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The Blue Economy: Charting a New Development Path in the Seychelles

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ABSTRACT

The Seychelles' geographical advantages have given it economic gains from its main Blue Economy (BE) sectors—fisheries and tourism. However, overexploitation and unsustainable management practices have placed undue pressure on these resources. In 2018, the country conceived a sustainable ocean-based development pathway—the Seychelles' Blue Economy Strategic Framework and Roadmap. Various socio-economic and environmental challenges threaten to undermine the country's BE journey, however: small population size, high dependency on external trade links, and economic susceptibility to natural shocks. Poverty and income inequality persist as well, despite Seychelles being the only country in Africa to have achieved high-income status. The COVID-19 pandemic has also exposed the dangers of the country's reliance on a narrow economic base. It has further revealed its dependency on imports for basic commodities, and the underdeveloped capacity for domestic production. To overcome these challenges, Seychelles' BE must be driven forward by innovation, capacity building, and durable multi-sectoral collaboration.

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INTRODUCTION

The Seychelles archipelago comprises of 115 tropical islands surrounded by over 1.3 million square kilometres of ocean. Its prime geographical position outside the cyclonic belt, in the Indian Ocean just below the equator, has made it a popular year-round tourist destination, with visitor arrivals totalling 384,204 in 2019.¹

The country's economy is dependent on tourism and fisheries.² The tourism sector contributes over 80 percent of GDP, with fisheries making up the bulk of the rest.³ Together, these sectors have helped the Seychelles—the smallest African country—achieve the highest per capita GDP figures in the continent.⁴ In 2018, the Seychelles' GDP at current market prices stood at SCR 22,063.8 million (US\$ 1,243.9 million), with a 3.5 percent growth rate estimated in 2019, primarily driven by tourism, fisheries and financial services.⁵ In the fourth quarter of 2019, year-on-year real GDP increased by 5.5 percent compared to the same quarter in 2018.⁶ Tourism and fisheries also make significant contributions to income and employment—over 25 percent of the country's 95,000 people are employed in tourism-related industries and 17 percent in the fisheries sector.⁷ The country's primary export base also revolves around fisheries, comprising of consumable fish and fish products, which make up 96 percent of total exports.⁸

The Seychelles' locational advantages have allowed it to exploit economic gains from tourism and fisheries. However, overreliance and overexploitation, and unsustainable management practices have placed severe pressure on these economic bases. Given its natural dependence on marine assets, the country decided to refocus its national development strategy around a sustainable Blue Economy (BE).

The BE concept originated at the United Nations (UN) Conference on Sustainable Development in 2012⁹ and derived from the Green Economy idea. It refers to the management of oceans and marine life. However, there is no universally accepted definition of the BE.¹⁰ It holds different meanings for different stakeholders, often resulting in conflicting or blurred applications.

The World Bank defines the BE as the “sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.”¹¹ The European Commission sees it as “all economic activities related to oceans, seas and coast. It covers a wide range of interlinked established and emerging sectors.”¹² The Commonwealth describes it as “an emerging concept which encourages better stewardship of our ocean or ‘blue’ resources.”¹³ The UN defines it as “an ocean economy that aims at the improvement of human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”¹⁴

The Seychelles’ BE concept aligns most closely with that of the UN, being referred to as “those economic activities that directly or indirectly take place in the ocean, use outputs from the ocean, and put goods and services into ocean’s activities and the contribution of those activities to economic growth, social, cultural and environmental wellbeing.”¹⁵ In framing its BE journey within this definition, the country is seeking to integrate the development of its ocean economy and trade activities with social and environmental concerns within the decision-making process.

Having designated the largest percentage of terrestrial space for conservation, the archipelago’s BE agenda further encapsulates this framework for sustainable development.¹⁶ Broadly defined as a

process enabling “human beings and communities to achieve their aspirations and full potential over a sustained period of time, while maintaining the resilience of economic, social and environmental systems,”¹⁷ the transdisciplinary framework seeks to equilibrate development, social equity and environmental conservation. The BE model has thus been adopted as the country’s path to sustainable development to fit its priorities, while also emphasising the importance of working with available and previously unused resources.¹⁸

This has led to greater attention to its ‘secondary space’ of resources—the ocean. By focusing on its extensive oceanic territory as a true space for development, the Seychelles is balancing being a Small Island Developing State (SIDS) and a large oceanic nation.¹⁹ Its BE model is geared to go beyond the current ‘make and waste’ industrial system to foster a restorative circular economy that will take care of future generations.

