

COVID-19 and Seychelles' Blue Economy

Angelique Pouponneau

Introduction

As a small island developing State (SIDS), Seychelles in the present century was already facing a number of global challenges, not least of all the anticipated effects of climate change. Then, in 2020, it also had to confront the spread of COVID-19. With immediate effect, the pandemic created both a health crisis and an economic downturn.

As part of the urgent response that was needed, attention was given to the Blue Economy paradigm, which Seychelles was pioneering. Its early development showed how the country could withstand global shocks and chart a more sustainable future. This is a model that Seychelles has been advancing since 2015 under the Michel and Faure administrations. In 2021, with a new political party in power and the Ramkalawan-led administration, the Blue Economy has not lost prominence, despite the department's merger with the Department of Fisheries.

The Blue Economy economic model provides a pathway towards resilience to environmental and economic crises if implemented well. Unfortunately, insufficient progress had been made by 2020 to diversify the economy, which remained over-reliant on the tourism industry.

This paper will explore how COVID-19 has impacted the Seychelles' Blue Economy and presents recommendations to keep Seychelles on the right pathway.

Covid-19 in Seychelles

COVID-19, an infectious disease caused by a newly discovered coronavirus,¹ emerged late in 2019. It was soon discovered that the virus was transmitting from person to person at a very high rate. As of March 2021, globally, more than 117 million people have tested positive with a 2-3% death rate.² On 11 March 2020, because of the virus's ability to spread quickly from country to country,³ the Director-General of the World Health Organization (WHO) declared COVID19 a pandemic.

The first wave

Seychelles was spared the arrival of COVID19 until 14 March 2020, when the first positive case of COVID-19 was discovered. The first wave saw 11 cases testing positive as of 11 April 2020. Those who tested positive were Seychellois and non-nationals visiting the country. Most cases were either Seychellois returning from high-risk countries and

expatriate workers who had returned from their annual leave. The majority of the cases were contained upon arrival at Seychelles International Airport (SIA) and, therefore, the cases were detected whilst the individuals were in quarantine.

The second wave

Seychelles was hard hit by a second wave of COVID-19. By mid-December 2020, public health officials warned that community transmission was imminent⁴ and community transmission was confirmed following the Christmas celebrations of 2020. This resulted in cumulative confirmed cases of 2,950 and 15 deaths, as of 5 March 2021. During the second wave, the majority of people who tested positive were Seychellois, with fewer incidents of tourists and GOP holders testing positive. By the end of February 2021, 1,816 total visitors had arrived in the country, representing a 97% decrease in visitors compared to 2020.⁵

The crisis faced by COVID-19 is not only a national health emergency but rather an economic crisis of a magnitude predicted to be worse than the 2008 economic crisis. As a country entirely dependent on tourism and fisheries, COVID-19 has undermined the whole of the Seychelles' economy. Seychelles International Airport (SIA) was closed to commercial flights until August 2019 and has since only been partially open. However, as COVID-19 cases increased and public health measures became more stringent, airlines have opted to cancel or provide a reduced service to Seychelles, bringing far fewer visitors to the country than one would normally expect.

COVID-19 and tourism

COVID-19 easily moves across borders, with people as convenient hosts carrying the virus on planes, through airports, and to the local communities at their destinations. Travelling became a high-risk activity that could quickly expose travellers to the virus. In addition, many countries imposed travel bans and lockdowns preventing the movement of people within the country and across borders. With such restrictions, and the risk of exposing one's self to COVID19, a significant decline in the worldwide tourism industry began, and Seychelles was not exempt. In 2018, Seychelles reported an all-time peak in tourism of more than 361,844 (more than 3.5 times the resident population), to its shores.⁶ The Ministry of Finance predicted a 64% fall in the number of tourist arrivals for 2020.⁷ A survey indicated that at least 2,367 bookings, worth US\$ 3.8 million, were cancelled between 25 February and 23 March during the pandemic.⁸ By the end of the year, Seychelles reached 102,246 visitors; a 71% decrease compared to 2019.⁹

First steps

The closure of the international airport affected all aspects of tourism, including marine-based activities. These include tourists flying to Seychelles to enjoy the ocean, the sailing of yachts in Seychelles waters, and also the cruise-ship industry. However, on 10 March

2020, new measures were introduced which were specifically directed towards marine tourism. No cruise ships or leisure boats were allowed entry into Seychelles' waters until further notice, and from the following month the same applied to yachts. It was to be more than a year before cruise ships were allowed to return to Seychelles.

