and enhancing regional cooperation to combine resources and address challenges. To make tourism an effective driver of sustainable development, it is necessary to stress the importance of better linking the development of tourism to sectors in which the leading role is played by the inhabitants of Asia-Pacific small island developing States.

ENDNOTES

1 Tourism employment accounted for 5.8 per cent of all employment in the 14 Asia-Pacific small island developing States that are member States of ESCAP in 2018. This share was 1.6 per cent in Papua New Guinea, which constitutes approximately two thirds of the labour force of the 14 small island developing States. Without Papua New Guinea, the average tourism share in total employment was 14.6 per cent. Figure III.4 provides further details.

2 In this chapter, unless otherwise indicated, aggregates for Asia-Pacific small island developing States include only the 14 member States of ESCAP and do not include associate members due to the limited availability of data.

3 Middle class refers to people whose daily spending ranges from $10 to $50 in 2005 PPP terms.

4 Large differences exist in the Chinese shares of total inbound tourists by country (see table III.3). For example, in 2016 Chinese nationals made up 47 per cent of visitors to Palau but only 0.5 per cent of those to the Cook Islands.

5 This is according to a statement delivered by the Secretary-General of UNWTO. For details, see www.unwto.org/unwto-convenes-global-tourism-crisis-committee.

6 For the conceptual framework and guidelines, see United Nations and others (2010).

7 The global average of cruise passenger spending per call is $128, according to Business Research and Economic Advisors.

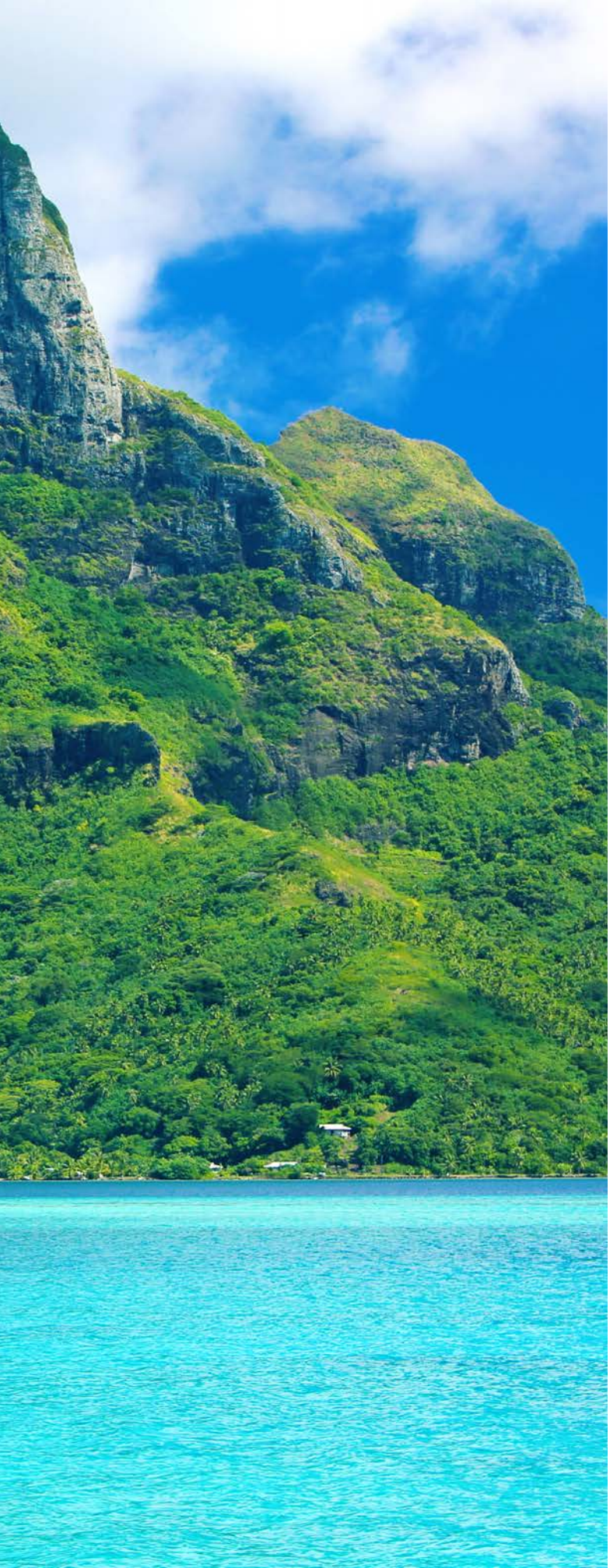
8 A Samoan word for house, which in that country typically is oval or circular in shape with a domed roof held up by posts, but having no walls.