THE SEYCHELLES’ BLUE ECONOMY STRATEGIC FRAMEWORK AND ROADMAP

Conceived in 2018 as a pathway to sustainable ocean-based development and growth, Seychelles’ BE framework focuses on strategic initiatives that encourage sustainable and inclusive use of its ocean environment, economic diversification, food security and the conservation of the country’s natural capital.²⁰ Given that the BE mainly comprises tourism and fisheries, the strategy was also seen as a means to anchor its development to the population’s traditions and way of life.²¹ For instance, fishery is perceived as a critical contributor to Seychelles’ cultural identity and other aspects of wellbeing in society, as well as contributing to its food security.²²

However, the BE concept was predominantly a result of the country accepting that sustainable management practices and effective institutional frameworks were urgently needed in the face of mounting challenges.²³ Over the past three decades, illegal, unregulated and unreported fishing led to an over 60-percent decline in the main fish stocks, resulting in loss of livelihood and revenue for the majority of Seychellois fisher folk.²⁴ Due to unsustainable fleet expansion and subsidised loans, fishing pressure on marine resources became a national concern. Challenges were also encountered in the fishery export sector—the high operating and investment costs made it difficult for the country to meet global quality standards, making its products less competitive in international markets.²⁵ A lack of development in value-added products coupled with a limited number of processing companies on the island also served to hinder the sector's growth.

Seychelles' tourism sector has also been perceived as vulnerable and over-developed at the expense of others.²⁶ Land-use conflicts between agriculture and tourism, water shortages, and the government's inability to regulate development were identified as major challenges.²⁷ Additionally, the 2008 financial crisis, the 2014 Indian Ocean tsunami and the ongoing COVID-19 pandemic effectively demonstrated the sector's lack of resilience to external shocks.²⁸ The country's tourism sector is predominantly made up of European visitors and is thus dependent on that region's economic stability. The Eurozone debt crisis, Brexit uncertainties and COVID-19 have created further difficulties for the island nation. With its main income streams from tourism primarily in Euros and its external payments in US dollars, the Seychelles' trading power has also been significantly impacted.²⁹

However, it is the adverse effects of global warming and climate change that were the key drivers of the country's BE strategy. The Seychelles is battling a barrage of threats, including rising sea levels, ocean acidification, increased coral bleaching events, rapidly changing weather and rainfall patterns, and marine pollution. These events have negatively impacted the country's fisheries and tourism sectors, coastal infrastructure, biodiversity and marine environment, and the population's livelihood, food security and health.³⁰

Given such challenges, the Seychelles government launched the BE Strategic Framework and Roadmap in 2018 with assistance from the Commonwealth Secretariat.³¹ The main aims of the plan are:

- To increase economic diversification and resilience to reduce vulnerabilities and reliance on a minimal number of sectors
- To increase shared prosperity through the creation of high-value employment and more local investment opportunities
- To improve food security and overall well-being
- To maintain the integrity of the ecosystem and habitats through climate resilience and sustainable management

In 2018, the country also sold the world's first sovereign blue bond,³² a US\$15-million instrument, the proceeds of which would be used to expand its marine protected areas, support the growth of a sustainable fisheries sector, and offer grants and loans for ocean-related projects.³³ Nicknamed the 'debt for dolphins' deal, Seychelles became the first country in the world to sell debt that was earmarked especially for ocean-related projects. It also rolled out a comprehensive Marine Spatial Plan (MSP) for its oceanic territory,

which allows for the management of Seychelles' Exclusive Economic Zone through an integrated approach that supports the BE agenda, climate change mitigation and adaptation strategies, and marine ecosystem protection.

At the policy level, Seychelles' BE plan demonstrates how countries can bring national development thinking in line with the UN's Sustainable Development Goals to promote the triple bottom line outcomes of equity, efficiency and sustainability.³⁴ High-value jobs leading to shared prosperity, social equity and natural resource conservation have been highlighted as key priorities within the roadmap.³⁵ However, these aims could prove conflicting as the country seeks to exploit oceanic resources for economic gain while balancing the requirements of environmental sustainability and local community needs.³⁶ Two years since the policy was implemented, this balance remains unachieved, yet highly sought after.

Key sectors

Although tourism and fisheries are the main sectors of the Seychelles' economy, its BE model also considers other scopes of activity within the prescribed vision for development.

