

Key Messages:

- Cambodia's marine and maritime resources hold significant potential, contributing \$2.4 billion and 3.2 million jobs to the national GDP in 2015. Blue economy sectors such as fisheries, aquaculture, marine tourism, and shipping have been established, while others like oil and gas extraction and salt production offer untapped opportunities.
- To promote sustainable and inclusive blue economy development, Cambodia must adopt a policy framework and institutional arrangements aligned with its commitment to the Sustainable Development Goals, particularly SDG 14 on life below water.
- Critical challenges threatening the marine environment and coastal communities include declining fish stocks, overfishing, illegal practices, ecosystem degradation, and pollution. Addressing these issues requires marine spatial planning, improved institutional coordination, capacity building, technology, and investment.
- An integrated and multisectoral approach, prioritising environmental sustainability and people's well-being, is crucial for sustainable, resilient, and inclusive blue economy development. Key enablers include global, regional, and national interest in the blue economy, effective law enforcement, sustainable financing options like blue financing, and international cooperation.

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Sustainable Blue Economy Development in Cambodia: Status, Challenges, and Priorities

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Cambodia is at the early stage of maximising the full potential of the blue economy, inclusively and sustainably, due to the lack of an integrated policy framework, clear strategies, and concrete actions. It is critical to address the immediate challenges in the decline of the health and well-being of the marine environment and coastal communities (marine fish stock decline, ecosystem degradation, and pollution). Cambodia also needs to incorporate marine spatial planning in its long-term development vision – strengthening institutional arrangements and capacity, human resources, and investment in coastal and marine infrastructure and technologies. An integrated and multisectoral approach to blue economy development, which places environmental sustainability and people at the centre, also needs to be developed. Cambodia should take advantage of the growing interest in the blue economy at the global, regional, and country levels through effective enforcement of existing laws and regulations; tapping sustainable financing, including blue financing; and participation in the global framework and the Association of Southeast Asian Nations (ASEAN) Blue Economy Cooperation Framework.

Definition of the Blue Economy and the Cambodian Context

The blue economy is an emerging concept that aims to define the activities related to the ocean, seas, and coastal areas and the resources contained within them. The Association of Southeast Asian Nations (ASEAN) Member States (ASEAN, 2021: 3) defined the blue economy as:

the sustainable, resilient and inclusive use, governance, management and conservation of oceans, seas as well as marine and coastal resources and ecosystems for economic growth across various sectors such as fishery, aquaculture, maritime transport, renewable energy, tourism, climate change, and research and development while improving human well-being and social equity.

Cambodia has not formally adopted the blue economy as a national development agenda, even though the desire for development of the blue economy was underlined for the first time in the National Policy on Green Growth (MOE, 2013a) and the National Strategic Plan on Green Growth, 2013–2030 (MOE, 2013b).

Cambodia's coastal area consists of four provinces – Kampot, Kep, Koh Kong, and Preah Sihanouk – encompassing a coastline of 435 kilometres and an exclusive economic zone of about 55,600 square kilometres. The four coastal provinces are home to more than 1 million people who mostly depend on marine and coastal resources for their livelihoods. The significant

size of the marine space and the wealth of marine and maritime resources highlight the potential of marine-based sectors, which could form components of the blue economy. Development of the blue economy could contribute to diversifying the economic base; promoting economic growth, trade, employment, and innovation; providing social and economic benefits to coastal and island communities; protecting the environment; and thus contributing to the sustainable development of Cambodia.

Potential of the Blue Economy in Cambodia

Cambodia has considerable potential in terms of marine and maritime resources for the development of an inclusive, equitable, and sustainable blue economy. Five blue economic sectors are well established in Cambodia (Table 1). Apart from the oil and gas extraction sector, whose development has been paused since 2021, these sectors have produced substantial economic outputs and foreign exchange earnings for the country and have generated employment and provided income support for the livelihoods of millions of people, especially those living in coastal areas. Emerging sectors that could be developed from marine and maritime resources include renewable energy; marine-based manufacturing; education, research, and development; and biotechnology. Three established blue economic sectors—fisheries, tourism, and shipping and ports—were estimated to contribute nearly \$2.8 billion in gross value added in 2020, building on the work of the Ministry of Environment (MOE) and Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) and the data collected from the 2020 Cambodia Input–Output

Table (ADB, 2021). These sectors are estimated to have created 3.2 million jobs in 2020 (PEMSEA and MOE, 2019; PEMSEA, 2018). As shown in Table 2, the coastal and marine ecosystem services were estimated at \$200 million–\$600 million per year (PEMSEA and MOE, 2019).