9 For further information, see http://islandtimes.us/ppef-generates-9-1-m-since-installment-in-2018/.

10 The prescribed services levied with this 10 per cent tax are the ones offered from the following businesses: licensed hotels, inbound tour operators, licensed bars, tourist vessels operating within Fiji's waters, licensed nightclub organizers of entertainment programmes/product exhibitions, recreational activity operators, cinema operators, licensed rental/car-hire operators, bistros and coffee shops, licensed restaurants, aircraft operators, water sports operators, home stay operators and unlicensed service operators.

11 For additional information, see https://consumer.southpacificislands.travel/designers-of-spto-brand-win-asia-pacific-award/.

12 Solomon Islands International Visitor Survey conducted by NZTRI (2019b) found that, while tourists are willing to discover several destinations, only 29 per cent of all travellers visited Solomon Islands as part of their larger journey. Of that proportion, 74 per cent were going to other Pacific small island developing States. For the Cook Islands, only 15 per cent of the survey respondents indicated that visiting the Cook Islands was part of a larger trip (NZTRI, 2019c). For Samoa, 20 per cent of the surveyed visitors also visited other countries, while only 21 per cent of that proportion visited other Pacific small island developing States (NZTRI, 2019d).



Chapter IV

Conclusion

Asia-Pacific small island developing States need to accelerate action to implement the 2030 Agenda. This is especially important as, based on current trends, these States will not reach most of the Sustainable Development Goals. The situation has been further exacerbated by the COVID-19 pandemic, which has disrupted international travel, brought tourism businesses to a standstill and which, through its economic and social impacts, may reverse years of development gains. To accelerate progress towards achieving these Goals, small island developing States must take full advantage of their blue economy in a sustainable manner. This will entail ensuring the sustainability of existing ocean resources that are currently overexploited or at the risk of overexploitation and developing those sectors that provide productive employment and close links to the local economy and local populations. This report argues that fisheries and tourism are among the most important and promising sectors contributing to poverty reduction and sustainable development of Asia-Pacific small island developing States. Although these sectors are already firmly embedded as pillars of their economies, sectoral challenges concerned with sustainability and their limited progress in achieving the Sustainable Development Goals must be addressed. Doing so harbours the potential to create valuable synergies with other sectors, notably between coastal fisheries and marine-based tourism.

The lack of data is a significant obstacle for Governments of small island developing States to formulate tailored and focused policy responses. Lack of factual, transparent and harmonized data poses a particular challenge to managing fisheries more sustainably. This lack of data is a concern in view of the importance of fisheries to the economies and social well-being of communities of small island developing States. Official, harmonized and widely shared data are necessary to fully understand the status of fish stocks and fishery practices and to effectively manage this sector. Data gaps also remain in measuring the impact of tourism-

related activities that are complex and fragmented in nature. A stronger push for investments in producing relevant data, especially in the limited statistical capacity contexts of small island developing States, is therefore required in order to monitor emerging trends, devise timely responses and evaluate their effectiveness.

Moreover, although some sources of data relating to oceans do exist, they are usually fragmented, unharmonized and/or siloed. Data sharing across data holders, including both private and public ones, therefore remains a challenge. Without significant changes in national laws and incentives, it is unlikely that open access to current confidential data will materialize in the immediate future. However, harmonized national statistical systems would assist with ensuring that fisheries data are consistent and robust and that tourism data are comparable across countries, over time and with other economic statistics. National statistical systems such as those in the Pacific face the compounded challenge of increasing the range of data to be collected and addressing limited existing capacity.