Table 1: Key Activities and Sectors Outlined Within Seychelles’ BE

Seychelles’ BE ³⁷		
Scope of Activities	Outlined Sectors	Level of Perceived Development
Activities that explore and develop ocean resources	Renewable ocean energy,	Minimal but growing: The first utility-scale privately-funded floating solar plant in Africa is being implemented in the Seychelles. Once completed, the project will accelerate the country’s transition to renewable energy and become the island’s first independent power producer source. ³⁸
	Hydrocarbons	Hydrocarbon exploration in the Seychelles’ waters is nascent, having been undertaken by a few foreign companies since 2014 with the aim of drilling potential exploration wells in future. ³⁹
	Mineral exploration	Currently, there is no deep-sea mining activity, but data suggests the presence of cobalt-rich crust deposits within the continental shelf. ⁴⁰
	Marine Biotechnology	Marine biotechnology remains minimal, but a recent grant of US\$800,000 from the African Development Bank is aimed at creating 20 micro, small and medium enterprises in the country’s marine biotechnology sector. ⁴¹

Seychelles' BE ³⁷		
Scope of Activities	Outlined Sectors	Level of Perceived Development
Activities that use ocean space	Aquaculture	Underutilised but expanding: The Seychelles has only three aquaculture ventures, consisting of farms for seafood, black pearl harvesting and a prawn harvesting farm on Coetivy Island, which is currently not operational. ⁴²
	Mariculture	Initiatives are being undertaken to rejuvenate this sector. ⁴³ In 2019, the government spearheaded a pilot Broodstock Acclimation and Quarantine Facility, aimed at homing and breeding some of the country's flagship fish species. ⁴⁴
Activities that protect the ocean environment	Maritime Security	Significant: Seychelles is one of the main anti-piracy prosecuting states in the region. In 2015, the country was the first in the region to chair the Contact Group on Piracy off the Coast of Somalia. ⁴⁵ The Seychelles also participates in international naval exercises and bolsters the capacity of its naval force through bilateral agreements. ⁴⁶ Ongoing efforts depend on external funding, and strong diplomatic relations has seen the country receive donations in the form of surveillance, patrol vessels and boats from India, Sri Lanka, UAE and the EU. ⁴⁷

Seychelles' BE ³⁷		
Scope of Activities	Outlined Sectors	Level of Perceived Development
Activities that use ocean products as the main input	Tourism Fisheries	Developed and intrinsically linked to the BE, with capacity constraints in both sectors observed: In recent years, a growing number of tourist arrivals has put increased pressure on coastal infrastructure, environment and resources. ⁴⁸ Depleting fish stocks and quotas, and an increasing number of fishing fleets has led to concerns over the extinction of some species, the over-exploitation of existing fisheries resources and a decline in the proportion of fish in the local population's diet. ⁴⁹
Activities that provide goods and services to support ocean activities	Port Development and Shipping	Developed but constrained: Port Victoria provides an array of commercial services, such as container handling, fishing and processing facilities, commercial ships and inter-island shipping terminals. With over 95 percent of the country's imports arriving by sea, over-capacity has caused congestion and delays, which has led to the announcement of a project to expand the port to accommodate larger vessels, provide more modern facilities and become a key transshipment hub in the region. ⁵⁰

With slow progress being made in the diversification and expansion of new and emerging BE sectors, fisheries and tourism continue to be the mainstays. Given the level of reliance placed on these two sectors, the Seychelles' economy is proving less robust to external shocks than more diversified economies. With the COVID-19-induced travel ban on commercial flights lifted on 1 August 2020,⁵¹ attention has turned towards the government's proposed

strategies to jumpstart recovery within the key BE sectors amidst stringent health measures.⁵²

Blue Economy Institutional Framework

The Seychelles’ BE strategy is integrated top-down within the national governance framework, and lies under the purview of the Office of the Vice President.

Table 2: Seychelles’ BE Institutional Framework

National Institutional BE Framework		
BE Departments/ Agencies	Role/Function	Opportunities and Limitations
High-Level Governmental Blue Economy Council	To provide leadership and to strengthen the Seychelles’ ocean governance mechanisms while enhancing methods of coordination among key BE stakeholders ⁵³	Established in 2019, the council has met once to discuss issues relating to the BE. Mandated to meet twice a year, it will serve to bring together key decision-makers within the various ministries and bodies involved in the BE.
Blue Economy Multi-Stakeholders Forum	To function as a think tank and make policy recommendations to the government while ensuring commitments are implemented	Established at the same time as the council, the forum will include members from the government, private sector and NGOs. It has yet to meet.
Governmental The Blue Economy Department	Primary coordination mechanism in the Seychelles’ sustainable development strategy in transitioning towards a BE.	The department’s limited mandate means it is not directly involved in the actual implementation of projects within the different economic sectors, governmental institutions and other bodies. It does, however, play a role in coordinating communication and monitoring BE developments.