Businesses which offered accommodation services, excursions, transportation, and entertainment directly linked to tourism were badly affected. Firstly, the decline in tourism has resulted in a significant reduction in foreign exchange on the market, leading to currency fluctuations and affecting the pricing of imports. Second, the Government of Seychelles announced a 'bailout package', which would guarantee the payment of salaries of workers of any businesses directly or indirectly linked to tourism, for an initial period of three months. In order to do this, the Central Bank provided a zero-interest loan to the Government of Seychelles to offer these payments.¹⁰ At the time, it was believed that COVID-19 would be short-lived, maybe 3 months, but this was not the case. The Government continued to fund salaries of many businesses in the private sector and not-for-profit organizations until March 2021. This has caused a significant dent in the local economy and an outcry by taxpayers about the management of the scheme.

With the SIA closed, some tourism establishments sought to tap into the local market by offering discounted rates for residents to spend the weekends at their establishments. Although most hotel owners indicated they did not turn a profit, it helped them cover their operating costs. Further, new products on the tourism landscape emerged from a collaboration between the Seychelles Chamber of Commerce and Industry and the Seychelles Tourism Board, and the idea to attract digital nomads to Seychelles on remote working holidays became more possible.

Tourism supports much-needed marine conservation efforts, and there is a heavy dependence on the Corporate Social Responsibility (CSR) taxes from tourism establishments. These contribute particularly to conservation through the channelling of the voluntary taxes to environmental non-governmental organizations. For example, non-governmental environmental organizations, such as the Marine Conservation Society Seychelles (MCSS) and WiseOceans, have partnered with local hotels to support conservation work, including coral reef restoration and marine education. Such organizations were reliant on running their organizations from the CSR, which is 0.5% of the monthly turnover of the hotels.¹¹ Inevitably the decline in revenue for these hotels will affect their monthly turnover which will, in turn, affect how much finance they can channel to the environmental NGOs. This will consequently disrupt the conservation efforts of environmental NGOs, when it is much needed.

Another organization that is affected is the Seychelles National Parks Authority (SNPA). It had recently been decided that this body would be autonomous and reliant on the collection of fees from the users of the national parks to sustain its operation and strengthen enforcement. Unfortunately, the steep decline in tourist numbers puts the

financial autonomy of SNPA at risk. Indeed, in the 2021 national budget SNPA received SCR 14.8 million to support its functions.¹²

In 2019, tourism was identified as an industry that could ensure a sustainable flow of funds to support marine protection. The Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) had recently presented the Government of Seychelles with a ‘Willingness to Pay’ study that indicates that 58.9% of visitors were willing to pay US\$ 10 – 40 as an environmental levy that would go towards environmental protection and waste management.¹³ This is similar to the recommendations made by the Biodiversity Finance Initiative (Finance Plans for Biodiversity Conservation, 2019) that included the introduction of a US\$ 10 fee to be used to fund waste management and biodiversity conservation.¹⁴ There has been little movement in the implementation of this decision, agreed by cabinet, but in its place the new ‘Travizory’ booking system of Seychelles allows visitors to opt to pay a contribution towards environmental protection. This voluntary contribution has generated SCR 1 million (approximately, US\$ 50,000) that has been transferred to the Environment Trust Fund (ETF).¹⁵ With the collapse of tourism, and as Seychelles competes with other destinations, the introduction of a mandatory fee is not likely to gain traction and is resisted by tourism operators.

Both environmental NGOs and government organizations must start to seek alternative sources of funding for both their recurring budgets and conservation programmes. In the interim, the ‘bailout package’ and the ETF have tried to fill the gap. However, there may still be hope for the return of tourism. In January 2021, Seychelles began its vaccination programme with the intention of having 70% of the population vaccinated by mid-March 2021. On 4 March 2021, the Department of Tourism announced that Seychelles would end the requirement for quarantine periods, proof of vaccination cards and PCR tests on 25 March, and open its borders to people from all countries except South Africa. South Africa has been excluded from the list because open travel corridors between Seychelles and South Africa had resulted in some countries placing Seychelles on a travel red list.¹⁶

Covid-19 and fisheries

Fisheries represent a key pillar of the Seychelles’ economy. They include artisanal, semi-industrial and industrial fisheries. Additionally, a mix of tourism and fisheries, that is, recreational fishing, is also a lucrative industry in Seychelles. All four have been affected, to an extent, by the impact of COVID19. For one, artisanal fishing is critical for food security, which is a high-priority when global supply chains are being disrupted, there is a depletion in the foreign exchange reserve, and a reduction in flights entering the country. Second, semi-industrial and industrial fisheries generate revenue for the economy. Seychelles hosts the largest tuna canning factory in the Indian Ocean and canned tuna remains the country’s biggest export with a value of US\$ 130,067 million of canned tuna exported in 2018.¹⁷ Fresh and frozen fish are also exported abroad to various markets. The

decline in such exports is affecting the availability of foreign exchange reserves. Finally, the closure of most tourism establishments operating fly-fishing expeditions means that a once-lucrative industry is at an all-time low.