Capture fisheries and aquaculture

Fishing is the most important economic activity for most people in coastal areas. The fishery subsector contributes 8%–10% of the country's gross domestic product (GDP), while marine fisheries account for 13% of the fishery subsector. Along a 435-kilometre coastline across the four coastal provinces, marine fisheries have a fishing domain of 48,488 square kilometres (ADB, 2022). The marine fish catch increased steadily from around 121,025 tons in 2017 to 125,000 tons in 2021. However, based on anecdotal evidence, the total marine fish catch could be two or three times the reported amount due to the landing of the caught fish in neighbouring countries, including the transfer of fish at sea; lack of recording of the fish catch; and widespread illegal, unreported, and unregulated fishing (ADB, 2022). Captured marine fisheries' contribution to total captured fisheries accounted for an average of 21% from 2017 to 2021.

Coastal and marine tourism

Before the coronavirus disease (COVID-19) pandemic, the number of foreign visitors to the coastal region more than doubled, from around 513,891 in 2013 to 1.2 million in 2019. The tourism revenue was estimated to triple from \$46 million in 2013 to \$145 million in 2019. Due to the pandemic, the number of foreign visitors to the coastal region dropped sharply to around 105,892 in

2021. As a result, the estimated tourism revenue dropped to \$12 million in 2021. As the Cambodian economy has recovered from multiple crises, including COVID-19 and food and fuel price hikes, coastal tourism is also likely to spring back. It will continue to play an important role in earning foreign exchange, creating jobs, supporting people's livelihoods, and fostering economic growth.

Shipping and ports

Cambodia has several seaports, but the major marine shipping and port activity that makes the largest contribution to GDP is through Sihanoukville Autonomous Port, the only deep seaport serving Cambodia's international trade. Before the pandemic, from 2013 to 2019, the container throughput increased by an average rate of 14.2% while the gross throughput rose by an average rate of 14.0% annually. Despite the devastating impact of the COVID-19 pandemic in 2020–2021, both the container and gross throughputs still had positive growth rates. The container throughput rose by 2.5 times from around 290,000 twenty-foot equivalent units (TEU) in 2013 to 732,387 TEUs in 2021, while the gross throughput grew by 2.3 times from 3 million tons in 2013 to 7 million tons in 2021.

National Commitments and Policy Frameworks

Cambodia has embraced the 2030 Agenda for Sustainable Development and adopted all 17 Sustainable Development Goals (SDGs) plus a national goal on ending mines and explosive remnants of war (becoming Cambodia's 18th SDG), as reflected in the national development policy agenda, the Cambodia SDG Framework. As SDG14 is about life below water, encompassing ocean and marine resources, Cambodia is committed to the development of the ocean-based or blue economy. Even though the desire for development of the blue economy was underlined for the first time in the National Strategic Plan for Green Growth, it has not been formally adopted in Cambodia as a major national development agenda. While the National Strategic Plan for Green Growth discusses four strategies for development of the blue economy, it has no concrete action plan for its implementation. As such, the current policy and institutional setting is organised around different sectors that form various silo components of the blue economy. In other words, the current policy and institutional arrangements are carried out in accordance with the existing sectoral management objectives and institutional mandates.

Key Issues, Challenges, and Enablers

Major Issues

The health of the sea and coastal areas in Cambodia is at considerable risk. It faces a number of critical issues, including fish stock decline, marine ecosystem degradation, and pollution. The issues are caused by a number of interlinked factors such as overfishing, urbanisation, industrialisation,

marine debris, and the triple planetary crisis (i.e., climate change, pollution, and biodiversity loss).

Challenges

A blue economy or ocean policy framework is not yet in place. Some policies and regulations have been developed separately for different sectors of the blue economy. However, marine spatial planning is required to indicate how coastal areas or marine resources are managed or used sustainably and inclusively. Several institutions have been created and equipped with statutory mandates and power to implement legal and policy frameworks related to coastal and marine areas and resources. While the intent is to improve the efficiency and effectiveness of law enforcement and policy implementation, overlapping of responsibilities and activities and lack of coordination persist (PEMSEA and MOE, 2019). Moreover, different components of the blue economy are managed individually by different institutions whose mandates may not necessarily be shared or unified. The National Committee on Management and Development of Cambodian Coastal Areas was established in 2012 to lead and coordinate the management and development of coastal areas in a sustainable and responsible manner.¹ However, this institution is empowered to mainly focus on the management of coastal area development, which is only part of the blue economy.