National Institutional BE Framework		
BE Departments/ Agencies	Role/Function	Opportunities and Limitations
The combined Departments of Environment, Tourism, Ports and Shipping; Seychelles Fishing Authority; Trade and Economic Planning; National Institution for Science, Technology and Innovation; Ministry of Employment, Entrepreneurship Development and Business and more	These ministries and departments are integral in the regulation and management of key components within the Seychelles' BE agenda.	Ministries, departments and agencies are perceived to be poorly managed and continuously operate in silos. Outdated systems and lack of trained personnel have made it difficult to implement national plans effectively. ⁵⁴ Consistent implementation of the BE Roadmap across such a landscape might prove challenging.
Financial Development Bank of Seychelles (DBS)	Since 2018, DBS has managed a US\$12-million Blue Investment Fund established by the proceeds from the sovereign blue bond, with the intention of supporting the diversification and expansion of sustainable fisheries value. ⁵⁵	There might be a lack of awareness around the purpose of this loan scheme, with DBS suggesting applicants tend to associate the scheme primarily with unsustainable activities related to the fisheries sector. ⁵⁶
The Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT)	An independent trust fund tasked with managing the proceeds of the debt swap and blue bond, SeyCCAT funds sustainable BE related projects in the country.	SeyCCAT has funded BE projects since 2018 but the pandemic halted the launch of new grant activities in the first half of 2020 (resumed in July). It has also indicated there are challenges in funding viable scientific and data-driven projects.

National Institutional BE Framework		
BE Departments/ Agencies	Role/Function	Opportunities and Limitations
<p>Educational</p> <p>The University of Seychelles; Blue Economy Research Institution (BERI)</p>	<p>Developed to support research in environmental science, specifically relating to the BE, BERI is also linked to the James Michel Foundation, a think tank focused on the BE, climate change and sustainable development.⁵⁷</p>	<p>BERI has a strong presence in BE research. It was part of the Nekton Mission, an underwater expedition to explore the depths of Seychelles' waters that saw the president become the world's first head of state to deliver a live address from a 124-meter depth during Nekton's submersible dive.⁵⁸</p>
<p>Post-secondary educational institutions such as the Seychelles Maritime Academy (SMA) and Seychelles Tourism Academy (STA)</p>	<p>The SMA and STA are mandated to generate a highly skilled and competent workforce with the aim of eventually becoming the leading regional training institutes in their respective fields.</p>	<p>International collaborations have helped both institutions partially achieve this mandate. The Colombo International Nautical and Engineering College (Sri Lanka) assumed management of SMA in 2013, eventually placing Seychelles on the white list of the International Maritime Organization.⁵⁹ The STA has partnered with Ireland's Shannon College of Hotel Management to increase the presence of Seychellois in top hotel management positions.⁶⁰ However, between 2013 and 2018, only 30 out of 63 graduates reported working in hotel establishments.⁶¹</p>

National Institutional BE Framework		
BE Departments/ Agencies	Role/Function	Opportunities and Limitations
<p>Civil Society/ NGOs</p> <p>The Citizens Engagement Platform (CEP), which has been active for the past 30 years, is the main civil society platform. The CEP formalised a framework for partnership and cooperation with the government through a memorandum of understanding (MOU) in 2017.⁶² The Seychelles has some of the highest levels of NGO participation in Sub Saharan Africa (one per 1000 people).</p>	<p>NGOs with an environmental or conservation background predominantly participate in the BE space. Prominent actors include Nature Seychelles, renowned for opening a BE Knowledge Centre⁶³ and SIDS Youth AIMS Hub, a youth-led NGO that launched the ‘Blue Economy Internship Programme’ initiative. Other notable actors include WiseOceans, Marine Conservation Society Seychelles, Island Conservation Society, Seychelles Islands Foundation, The Oceans Project and SWIOTUNA,⁶⁴ a membership network of civil society and private sector organisations across Africa.</p>	<p>Although the government is generally supportive of civil society participation, there is currently no formal mechanism beyond the MOU for such engagement. While the importance of civil society in championing the BE has been recognised,⁶⁵ the aims of most NGOs in the BE space tend to overlap, given their similar backgrounds in environmental conservation and sustainability alone. Further, the CEP has questioned Seychelles’ preparedness to venture into BE to its fullest potential. Given the current education and employment constraints, members have pointed out that most Seychellois may not hold the required qualifications.⁶⁶ Additional questions around the transparency of the country’s extractive industries, such as oil drilling, have also been raised as key points of concern.</p>

Impact of BE Strategy

The Seychelles has made significant progress in implementing specific key objectives that form part of its BE roadmap. Notably, the country declared 30 percent of the country's territorial waters a Marine Protected Area in March 2020 as part of its MSP, meeting international targets ten years ahead of schedule.⁶⁷ This announcement effectively protects the integrity of the island nation's oceanic territory, ecosystem and resources, which is a key outcome of the BE strategy.