Artisanal fishing

Artisanal fishing typically, provides fish to the local communities of Seychelles, and tourism establishments, such as restaurants and hotels which cater for visitors. There are currently 500 artisanal fishing vessels with approximately 1500 people employed in the sector.¹⁸ On a monthly basis, the average catch of demersal fish is 400 tonnes.¹⁹ Half of this supplies the local community and the other half tourism establishments.²⁰ With restrictions on visitor numbers the impact was evident, with 200 tonnes of fish without a market for consumption. As a result, fishers indicated that, given the decline in sales, there was no incentive to go out to fish, ultimately undermining food-security efforts for this SIDS.

Furthermore, small-scale fishers are ‘essential workers’²¹ so they are able to move out to sea, typically spending one night or a few days away. When vessels return to shore each day, they have to engage with people in the local communities, commercial buyers and processors, who are now even more reliant on the catch for food security. In these situations, the sale and purchase of fish and exchange of money, social distancing may be impractical. The small-scale fishers have not been provided with obligatory protective gear to protect themselves and other members of the community. Given the incubation period of COVID-19 (approximately, 5 days)²² and the sleeping conditions on these small fishing vessels, fishers can easily infect each other. One change in marketing is that fishers are advertising their fish on Facebook and WhatsApp, providing a number to text so the fish can be delivered to households. It begs the question, could technological innovation in this COVID-19-afflicted Blue Economy landscape have stepped in to further protect the fishers and facilitate their lives? Two initiatives, currently in the early testing stages, could have provided that support. One is the creation of a route-to-market app²³ by Shahiid Melanie and the second the adoption of the Abalobi²⁴ initiative; but neither have surfaced to bridge that gap.

Semi-industrial fishing

Semi-industrial fishing has also, been impacted because export markets are limited due to disruptions in trade. Fishers undertaking semi-industrial fishing were encouraged not to go fishing for tuna and other pelagic species since there is no market for them. Instead, the semi-industrial boatowners were channelled under the ‘bailout package’ for the payment of wages. The semi-industrial longline gear is used to target large pelagic fish such as broadbill swordfish (*Xiphias gladius*), bigeye (*Thunnus obesus*) and yellowfin (*Thunnus albacares*). Bycatch also includes billfishes such as marlin and sailfish. It is therefore, likely that the legal semi-industrial fishing operations will decline due to the supply chain disruptions caused by market closures.

Industrial fishing

Seychelles provides licenses to foreign-flagged vessels to fish in Seychelles' waters using purse seine fleets. These fleets are typically flagged by Spain and France with an observer programme in place to ensure good practice is being undertaken. A delay, in the first quarter of 2020, in the signing of the partnership agreement between the EU and Seychelles resulted in the exit of many fishing vessels from the EEZ of Seychelles.²⁵ It was only in late February that the agreement was adopted, when foreign-flagged vessels could have already been on the high seas. It is worth noting that over 90% of catches of purse seiners licensed to fish inside the EEZ are unloaded in Port Victoria every year, which provides the Indian Ocean Tuna company input for the canning factory. The IOT indicated that they have seen an increase in demand and as a result urgently ran a recruitment campaign with more than 80 vacancies to be filled by Seychellois nationals.²⁶ It has been reported that panic buying in various countries caused the increase in demand for canned fish products.²⁷ It is questionable as to whether this demand will continue at this rate. Also, Seychelles has prohibited the disembarkation of non-nationals from marine vessels, meaning that many crew members on board industrial fishing vessels cannot disembark in the port, which may make Victoria an unfavourable port. This has consequences for the tuna canning factory, by-catch processors, and other port services which would be used by the crew of purse seiners, resulting in a decline in revenue collected. Other than the availability of raw materials, the Indian Ocean Tuna canning factory, saw many of their workers, who are non-nationals, leave prior to the closure of the SIA to commercial flights.

As of 26 March 2020, the Public Health Commissioner announced new measures to reduce the introduction of new cases of COVID-19 through the arrival of vessels at landing ports, including from fishing vessels with non-Seychellois nationals working on them. This included the prohibition of non-nationals from arriving in Seychelles by sea from any marine vessel. Additionally, turning off tracking systems, such as vessel monitoring systems (VMS), whilst navigating through the EEZ of Seychelles has been made a punishable offence. Whilst the latter measure enhances surveillance of vessels operating in the EEZ of Seychelles, the former measure may create some concerns for the human rights of people on marine vessels where humanitarian aid may be required. This is compounded by the fact that many of these long voyages at sea mean that infected persons may be in tight, crowded conditions and far from medical help. Some have argued that the long time at sea is *de facto* quarantine but such long-haul vessels frequently use ports. These ports often have poor health controls and are where new COVID-19 cases may be introduced into the country and onto the vessel. To avoid such encounters with ports, and the fact that many ports were restricting the ability of vessels to call at them, there appears to be an increasing use of transshipment which, in itself, introduces other concerns. Despite these efforts, with Seychelles' reliance on industrial fishing as a source of income as the only viable option with the collapse of tourism, the Government of Seychelles entered into a cooperative agreement to allow for crew changes of fishers on industrial fishing fleets. The new crew would be flown to Seychelles, having previously taken