Accelerating international and regional cooperation, enforcing international frameworks, norms and standards and enhancing multi-stakeholder engagement are further critical elements to ensuring that tourism and fisheries are effective drivers of sustainable development. Indeed, many of the challenges related to oceans are not contained within individual countries; the overexploitation of fish stocks especially spreads beyond national borders. As a result, separate standards and uncoordinated actions are insufficient to cope with the transboundary and interconnected nature of the oceans. Numerous international instruments have been put into place to create ambitions and gather critical mass for the protection and sustainable use of ocean resources, including, for instance, the Code of Conduct for Responsible Fisheries and the subsequent Agreement on Port State Measures, with binding principles and standards to tackle illegal, unreported and unregulated fishing, as well as the United Nations Convention on the Law of the Sea. Enabling these instruments to produce tangible results depends, however, on Governments' ability to translate them into effective actions, enforceable rules and time-bound targets anchored in national regulatory frameworks. There are important gaps in existing capacities of small island developing States to devise and implement national actions that are aligned with international norms and standards, particularly for those which face severe challenges related to institutional limitations. To address these issues, support across countries will be fundamental to make sure there are no loopholes in the cross-border protection of oceans and marine resources.

An indispensable approach to address weak institutional capacity is to involve all stakeholders, from international organizations to local communities and individuals. This is a reflection of the growing attention to the oceans and amplifies the effects of partnerships protecting them. For instance, when local communities are involved in a partnership approach, individuals are less likely to conduct illegal, unreported and unregulated activities and are actually more likely to report them to public authorities, thereby effectively increasing the monitoring and enforcement capacity of the State. Engaging local communities is equally important in the development of the tourism sector. If tourism is to continue to be a driver of sustainable development, then links between the sector and local communities must be strengthened. This policy cannot be limited to enhancing backward and forward linkages and allowing for employment creation in certain sectors to cater to the tourism industry (for example, the production of handcrafts and restaurant services), but must explicitly target development of new types of tourism with extensive local content. Such tourism embraces the concepts of blue and green economies, examples of which are marine-based tourism, culture-based tourism and sports tourism. Needless to say, some of that tourism may be effectively linked to costal fisheries.

As far as Pacific small island developing States are concerned, taking into consideration their remote location, modest population size and small national economies and at the same time their diversity and uniqueness, regional cooperation is of paramount importance to promote a common and recognizable brand, to cooperate rather than to compete, to harmonize green tax/fee mechanisms and policies, to ultimately attract more (or fewer, where applicable) tourists that are spending more, to eliminate potential gaps in sectoral revenue flows and to enable broader diffusion of benefits, particularly in those States that have profited less from tourism sector development.

Just as the policy response to the current COVID-19 pandemic underscores the importance of coordinated and evidence-based policy measures, grounded in strong political will and commitment to sustainability, regional and international cooperation is also needed

to scale up actions for oceans. Such cooperation can help protect fisheries and enable recovery of coastal fisheries, as a number of ongoing initiatives demonstrate, including multi-country partnerships, such as the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security, to monitor the protection of marine ecosystems, fishery activities and fish stocks. Regional cooperation can also be linked to tourism by promoting a common branding for the Pacific subregion and leveraging tourism to foster further sustainable development. Building meaningful partnerships starts with ambitious, inclusive and action-oriented dialogues. Valuable regional platforms already exist, including the Asia-Pacific Day for the Ocean, which have the potential to raise the bar for regional and collaborative actions. Such platforms can not only leverage the existing partnerships on ocean data, such as the Global Ocean Accounts Partnership, to jointly support the production of harmonized data relating to Goal 14, but they can also provide a venue for the public and private sectors to engage, exchange lessons learned and devise new ways forward to tackle common concerns. For instance, the tourism sector can devise common branding schemes, such as the SPTO "Ours is Yours", and work collectively to overcome challenges. Again, if tourism is to succeed as a driver for long-term sustainable development, then regional cooperation is of paramount importance. Considering their remote location and diversity of tourist attractions, Asia-Pacific small island developing States can act together to attract visitors, leverage their natural assets and gain collective bargaining power and other benefits through economies of scale and improved air and sea connectivity. For that purpose, these regional platforms should be reinvigorated to enable small island developing States to use them to enhance their sustainable development.