The move also showcases that the country has prioritised sustainable growth by trading-off development for ocean preservation. With reports indicating that the impacts of climate change will significantly affect equatorial developing nations the most, countries like Seychelles are facing an estimated 85 percent loss in ocean industry productivity.⁶⁸ This is expected to amplify food insecurity, inequality and poverty unless rapid climate action and adaptive measures are adopted. In seeking to preserve its marine environment, the Seychelles has not only safeguarded against unregulated economic activity but has mitigated coastal erosion, flooding and increased sea level risks as well.

The country's BE strategy has also allowed for a significant reduction in debt levels.⁶⁹ The island nation raised a US\$15-million sovereign blue bond complemented by an additional US\$10.3 million in World Bank and Global Environment Facility loans and grants.⁷⁰ The SeyCCAT disburses proceeds from the blue bond and blue investment funds to the tune of US\$750,000 per annum to fund sustainable BE related projects, supported by a US\$12 million investment fund administered by DBS. This has helped the country

meet its BE Roadmap objective of increasing the investment streams, diversifying the existing BE sectors, and encouraging the generation of new knowledge and research around Seychelles' oceans.

Seychelles has also achieved global recognition for championing the BE.⁷¹ The country recently received the Ocean Heritage Award from the Shark Research Institute in recognition of moves made to protect its marine territory.⁷² It also won the 2019 Best Sustainable Finance Solution Award at the Adam Smith Awards in the UK.⁷³ In 2018, the president received the Blue Economy Award on African maritime sectors from the African Union Commission.⁷⁴ The country also drew global attention by announcing a complete ban on common use plastics alongside a ban on the use of single-use plastic straws in 2019.⁷⁵ Through such efforts, the Seychelles has signalled that it is not a passive player when it comes to climate change, but it cannot do it alone. A regionally coherent approach towards ocean governance is required, given the cumulative impacts of oceanic areas. The promise of more plastic pollution is becoming ominously clear as disposable masks, hand sanitisers and sanitary gloves begin to show up in the ocean due to the COVID-19 pandemic.⁷⁶ The country has called for “responsible global action” in the face of climate changes’ pressing threats to humanity’s survival.⁷⁷

The island nation’s commitment and engagement with climate change and ocean health have seen it become an active participant in regional and global partnerships. The Seychelles is a member of the Indian Ocean Rim Association, the Common Market for Eastern and Southern Africa, the Southern African Development Community, African Union, and the Indian Ocean Commission. It is also the base of headquarters for the Indian Ocean Tuna Commission, an intergovernmental organisation that coordinates the regulation

and management of tuna in the Indian Ocean. In June 2020, the country also set up an annual US\$200,000 fund for the sustainable management of its ecosystem under the renewed European Union-Seychelles sustainable fisheries partnership agreement.⁷⁸

Challenges

Despite several notable successes, the Seychelles continues to face distinct social, economic and environmental challenges that undermine its BE journey. The UN cites the country's small population size, high dependency on external trade links and development assistance, low connectivity, and significant susceptibility to natural shocks as key challenges hampering the development of SIDS.⁷⁹

The Seychelles' level of vulnerability and its dependency on imports remain high despite efforts to encourage expansion and diversification. While most major economies are import-reliant and remain competitive, Seychelles' size, remoteness and lack of natural resources for manufacturing and export aggravate this reliance. The country is now looking to increase self-sufficiency in climate-smart agricultural production while enhancing trade with regional partners. For instance, ways to increase investment and trade between India and Seychelles were discussed at the 2020 India-Seychelles Bilateral Trade and Investment talks, given that exports to India currently represented only 0.3 percent of Seychelles' total export base.⁸⁰