COVID-19 tests, and shuttled by bus to the vessel to quarantine for 14 days while the exiting crew onboard the vessel would be shuttled back to SIA and flown out.²⁸ Although it seemed foolproof, with limited contact, this transaction led to a surge in COVID-19 cases in Seychelles, as many of the seamen quarantining onboard the vessel tested positive for COVID-19 and the disease quickly spread.²⁹

There have been efforts to better understand the impacts of COVID-19 on the fisheries sector through a series of studies.

COVID-19 and food security

The Government of Seychelles, through the then Ministry of Fisheries and Agriculture (MFAG) and the Seychelles Fishing Authority (SFA) introduced new measures geared towards securing food security, during a time when foreign exchange is restricted for the importation of other sources of protein typically consumed by the local community. The Government of Seychelles is faced with a difficult conundrum in choosing priorities. On one hand, if it is known that fishers will not be able to sell 400 tonnes of fish, then common sense dictates that they should not exploit 400 tonnes as the market does not exist. However, if this is done, they will face reductions in their revenue and thereby, affect their livelihoods. The small-scale fishers have already indicated that if revenue does not justify venturing out to sea, they will opt not to go, which in turn affects the country's food security. Hence, in an attempt to reach a delicate balance and to secure food security, MFAG and SFA have responded with the following measures:

- ◆ Reducing the cost of bait³⁰ and ice³¹ to undertake fishing. This should drive the cost of operations down, making the endeavor more profitable, even though the Government has requested that most of the benefit is passed to the consumer.
- ◆ Fishers who sold to the community are encouraged to continue to do so.
- ◆ Providing the fishers with a guaranteed market through the processors at an agreed price.³²
- ◆ Processors will then buy the catch from the registered fishermen at the set price and sell it to Seychelles Trading Company (STC)³³ as the readily-available market, which will buy the products from processors and distribute on Mahe, Praslin and La Digue.
- ◆ Processing plants are being offered financial support through a loan at 1% interest, to assist with cash flow to make their initial purchases of fish stock.

The measures also provide food security during the south-east monsoon as the processors and retailers will stock the products. During May to September/October, the south-east monsoon will commence and small-scale fishers are more reluctant to venture out fishing because of the bad weather. By going out fishing now and having storage facilities from

processors and retailers, the measures will ensure there is a stock of fish even when there is a decline in catch. The above measures side heavily with an attempt to salvage the livelihoods of the fishers and their families. It is worth noting that additional measures to ensure food security have been initiated by the Government of Seychelles to enhance local production of agricultural products.³⁴ However, the production of agricultural products often requires the importation of food for livestock and fertilizer for crops which still places pressure on the need for foreign exchange. Hence, arguably, encouraging fish as the local community's source of protein has the least impact on the availability of foreign exchange reserve. The measures employed by the Government of Seychelles should be supported with education on the need for the local population to eat fish and reduce the demand for alternative sources of protein (which are mostly imported) and to encourage support for local livelihoods. The Department of Health maintains that the best source of protein is fish, and that its consumption cannot be pre-determined for each person but as the 'go-to' option, over other locally-produced or imported sources of protein.

COVID-19 and maritime security

With an EEZ of 1.35 million km², maritime security is always a priority for Seychelles, noting that vessels can exercise their freedom of navigation and licensed vessels can undertake the exploitation of marine resources whilst in the EEZ. Activities in the EEZ may have reduced with COVID affecting fisheries and shipping industries, but as countries focus their efforts on combating COVID-19, this may encourage malefactors to undertake illicit activities within the wide EEZ. Seychelles has sought to reinforce its maritime surveillance by re-enrolling the reserve from the coastguard domain of the Seychelles' Peoples Defense Forces (SPDF) to assist with patrolling to secure the borders of Seychelles. Additionally, reserves from non-maritime domains are assisting on-land security and enhancing enforcement of the restrictions on movement.