However, in the short term, **addressing the consequences of the COVID-19 pandemic must take priority.** Most Asia-Pacific small island developing States have already introduced countermeasures by, for instance, enforcing travel restrictions and isolating suspected cases. These actions are needed due to the relatively rapid transmission of the SARS-CoV-2 coronavirus, as well as the limited capacity of the Asia-Pacific small island developing States' health-care system. They are also important considering that, in the case of an outbreak, island States are likely to face a heightened mortality rate due to lower levels of immunity to outside diseases (Horwood and others, 2019). Indeed, there have been several health emergencies, such as an outbreak of measles in Samoa in late 2019 and a dengue fever epidemic in Marshall Islands in 2019-2020. These events had an economic impact, particularly on the tourism and broader services sector. However, to respond effectively to the immediate need to provide sufficient health-care services, the provision of basic medical supplies, testing kits and protective gear is critical. These need mostly to be imported.

In looking forward, **targeted fiscal and monetary support measures will be necessary in the short term to support affected businesses, such as in tourism-related services and in fisheries, particularly local MSMEs providing local populations with employment**. Tourism-dependent Asia-Pacific small island developing States are estimated to need a fiscal stimulus of at least 10 per cent of GDP (Sen and Kenny, 2020). While typical stimulus programmes include direct cash transfers, wage subsidies to businesses and cheap financing to MSMEs, a compensation package for employees in large informal sectors, such as farmers and fishers who provide supplies to the tourism sector, should also be considered (Sen and Kenny, 2020; World Bank, 2020). However, many Governments of small island developing States do not have the fiscal space to respond to this economic downturn as their budgets are already overstretched or largely in deficit, with limited access to foreign debt markets. While such States could consider approaching multilateral development banks, such as the Asian Development Bank and the World Bank, for concessional budget support loans or emergency financing facilities, development partners, including bilateral donors, are encouraged to reverse the decline in official development assistance, particularly to least developed countries; also, creditors should consider immediate suspension of debt payments from those requesting forbearance (United Nations, 2020).

The COVID-19 pandemic provides a stark reminder of the price of weaknesses in health systems, social protections and public services. It has underscored and exacerbated inequalities, above all gender inequality, laying bare the way in which the formal economy has been sustained on the back of invisible and unpaid care labour. However, it also provides a historic opportunity to advocate for change, for macroeconomic choices that are pro-poor and place peoples' rights at the centre, greater investment in public services and fiscal policies and other measures that curb inequalities. By making progress on the global road map for a more inclusive and sustainable future, it may provide the opportunity to better respond to future crises (United Nations Sustainable Development Group, 2020).

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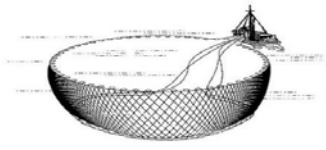
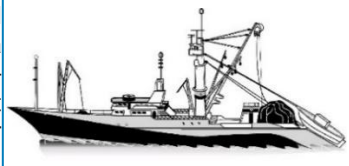
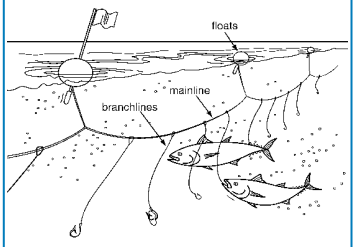
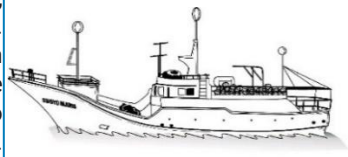
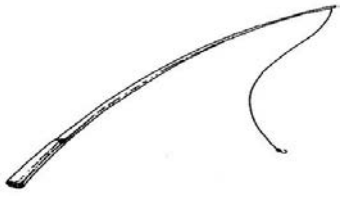
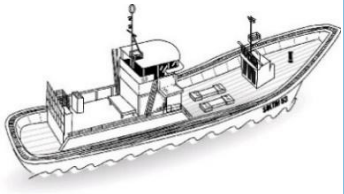
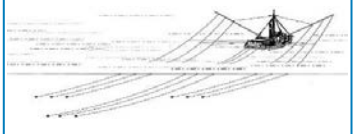
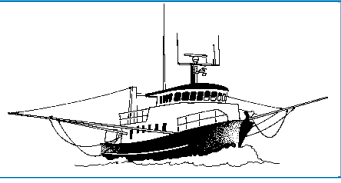
ANNEXES