Furthermore, exploring the feasibility of emerging BE sectors such as aquaculture, renewable energy and marine biotechnology continues to be slow. Despite significant regional and global partnerships, the island nation continues to face undiluted risks associated with illegal, unreported and unregulated fishing, marine pollution and climate change.⁸¹ This may be in part due to Seychelles'

internal human and physical capacity constraints, and a perceived lack of awareness around the BE concept at the community level. The unexpected impact of COVID-19 has also thrown the country's development strategy off course.⁸²

External challenges include:

- The adverse effects of global warming and climate change

These include rising ocean temperatures, ocean acidification and rising sea levels, as well as changes to long term rainfall/weather patterns and a rise in diseases and increased coral bleaching events, leading to reduced fish populations, species loss and food-stock decline.⁸³ The potential impacts include tidal surges and flooding, impacts on coastal infrastructure and rise in the vulnerability of sectors such as tourism, fisheries, agriculture and marine/terrestrial biodiversity.⁸⁴ Additionally, a severe reduction in availability of water resources will adversely affect the local population and economic sectors such as tourism, agriculture, health and biodiversity.⁸⁵

- COVID-19 pandemic

Tourism and fisheries, the main pillars of Seychelles' BE, have been impacted significantly as the pandemic cratered demand for travel and leisure for much of 2020.⁸⁶ Despite declaring a public health emergency and reporting only 114 confirmed cases, 113 recovered cases, and only one active case so far,⁸⁷ the country remains vulnerable to imported cases. For instance, many of the confirmed cases were attributed to crew members from Spanish fishing fleets operating in Seychelles waters who tested positive for COVID-19.⁸⁸ Although most domestic containment measures were lifted in May, the economy is anticipated to contract by negative 10.8 percent

accompanied by a significant increase in unemployment with a slow recovery to pre-COVID-19 levels.⁸⁹ The crisis has led the country to seek financial assistance from international institutions.⁹⁰ Notably, the government has received a loan of US\$10 million from the African Development Bank to strengthen national health strategies and safeguard livelihoods.⁹¹ Additionally, the World Bank approved a US\$15 million development policy loan to support the country's COVID-19 response and recovery measures.⁹²

Internal challenges include:

- High-income status at odds with the country's poverty and inequality levels

In 2018, the country's Human Development Index stood at 0.801, placing it in the very high category.⁹³ Having also achieved high-income status, the Seychelles still faces the twin burdens of reducing high levels of poverty and income inequality.⁹⁴ In 2016, the total number of people living in poverty was approximately 36,100, roughly 40 percent of the population and inequality in the distribution of gross income per adult was estimated at 45.9 percent.⁹⁵

- Over-reliance on imports

With an open-trade regime and a minimal production/manufacturing base, the country is dependent on international suppliers for approximately 90 percent of its goods and services. According to the National Food and Nutrition Security Policy, 72 percent of food consumed by the population is imported.⁹⁶ With self-sufficiency achieved only in egg production, the country is looking to reduce its structural vulnerabilities and increase local food production to enhance its comparative advantage further.⁹⁷

- Unaccounted ecosystem services associated with the BE⁹⁸

Ecosystem services affect the well-being of individuals and the performance of firms, but is rarely reflected in financial incentives that ecosystem stakeholders receive.⁹⁹ While the MSP considers evaluating the ecosystem goods and services for Seychelles' marine protected areas, it is unclear whether the country will incorporate the identification, tracking and integration of the contributions of its ocean economy within its national accounts in a meaningful manner.¹⁰⁰ This could take the form of creating an adjusted measure of value add to GDP by considering the depletion of natural assets and assessing the value of non-market benefits (such as carbon capture and storage) provided by the BE ecosystem.¹⁰¹

- Environmental and livelihood concerns over specific sectors identified for development within the national BE agenda

Hydrocarbon exploration has long been viewed as a BE sector that is at odds with the country's espoused narrative around environmental conservation, responsible ecosystem management and sustainable development.¹⁰² Artisanal fisherfolk in Seychelles have also viewed the BE agenda as a threat to their livelihoods.¹⁰³ Some perceive the industry to be dying due to the Seychellois youth's lack of interest in joining the sector. They also cite over-protection of the country's waters and push towards aquaculture to be at the expense of the local fishing industry.¹⁰⁴

- Lack of skilled and available human capital

With a population of approximately 95,000 and a reliance on foreign labour to meet its development needs, the country's ability to harness job creation and growth for the exploration of new and emerging BE

sectors is significantly hindered and translates into the presence of a narrow economic base.