However, with increased pressure on security forces, this may provide malefactors with more opportunities to undertake illegal activities out at sea. From February to April 2020, the Seychelles Coast Guard and the Seychelles Air Force intercepted four fishing vessels suspected of illegal fishing in a space of four weeks.³⁵ It is unclear whether these vessels were capitalizing on the realities of COVID-19. To ensure public health protection, the arrest and detention of vessels involves a strict health protocol where there is thorough questioning and collection of temperature logs to ascertain the likelihood of people on the vessels being infected. Once the vessel is detained, it is moored in a demarcated area where the crew is then quarantined for 14 days onboard the vessel. Subsequently, the legal process will then commence. Despite the global pandemic, Seychelles continues to tackle IUU fishing, regardless of the health risks, with arrests and detentions signalling its seriousness to secure the Blue Economy.

The Seychelles Coast Guard is also able to monitor the data from automatic identification systems (AIS) of vessels and the VMS to determine the nature of the activity taking place in these areas. Turning off the VMS was made a punishable offence and this will also enable the monitoring of illicit fishing which is likely to increase during this time. If unsustainable practices increase during these upcoming months, we can anticipate effects on different fish stocks. But effects may prove difficult to decipher if there is a lack of baseline information on many of the species exploited in the Seychelles' EEZ. As identified earlier, if fishing vessels opt for transshipment, as ports are closed, these activities are difficult to regulate and likely to be associated with illicit fishing and human-rights violations, introducing new ways in which COVID-19 can spread.

COVID-19 and port services

The movement of goods and services within and between ports is particularly problematic when it comes to a global health pandemic. The measures introduced by the Public Health Commissioner, that would affect the port, include the prohibition of the disembarkation of non-nationals from marine vessels;³⁶ the banning of cruise ships in Seychelles' waters;³⁷ and the prohibition of leisure boats from entering Seychelles waters. These prohibitions were subsequently lifted.³⁸

Port services generate significant revenue towards the Seychelles' economy. Several types of vessel land in Port Victoria, including cruise ships, purse seiners offloading, military vessels, and ferries to and from the inner islands. A reduction in such activities will lead to significant loss of revenue. In any case, it is probably faring better than other sectors, as cargo services are still operational – even though trade between the main islands is struggling due to the lack of tourism, which has led to a drop in the number of trips to reduce the operational costs.³⁹

Despite these measures, Seychelles must be cognizant of the humanitarian issues that may arise as a result of these closures. Such an instance occurred where humanitarian assistance was offered to 'Costa Deliziosa' where a person was evacuated with the help of the SCG but no other passengers or crew members were authorized to come onshore.⁴⁰

COVID19 and marine protection

Central to the sustenance of the above industries is the health of the marine environment that may be experiencing fewer stressors with fewer people in the water wearing toxic sunscreens, less noise pollution from leisure crafts, and short-term benefits from the reduction of greenhouse gas emissions from the aviation industry. However, the impacts of COVID-19 on the marine environment are long-term. With the country having announced the designation of 30% of the EEZ as an MPA, there is a real need to ensure

that the 410, 000 sq km is not a ‘paper park.’ Immediate enforcement needs are required in order to ensure that illegal activities and poaching do not peak as attention is placed elsewhere. The Ministry of Agriculture, Climate Change and Environment (MACCE) has already seen an increase in illegal dumping in areas of undeveloped reclaimed land, which are, by their very nature, near the coast.⁴¹ To counter this, the restriction of movement could be relaxed for essential services which include all staff of the MACCE. The Ministry is also able to provide non-governmental organizations that provide services to assist with ‘anti-poaching and conservation efforts’ with a pass to enable their movements. However, it would appear that delays occurred in the issuance of these passes.⁴² Furthermore, the next phase of the marine spatial plan is the focus on the implementation through the creation of management plans for the ‘zone 1 and zone 2’ areas. With the current restriction of movement, it is highly likely that delays will occur.

With significant marine protection areas, Seychelles was already experiencing a financing gap to meet the associated expenses. With an economy in deficit, the question is whether marine protection will be put at the helm or whether other priorities will outshine it, undermining the Blue Economy concept. It has already been suggested that an environmental levy placed on visitors will be met with reluctance as Seychelles attempts to attract more tourists with a lower purchasing power. The Appropriation (Amendment) Act 2020⁴³ re-adjusted national spending to healthcare, food security, job security, social protection, security and infrastructure to support economic growth, with little alteration to the budget allocation to organizations supporting the Blue Economy. In the Appropriation Act 2021, there has been the appearance of an increase in budget to the sectors within the Blue Economy but this is mostly attributed to the devaluation of the Seychelles Rupee.⁴⁴

Seychelles takes a holistic approach to the marine environment and rarely sees it strictly as EEZ versus the high seas, but appreciates the integrated approach to the governance and management of the marine environment. Hence, Seychelles actively participated in international negotiations pushing for more ambition on protection of biodiversity and marine areas. However, COVID-19 has led to the postponement of the negotiations for BBNJ, and the COP 26 that were scheduled for 2020. It is unclear what are the implications of these postponements; effort to maintain momentum for ambitious action is required. Additionally, Seychelles seeks to use its leadership to mobilize others to also take ambitious action. Platforms such as the UN Ocean Conference and the IUCN’s World Conservation Congress provide the platform to showcase and call upon other countries to take similar action with Seychelles as a model. However these, too, have been postponed.