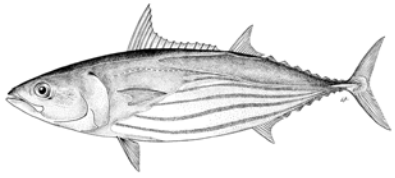
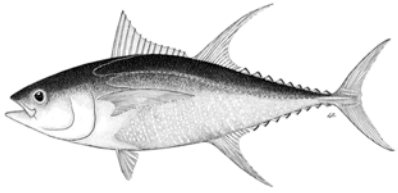
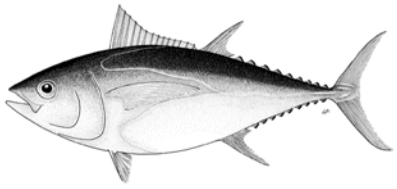
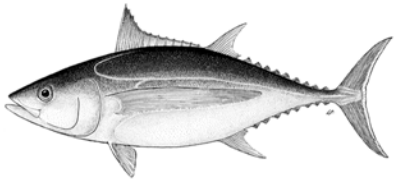
Annex I
Types of gear for offshore fishing

Gear type	Catch	Typical vessel	Notes
Purse seine			
	Mainly skipjack and small yellowfin tuna are caught by purse-seine gear. Most of the catch is for canning.		In 2018, 271 vessels were in operation in the region, catching 1,910,725 tons during the year. This represents about 77 per cent of the total offshore catch of the region.
Longline			
	Most tuna caught are large size yellowfin, bigeye and albacore. The prime yellowfin and bigeye often are exported fresh to overseas markets. Most of the albacore is for canning.		There are two major types of longliners: (a) relatively large vessels (often based outside the Pacific islands), and (b) smaller vessels that are typically based at a port in the Pacific islands. About 2,800 vessels operated in the region in 2018, catching about 250,000 tons during the year.
Pole and line			
	Mainly skipjack and small yellowfin are caught by pole-and-line gear. Most catch is for canning or producing a dried product.		In the 1980s, several Pacific island countries had fleets of these vessels, but most no longer operate due to competition with the more productive purse-seine gear. The 2018 catch by pole and line in the region was 170,000 tons.
Troll			
	Large-scale trolling targets albacore for canning.		About 160 troll vessels participated in the 2018 South Pacific albacore troll fishery. The catch during that year was 2,847 tons.

Source: Adapted from Gillett and Bromhead (2008) and Williams and Reid (2019).

Annex II

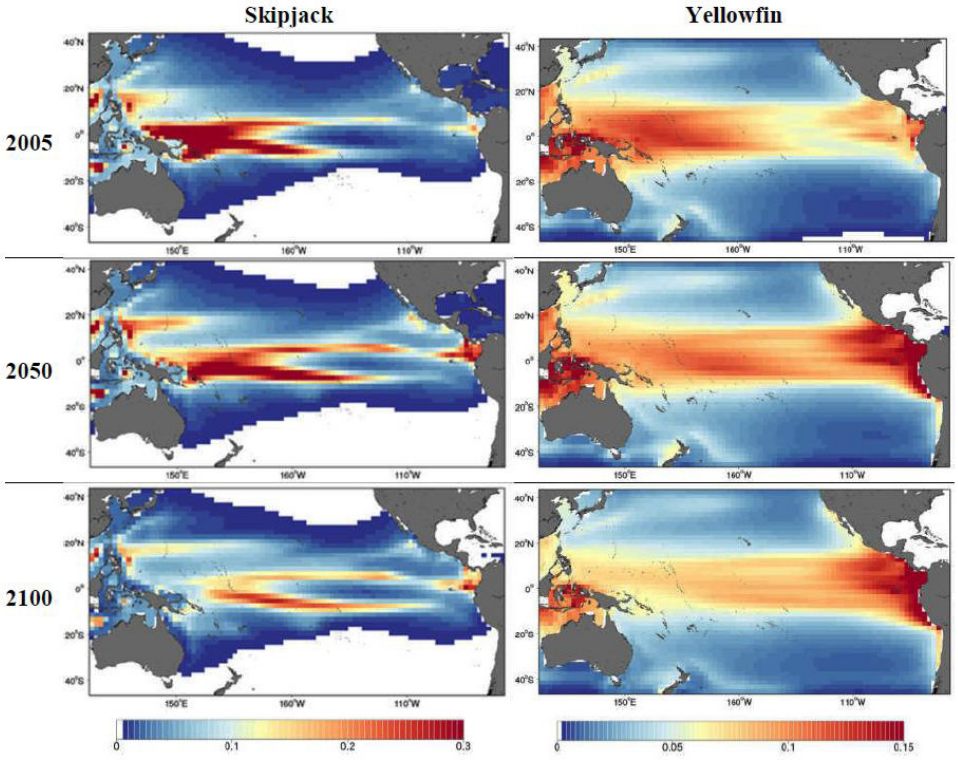
Species of tuna of major commercial importance in the Asia-Pacific region