- Ease of doing business and lack of entrepreneurial innovation and new venture creation in BE space

Studies show many BE entrepreneurs cite bureaucracy, fear of failure, and a lack of networking and mentorship opportunities as major obstacles in innovative venture creation. Additionally, limited access and know-how to tap into appropriate financing seem to have fuelled a culture of imitative business models, with entrepreneurs preferring this low-risk, go-to-market strategy and avoiding expensive disruptive innovation altogether. This has proved dangerous in the era of COVID-19.

- Social ills and public health emergencies

Government figures show that nearly 10 percent of the national workforce suffer from heroin addiction and substance-related illnesses, which further strains the country's public health system, productivity and economic efficiency.¹⁰⁵

- Gender inclusivity

There is very little gender-specific data available to measure the participation of women in the BE, but recent studies suggest women are less present in the BE sector with lower access to resources than men.¹⁰⁶ Generally, the country is fairly gender-neutral; women can own property, land and businesses. However, gender inclusivity and gender-based violence may be a problem affecting not only equity but the country's development discourse.¹⁰⁷ According to a 2018 Commonwealth report, the country loses US\$65 million a year due

to violence against women and girls.¹⁰⁸ Government figures also suggest gender-based violence on the island is on the rise; at least 58 percent of women in Seychelles have experienced some form of violence in their lifetime from a partner.¹⁰⁹

The future of Seychelles' BE

Historically, Seychelles is no stranger to the top-down implementation and management approach of major national development policies. The country's BE strategy, however, calls for a more adaptive governance approach that enhances institutional synergy to manage complex systems effectively.¹¹⁰ A genuine effort has been made in ensuring a multi-stakeholder model is applied in the Seychelles. However, two years since the launch of the policy, the BE strategy may be in danger of a slow stall.

Economic activity within the BE space continues to be concentrated within the country's existing sectors, seemingly at the expense of new and emerging resource bases. The Seychelles' export base operates primarily around tuna fishery. Due to poorly developed value chains, these exports remain predominantly canned tuna bound for the EU¹¹¹ and potential growth in value-add services through maximising landed catch, transshipments through Port Victoria and marketing better-quality demersal fish and tuna products has not transpired greatly.¹¹²

The economic value of marine ecosystem services is mostly ignored in development policy and decision-making processes. Major innovations remain few and far between while depleting marine habitats, resources and conflicting stakeholder interests threaten the country's blue future development.¹¹³

A more coordinated, whole-of-government approach should underpin the country's BE framework for better policy implementation. One suggested approach entails a more singular focus on the BE portfolio, which could revolutionise the country's BE agenda. Notably, Mauritius' BE strategy has seen the creation of a separate Ministry of Blue Economy, Marine Resources, Fisheries and Shipping,¹¹⁴ which consolidated most of its BE-related governmental and educational institutions under one roof to provide regulation and oversight for sectors such as shipping and fisheries, to be monitored by the Mauritius Oceanography Institute (think tank) and the Maritime Academy (training institute). The country has also established a National Ocean Economy Task Force equipped with overseeing the implementation of its Ocean Economy Roadmap with the support of the Office for Ocean Affairs and Development.¹¹⁵

Replicating such a structure in Seychelles may prove challenging since the strategy integrates nearly all governmental ministries, departments and agencies. This would also reduce the level of flexibility and independence offered within the present framework. However, a partial adoption of Mauritius' best practices—including the seemingly aggressive leadership approach towards the BE strategy—might serve to synergise the agendas of Seychelles' various BE agencies, bring the voices of stakeholders from diverse BE sectors together, reduce the overlap and duplication of mandates, and minimise the inherent silo culture.

To help achieve this, formalising civil society engagement beyond the current MOU may prove vital in strengthening and streamlining their participation in Seychelles' BE agenda. Civil society occupies a crucial position in the development narrative as it enables local communities to advocate for collective action and social equity.¹¹⁶

More effective civil society participation in Seychelles' BE space will bolster budget planning, policy development and the associated legislative processes. Given that civil society participates minimally in these areas presently, more training and education may be required.¹¹⁷

Any reform should take into consideration the Seychelles' human capital constraints,¹¹⁸ which remain inadequate to tackle the research and development demands of BE.¹¹⁹ This worrying deficit is evidenced through a widening skills gap between the education and labour markets, a lack of high-level scientific expertise and knowledge, and the unavailability of quality data and research.¹²⁰