Other adverse consequences

Repayment of debts

Seychelles has significant external debt, and has incurred more debt to support the COVID-19 recovery; in the present circumstances, the repayment of such debts will be particularly arduous. On 7 April 2020, the French President announced the need to have a moratorium on debts owed by African countries,⁴⁵ but it is unclear whether Seychelles will benefit from such commitment. This is worsened as the OECD continues to classify Seychelles as a 'high-income' country. In relation to debts directly linked to the Blue Economy, the Government of Seychelles has an annual debt repayment following the debt-for-nature restructuring to SeyCCAT and the repayment of the Blue Bond, both capital and interest. However, for the fiscal years 2020 and 2021, the Government of Seychelles had already factored in its international debt obligations and, hence, does not have to renegotiate commitments at this time.⁴⁶ The uncertainty of COVID-19 means it is unclear how long the Seychelles economy will continue to be under such stress from a lack of revenue. With growing stressors, the Government of Seychelles may have to consider re-negotiating some of its debt. Looking specifically at the debt-for-nature, it is unlikely that the Government will seek to restructure this debt as it permits the debtor to make a portion of the payment in Seychelles Rupees, and has a lower interest rate than other debts. On the other hand, although COVID-19 could not have been predicted, the Blue Bond has two mechanisms to reduce the risk of default on payment that include a partial guarantee by the World Bank and a concessionary loan from the Global Environment Facility that may assist with repayments.

Environment for new investments

Seychelles introduced two new streams of finance to support investments. However, businesses and investors may be less likely to invest, given the uncertainty in the market and the duration of the disruptions caused by COVID-19. This may affect the uptake of two novel financing streams. The first is the Blue Investment Fund (BIF), administered by DBS, which seeks to support investments in value chains that will add value without creating additional pressure on vulnerable fish stocks. The Fund can finance logistical and scientific services to the fisheries sector, businesses that aim to improve market access for fisheries products and businesses that process by-catch and large pelagic species (e.g., tuna and tuna-like species). It was believed that the loan itself was quite attractive with an interest rate of 4% (in comparison with commercial loans of 12-13%), and a repayment period of 15 years, and for a maximum amount of SCR 42 million Seychelles Rupees (approximately US\$ 3 million).⁴⁷ However, with a high personal contribution and reduced purchasing power, the appeal of this Fund may continue to be negatively affected and has resulted in a review of the design of the fund which is being considered by all partners. In 2021, the terms and conditions were altered, for example the personal contribution was halved, and the BIF could be used as working capital which was not previously allowed.

Additionally, and even more unfamiliar in the Blue Economy landscape of Seychelles, there is support for biotechnology, which is less likely to attract investment in this uncertain climate. The Seychelles Government and the African Development Bank have provided a grant of US\$ 800, 000 to Seychelles to support the development of biotechnology by micro, small, and medium enterprises.

Marine research

There is a clear call for an increase in marine research, in particular fisheries research, but this has been disrupted by COVID-19; for example, in Seychelles, the cancellation of the Nekton Expedition, a vital continuation of deep-sea exploration of the Indian Ocean.⁴⁸ With the restriction of movement, many of the organizations undertaking research have a more limited scope of operation. Projects such as the parrotfish baseline assessment, where daily data collection on parrotfish has been disrupted creating COVID-19-related gaps,⁴⁹ and the inability of scientists to travel to their research site, as is the case for the coral mapping project,⁵⁰ meaning that some sites will simply not be surveyed. However, with more health protocols put in place, research is slowly returning; as was seen with the arrival of the Greenpeace vessel carrying out research on the Saya de Maya banks.⁵¹

Path to Recovery: The approach of ‘build back better’

Despite the disruptions that COVID-19 has caused to many sectors in the Seychelles’ Blue Economy, this crisis has provided all sectors in the Seychelles an opportunity to re-think and re-evaluate priorities, and plan to build back better. COVID-19 has exposed many vulnerabilities of the Seychelles economy, with its dependencies on too many externalities, including having an economy built around the tourism industry and the over-reliance on importation of food.

The last time Seychelles had an opportunity re-build its economy was in 2008. At that time, its reserves were severely depleted; but in 2020 there was sufficient for loans to be provided by the Central Bank of Seychelles. Another notable difference is the fact that Seychelles is now categorized as a ‘high-income country’, so that it becomes more difficult to obtain foreign loans on favourable terms. On this occasion, in the Blue Economy, Seychelles also has a model for a low-carbon route for development. So, what steps can now be taken to build back better?