Moreover, strengthening the institutional and human resources capacity is essential to foster blue economy development. There is a shortage of skilled workers for the existing and emerging blue economy sectors. There is a significant gap in education and training in fields related to marine aquaculture, marine conservation, and marine-based manufacturing (e.g. shipbuilding and repairs). In addition, lack of investment in the blue economy sectors is viewed as a major challenge to the extraction of economic benefits from the marine sector and to the sustainable protection of sea and marine resources. Limited national budget is allocated for the conservation and protection of marine forests and resources such as mangroves, coral reefs, and seagrasses, which play a crucial role in protecting marine biodiversity. Private investment is also lacking in marine sectors such as oil and gas extraction and marine ecotourism, which can promote economic growth and job creation.

Another critical challenge is the limited data available related to marine and maritime resources and activities. Data on various marine and coastal resources and activities are not adequately recorded or reported. There is a lack of recording and reporting on data on various marine and coastal related resources and activities

¹ Royal Decree No. NS/RKT/0212/079 dated 16 February 2012 on the Establishment of National Committee on Coastal Area Management and Development and Sub-decree RGC No. 171 ANKr.BK dated 7 October 2012.

Table 1: Established and Emerging Blue Economy Sectors

Established sectors	Emerging sectors
Capture fisheries and aquaculture	Renewable (ocean-based) energy
Coastal or marine tourism	Marine-based manufacturing
Shipping and ports	Education, research, and development
Hydrocarbon extraction (oil and gas)	Biotechnology
Salt production	

Source: Authors' compilation.

Table 2: Estimated Values of Cambodia's Blue Economy

Indicators	Values
Blue economy size	\$2,770.8 million (GVA, 2020)
Marine fisheries	\$581.5 million (GVA, 2020) (estimated as twice the recorded value in the input–output table)
Coastal and marine tourism	\$174.0 million (GVA, 2020)
Shipping and ports	\$2,015.3 million (GVA, 2020)
Oil and gas	\$174.0 million–\$1.7 billion per year (IMF, 2007) (potential revenue if the oil extraction is at full capacity)
Blue economy employment	3.2 million (2015) (PEMSEA and MOE, 2019)
Coastal and marine ecosystem services	\$200 million–\$600 million per year (estimated) (PEMSEA and MOE, 2019)

Source: Authors' compilation.

(e.g. living aquatic resource stocks and exploitation, marine fishery processing activities, marine forest and biodiversity resources, and marine debris). Further, the records that do exist (e.g. landed marine fish catch) are not reported systematically and accurately. Regularly updated and accurate data on blue economy activities are crucial for the formulation of a policy and regulatory framework, as well as the planning, monitoring, and evaluation of the policy and strategy implementation.

Enablers

Global interest in the blue economy is growing. International conceptual and policy frameworks, which can be used as guidance for developing a national blue economy policy framework, are available. Moreover, there is a rising trend of environmental, social, and governance compliance and environmental sustainability protection amongst private businesses, including international investors and multinational enterprises. Cambodia has regulations in place that could enable policy formulation for the implementation of the blue economy. The country has already embraced the 2030 Agenda for Sustainable Development, under which SDG14 is closely related to the blue economy. This could help Cambodia to formally adopt the blue economy concept and formulate a coherent and integrated blue economy development policy and strategy. Various blue economy sectors have been covered to some extent in the existing sectoral policies and strategies.

Sustainable finance or sustainability-oriented financial resources, including blue economy financing, are rising and increasingly accessible for developing countries, including Cambodia. Blue financing, which is defined as the financial resources used to finance marine and maritime related projects, is gaining traction amongst investors, international financial institutions, and private financial institutions (IFC, 2022). The cumulative public financing for ocean conservation and climate action has grown from \$579 million to \$3.5 billion between 2013 and 2019 (Huang and Morgan, 2022).

Policy Recommendations

1. Raise awareness and recognise the importance of Cambodia's coastal and marine resources for a sustainable and inclusive long-term development agenda.
2. Address immediate challenges that threaten the health and well-being of the marine environment and coastal communities, such as the marine fish

stock decline – including overfishing and illegal, unreported, and unregulated fishing; marine ecosystem degradation; and pollution.

3. Develop a blue economy policy framework and marine spatial planning, improve the institutional arrangements and capacity, develop human resources, and invest in coastal and marine infrastructure and technologies.
4. Implement an integrated and multisectoral approach to blue economy development, which places environmental sustainability and people at the centre, to ensure sustainability, resiliency, and inclusiveness.
5. Participate in the global framework and the ASEAN Blue Economy Cooperation Framework.

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