With youth unemployment 3.2 times higher than the national unemployment rate and categorised as 'severe' in 2019,¹²¹ the focus should be on engaging Seychellois youth on ocean literacy and opening sustainable career pathways.¹²² The country's blue agenda will require highly skilled and innovative professionals, hence emphasis should be placed on appropriately upskilling the next generation. The knowledge and skills gap within the marine and coastal sciences, the legal governance arrangements and other spheres will require not only the involvement of a swathe of disciplines but the collaboration of global education institutions, given that the country's own educational facilities are limited.¹²³ The University of Seychelles is the only primary institution of higher education in the country and presently offers limited local programmes around BE. To meet this gap, a government-funded scholarship scheme ensured students would gain an internationally recognised degree overseas. However, COVID-19 has forced Seychellois students to defer their international courses due to health and budget constraints.¹²⁴ Therefore, the need for more localised training, education and awareness-raising for

the country's youth around the BE and its inherent benefits cannot be emphasised enough.¹²⁵ A youth advocacy group for the BE has already been created as a response to not only the needs of the BE Roadmap but also to elucidate the concept to the younger Seychellois generation.¹²⁶

Seychelles' comparative advantage lies in its natural capital—the environment. The government is currently facing tough choices amid the economic pressures caused by the COVID-19 pandemic. Sectors that generate employment and revenue—and thus, quicker economic recovery—will likely be prioritised. The country should not, however, lose sight of the core values of environmental conservation and sustainability that signpost its BE Roadmap. The BE strategy promises much in terms of a development transition for a future that includes collective decision-making, shared prosperity and equitable wealth distribution. There is thus an urgent need to continue improving the socio-economic and environmental sustainability frameworks of the marine-related sectors.¹²⁷


Better national-level planning, coupled with effective data-driven integration, will also dictate the speed of this transition. As revenue streams from existing BE sectors slowly dry up,¹²⁸ the development of new ones and the sustainable maintenance of existing ones will require immediate and special attention. Furthermore, policies aimed at encouraging more self-sufficiency, especially around the domestic production and manufacture of basic commodities should become more prevalent. This, in turn, requires improving appropriate travel and trade infrastructure, facilitating greener job creation and diversifying the global value chain.¹²⁹ By recognising natural capital as a vital cog in the process, sustainable tourism development and lower carbon-based activities, such as ecotourism, should be

nurtured further. Ecosystem services that are properly identified, valued and integrated into national development plans will also assist the country's transition towards a true blue economy.¹³⁰

To advance this transition, the Seychelles should explore prospective blue carbon initiatives.¹³¹ Blue carbon ecosystems such as mangroves, seagrass beds and salt marshes are among the planet's most efficient carbon sinks, sequestering carbon up to 40 times faster than terrestrial rainforests.¹³² Given that the Seychelles' BE Roadmap prioritises the country's carbon offsetting capacity, carbon-oriented approaches could offer substantial emission mitigation outcomes that could be met through climate financing and blue carbon markets. Research has identified five key ecological services with potential marketing for revenue generation so far—carbon sequestration, shoreline protection, nursery habitat, biodiversity, and water quality.¹³³ However, ocean finance is relatively new, and blue carbon investors' main concerns revolve around measurement and economic valuation uncertainties, logistical challenges, governance and transparency issues, and technical capacity and infrastructure constraints within the existing framework.¹³⁴ Nonetheless, the investment and financing potential offered by blue carbon demonstrates emerging economic approaches for a climate-conscious world. To this end, the SeyCCAT has recently funded a first-pass assessment of potential blue carbon opportunities in Seychelles, whereby stakeholders will assess the potential of the country's marine assets for seeding new markets and ensuring the optimal protection of coastal ecosystems.¹³⁵

CONCLUSION

The Seychelles holds a unique position in Africa due to its remote location in the Indian Ocean, political history, and pioneering role in pushing the BE agenda.¹³⁶ This standing will benefit the island nation in the long run as it seeks effective partnerships and collaborative mechanisms to achieve its BE vision. Stakeholder participation at the local, regional and international levels will be crucial to achieving the BE strategic objectives.¹³⁷ The devastation wrought by COVID-19 has highlighted the need to promote resilience within the domestic BE ecosystem to help achieve sustainable growth and reduce existing vulnerabilities.¹³⁸

As the Seychelles attempts to recover from the pandemic by prioritising sectors that offer the quickest employment and income opportunities, it should not lose sight of the pillars of its BE agenda that seek to promote sustainable growth.¹³⁹ This balancing act will take on added importance as the island nation gears up for its presidential elections in October 2020.¹⁴⁰ The Seychelles' BE model must embody innovation, research-based analytical frameworks, and durable multi-sectoral collaboration if it is to shed perceptions that it is merely new branding for business as usual.¹⁴¹ 

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