A) Economic diversification and sustainability

The over-reliance of tourism has once again hampered Seychelles’ economy. Regardless, prospects for economic recovery remain banked on the tourism industry.⁵² Despite the emphasis on tourism, however, it must be maintained that the priorities are how we re-build the industry and ensure its sustainability, and how we ensure the health of travellers, rather than simply seeking to increase the number of visitors. In 2015, Seychelles announced a moratorium on hotels of more than 25 rooms whilst it undertook a carrying-

capacity assessment.⁵³ The results are yet to be made available. In 2008, when Seychelles faced the international economic crisis, one of the solutions was the need to attract foreign direct investment (FDI) where numerous hotels were set up in Seychelles, and at the time, given its then economic categorization,⁵⁴ there were loans available at concessionary rates. If similar pathways are employed, it raises the question whether increasing FDI in the tourism sector is feasible and whether it will be in line with the findings of the carrying-capacity survey. The loss of revenue and desire to increase foreign exchange into the national economy may push for near-term exploitation, but such methods must be resisted. To achieve this, there will be a need to diversify the tourism products on offer providing an opportunity for innovation and entrepreneurialism.

Fisheries – most recently referred to as a ‘goldmine’ that still has not reached its full potential must be developed with the same level of caution to ensure that the pressure on the natural resource base is not exacerbated. The Government of Seychelles should maintain its policy of not providing financing and licenses for new boats to partake in fishing activities on the ocean until a carrying-capacity study is undertaken. Prior to COVID-19, there were suggestions of having fishing boats converted to tour operators for tourism purposes, but this also poses challenges as there is no carrying capacity for such marine-related excursions that these boats would offer.

The Blue Economy Roadmap provides two ways to increase revenue whilst reducing the impact on the natural stock. The first is greater investment in value-addition products, and the second is aquaculture. The DBS’ ‘blue loans’ offers a new opportunity to achieve this. For example, efforts for value-addition products should be focused on the use of under-exploited stocks through the exportation of fish not typically consumed by Seychelles. Similarly, with aquaculture, the species that can be farmed in Seychelles have been identified, for example sea urchins, and have known markets. The regulations for aquaculture were finalized in November 2020 enabling the launch of the industry. Aquaculture appears to be an industry that can attract FDI and generate revenue for the economy through the exportation of fish and fish products. It is worth ensuring that lessons learned from tourism are heeded if aquaculture becomes the next promising industry, by ensuring the inclusion of local investors and service providers and the reduction of financial leakage. However, the emphasis should not solely be on production but also ensuring that the local population, of all economic backgrounds, have access to this much-needed source of protein.⁵⁵

Other opportunities for economic diversification exist and there must be ways that these opportunities contribute to the conservation of the health of the ocean. Seychelles has an opportunity to build on its strengths, such as marketing itself as a hub for education and research on the Blue Economy, and investing in the University of Seychelles’ Blue Economy Research Institute; by offering training on addressing piracy, given its success in addressing piracy at the Gulf of Aden; or developing into a blue financing hub specializing in financial instruments to support the Blue Economy or climate resilience.

Undoubtedly, marine protection and control and surveillance come at a cost, but all activities that negatively impact the Seychelles' marine biodiversity and fisheries undermine any efforts to realize its potential. Therefore, there is an urgent need for the Government of Seychelles to ensure that there is continued and increased investment in marine research, fisheries research and maritime security. The country should consider committing a minimum of 1% of its GDP to research and development, in particular focused on marine research. Further, in the process of economic diversification, new opportunities should be explored such as realizing a Blue Economy knowledge hub, attracting the brightest minds, nationally and internationally, to increase research and the generation of knowledge about our marine resources. Another opportunity could be setting up a Blue Economy incubator and accelerator where entrepreneurs, nationally and internationally, can engage in a comprehensive programme, register their company and IP in Seychelles, and pilot their innovations in Seychelles to further develop blue enterprises. It is crucial that such new Blue Economy developments support marine protected areas. Finally, the existing and new Blue Economy sectors must appreciate the ecosystem services that the ocean provides and, as such, a strategic response is required upon the completion of the ecosystem valuation assessment currently being undertaken.

Diversification is of the utmost importance. A Blue Economy diversification plan, feasibility studies of new potential development, and capacity-needs assessments for the development of the Blue Economy are urgently needed. The availability of grants for marine biotechnology and other innovations assists with this and will further develop Seychelles' Blue Economy to make provision for an emerging sector. However, to be able to realize this diversification, there will be a need to re-train and upskill the workforce to respond to these new opportunities.