Tuna species		Typical size captured (centimetres)	Important aspects
Skipjack		40–70	Skipjack are caught mainly on the surface by purse-seine and pole/line gear and are used for producing canned tuna. Most fish caught are 1–3 years old. In the western and central Pacific Ocean, the skipjack biomass is greater than that of the other three main tuna species combined.
Yellowfin		40–70 and 90–160	Small yellowfin tuna are caught on the surface by purse-seine and pole/line gear, while larger/older fish are caught in deeper water using longline gear. Small fish are used mainly for canning, while high-quality larger fish are often shipped fresh to overseas markets. Most fish caught are 1–6 years old.
Bigeye		40–70 and 90–160	Small bigeye tuna are caught on the surface by purse-seine and pole/line gear, while larger/older fish are caught in deeper water using longline gear. Small fish are used mainly for canning, while high-quality larger fish are especially valuable as fresh fish in the Japanese market. Most fish caught are 1–10 years old. Bigeye tuna account for a relatively small proportion of the total tuna catch in the region, but these tuna are extremely valuable.
Albacore		60–110	Small albacore are caught by trolling at the surface in cool water outside the tropics, while larger fish are caught in deeper water and mainly at lower latitudes using longline gear. Most of the catch is used for producing "white meat" canned tuna. Fish caught are typically from 1.5 to 10 years old.

Source: Adapted from Gillett and Bromhead (2008).

Annex III

Expected redistribution of skipjack and yellowfin tuna across the Pacific Ocean due to climate change



Source: Adapted from Senina and others (2018).

Annex IV

Global distribution of regional fishery bodies

Source: FAO (2020b).
Note: Details on specific regional fishery bodies can be found in FAO (2020d).

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Fax: 662 288-3007
Email: escap-mpdd@un.org

The *Asia-Pacific Countries with Special Needs Development Report* examines how small island developing States can leverage ocean resources for their sustainable development. It shows that these economies are not on track to reach most of the Sustainable Development Goals and that accelerated action is needed to reach them, especially given that the economic and social impacts of the COVID-19 pandemic will be hard felt by the people in the Asia-Pacific region. It examines how small island developing States should take full advantage of their blue economy to foster their development, focusing on two sectors, fisheries and tourism, which are important in small island developing States and which both rely on ocean resources.

This report puts forward pertinent policy recommendations to strengthen the development role of fisheries and tourism. It highlights that scaling up action for oceans is required for small island developing States to make progress towards implementing the 2030 Agenda for Sustainable Development. Enforcing international frameworks, norms and standards is one element that will contribute to such progress; ensuring greater regional cooperation is another one. Just as the policy response to the current COVID-19 pandemic underscores the importance of coordinated and evidence-based policy measures, grounded in strong political will and commitment to sustainability, regional cooperation can help protect fisheries and enable recovery of coastal fisheries. It can also be linked to tourism by promoting a common branding for the Pacific subregion and leveraging tourism to foster further sustainable development.

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