Invest in human capacity and retraining

If the tourism industry shrinks, this would inevitably mean redundancies and an urgent need to retrain the former staff of hotels to ensure a just transition. If Seychelles remains on the path of a sustainable Blue Economy, a capacity-needs assessment is required to better understand the fields in which people will have to be retrained.

Post-2008, we developed our educational and training institutions to fit the strategic direction of the economy. There were developments of the Seychelles Tourism Academy and increased emphasis on the Seychelles Maritime Academy. Whilst these will continue to be important, a capacity-needs assessment of a new vision of the post-COVID-19 development is required. This may lead to the introduction of new courses, such as ones focused on aquaculture. Adjustments will have to be made in the list of priorities for the Agency of Human Resources Development.

B) Debt-financing of post COVID19 development

Seychelles has reached out to the International Monetary Fund (IMF) and the World Bank to assist with credit lines to address the impacts of COVID-19 and rebuild the economy. The Director of the IMF indicated that countries receiving support from the IMF must

have a green approach in using these credit lines rather than reliance on fossil-fuel driven industries. This may place sufficient pressure on governments to re-think its priorities when seeking credit lines. Nevertheless, one thing that can be certain about having the help of the World Bank and the IMF is the employment of market-driven solutions to address the current challenges. It is worth reiterating that the Government of Seychelles opted for non-market approaches to secure food security during the pandemic. This may lead to mixed messages for the end-users and we must always prioritize solutions that favour people over profit. In any event, the majority of economic plans by these two Bretton Woods institutions are to attract foreign direct investment into the local economy but this time, Seychelles must insist on mechanisms that will reduce financial leakages, secure a place for local investors and service providers, and ensure that the local population is ready for the transition. A strengthened communication strategy targeting the general population on the strategic direction of the country must be undertaken, so people can develop new enterprises with ecological and social sustainability at their core.

C) Development in a changing climate

Finally, as the world preoccupies itself with COVID-19 and its impacts, the worsening of the climate crisis persists. This could undermine all the above efforts unless, when designing the new sustainable economic future, it is done in the context of a changing climate. This should be mainstreamed in the above discussions, which would help to reduce our dependency on fossil fuels for electricity production, amongst other things, as well as building our resilience and adaptation to the impacts of climate change.

The Blue Economy, and thinking post-COVID, provides countries with the opportunity to take steps to help support the ocean. Seychelles could set targets to reduce carbon emissions of shipping fleets. To do this, Seychelles could consider mandating the greening of Seychelles-flagged vessels, including fishing fleets. It is worth considering how we reduce the carbon footprint of artisanal and semi-industrial fishing. Other opportunities include harnessing ocean renewable energy, such as investing in offshore wind farms, and the protection of more blue carbon habitats such as mangroves and seagrass meadows, and educating the population to opt to consume low-carbon sources of protein over imported land-based protein that have a significant carbon footprint globally.

Conclusion

In conclusion, the Blue Economy is an economic model that places the health of the ocean as central to economic development. It provides a pathway for the sustained generation of wealth and shared prosperity that is resilient to external shocks. In order to realize the Blue Economy, a holistic approach must be embraced with all sectors working in a concerted and coordinated way. It has to be prioritized at a national level with the necessary prominence, funds and investment to support its development. Further, the benefits of the development of the Blue Economy – for example the availability of the more nutritious

source of protein, revenue generation, jobs created – should be made widely accessible, in particular to youth, women and small-scale fishers.⁵⁶ The social pillar is equally important to that of the economic. It is only in this way, that we can achieve transformational change.

Angelique Pouponneau is the Chief Executive Officer of the Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT). Angelique is a lawyer (Seychelles and UK) and she holds an LLM in Environmental law, specializing in the law of the sea and natural resources law. She also serves as a member of the Environment Appeals Board in Seychelles. Further, Angelique is a trained climate change negotiator under the AOSIS Climate Change Fellowship Programme at the United Nations. Angelique has worked in different countries in the Caribbean, Pacific, and the Indian Ocean on a wide range of projects relating to sustainable fisheries, sustainable management of marine biodiversity within and beyond national jurisdiction, and climate change, in particular, climate adaptation, climate finance, and capacity-building. Further, she served as a legal expert to the African Group Sixth Committee in works of oceans and law of the sea at the United Nations. Moreover, Angelique has experience working with civil society as a co-founder and board member for not-for-profit organizations in Seychelles and abroad.

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³¹ Ibid 30, no. 2. The price of ice is reduced from SCR 30 for 60 kilograms to SCR 15 for 60 kilograms.

³² Ibid, no. 2. The red snapper is priced at SCR 65 per kilogram, job and grouper at SCR 45 per kilogram and trevally (commonly known as jackfish) at SCR 20 per kilogram.

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