

Blue Economy in Myanmar

Zaw Oo and Ngu Wah Win

Key Messages:

- Myanmar's coastal zones are key to the country's economic development, imparting rich natural resources through their fisheries, agriculture, tourism draws, and untapped oil and gas fields. Seaports are also crucial.
- Rising conflict has negatively affected livelihoods and foreign investments in coastal townships. The departure of international businesses has had negative consequences for Myanmar, as they enforced stringent environmental safeguards and contributed to revenue flows.
- Myanmar is seeking regional and global expertise; it has actively engaged in regional dialogues to develop its Blue Economy. Strategic partnerships with ASEAN, China, and India offer opportunities for cooperation and access to further knowledge and resources.

Myanmar's commitment to the Blue Economy is driven by the Sustainable Development Goals, and it has developed a long-term plan to guide its efforts in reaching these goals. Myanmar's vision of a Blue Economy involves various sectors, such as fisheries, tourism, and energy. However, the sustainable development of these sectors is facing many challenges, such as conflicts in coastal townships and the departure of foreign businesses. Myanmar must actively seek international cooperation with neighbouring countries and organisations such as the Association of Southeast Asian Nations (ASEAN) to form a stronger framework for sustainable use of ocean resources; invest in research, data collection, and capacity building; and strengthen the governance of Marine Protected Areas.

1. Introduction

Myanmar possesses a coastline of nearly 3,000 kilometres, which is divided into three distinct regions: Rakhine State to the west, bordering the Bay of Bengal; Tanintharyi Region to the south, bordering the Andaman Sea; and the Ayeyarwady Region between them. These regions have diverse ethno-cultural heritages and a population of 23 million, about 40% of Myanmar's entire population.¹ These coastal zones are contributing to Myanmar's economic development thanks to their fisheries, agriculture, tourism sites, and oil and gas fields. The country's seaports – Dawei, Kawthoung, Kyaukpyu, Mawlamyine, Myeik, Patheingyi, Sittoung, and Yangon – serve as important transport hubs for trade and exports. There are plans to build deep-sea ports at Kyaukpyu (Rakhine) and Dawei (Tanintharyi).² Natural gas exports from offshore fields to neighbouring Thailand have contributed 25% of Myanmar's total merchandise exports in recent years, while fisheries make up about 33% of agriculture export revenue.

The government has indeed recognised the potential of sustainable ocean resources development, establishing committees and initiatives to manage coastal and marine resources, combat illegal fishing, and promote international cooperation. These efforts are aligned with the Blue Economy Framework of the Association of Southeast Asian Nations (ASEAN), which is under development.

In 2018, Myanmar formulated the *Myanmar Sustainable Development Plan, 2018–2030* which incorporates Blue Economy goals by balancing resources use with economic growth, environmental protection, and social equity.

Zaw Oo

Centre for Economic and Social Development, Yangon, Myanmar

Ngu Wah Win

Centre for Economic and Social Development, Yangon, Myanmar

¹ For example, the Tanintharyi Region comprises a blend of Mon, Karen, and Burmese ethnicities, while the Ayeyarwady Region is home to Burmese and Karen peoples. Government of Myanmar, Ministry of Immigration and Population, Department of Population, <https://dop.gov.mm/en>

² The Dawei Special Economic Zone and Deep-Sea Port Project, initiated in 2008, aims to create a substantial industrial and economic zone in the Tanintharyi Region. In parallel, the Kyaukpyu Deep Sea Port project, which invited bids in 2014, aims to establish a modern port facility along the Bay of Bengal, strategically positioning Myanmar for international trade, particularly in South and South-East Asia, via access to the Indian Ocean.

Myanmar is also seeking regional and global expertise through strategic partnerships with ASEAN, China, and India to leverage existing opportunities and to overcome challenges in both traditional and emerging sectors of the Blue Economy.

2. Transitioning into the Blue Economy: Old and New Challenges

In the *Myanmar Sustainable Development Plan, 2018–2030*, Myanmar emphasised ‘People and Planet’ as one of three pillars to achieve its SDGs by 2030.³ Yet the country’s Ocean Health Index remains poor at 65, compared to the global average of 69.⁴ Although the score has slightly improved over recent years, Myanmar still faces many challenges to its coastal and ocean-dependent livelihoods, biodiversity, and habitats. Conflicts – stemming from ethnic and communal tensions; land disputes; and clashes related to the extraction of resources, including activities like illegal logging, mining, and fishing – are affecting coastal townships in Rakhine State and Tanintharyi Region. These conflicts result in instability, displacement of communities, and disruptions to daily life; they often impact the overall social, economic, and environmental conditions in these areas. Moreover, the difficulty in transitioning towards a sustainable Blue Economy is exacerbated by the lingering effects of the COVID-19 pandemic, such as prolonged border closures that affected tourism, rising poverty that causes a lower demand for fish, and disrupted supply chains that are delaying the recovery of local industries.

The departure of international oil and gas corporations, such as Total Energies and Chevron, due to human rights concerns have complicated the efforts to promote environmental safeguards. Thus, the government established the Coastal Resources Management Central Committee, which is focussed on increasing the sustainability of ocean economies. The committee held bi-annual coordination meetings in 2022 and plans to develop the Integrated Coastal Management Programme within 1 year.

Additionally, the presence of strategic rivalries amongst major global powers like the United States, China, and Russia, in conjunction with Myanmar’s influential neighbouring giants such as India, China, Thailand, and Bangladesh, presents significant challenges to the nation’s security and its potential for development. The competition for infrastructure projects, marine resources, shipping

lanes, and maritime trade has intensified the strategic rivalry in the Bay of Bengal region. This rivalry, coupled with the humanitarian crisis and conflict in Rakhine State, hinders effective cooperation on development of the Blue Economy in Myanmar.

3. Key Blue Economy Sectors

3.1. Fisheries

The fisheries sector plays a vital role in Myanmar’s economy; however, unmanaged fishing practices have led to a rapid depletion of marine resources, risking ecosystem collapse and diminishing the sector’s ability to provide food, jobs, and revenue. There was a significant decline in marine capture from –27% to –64% between 2009 and 2018 (Hosch, Belton, and Johnstone, 2021). A recent survey showed that the biomass of pelagic and demersal fish in Myanmar’s exclusive economic zone also decreased over 3 decades, by 80% and 60%, respectively, since the 1970 and 1980 surveys (FAO, 2020). Unreported catches in Myanmar’s fisheries are between 10% and 70% of reported landings, with an estimated value of \$0.41 billion to \$1.22 billion (Pearce et al., 2015). Other major challenges to the sector include:

- (i) **Overfishing and depleted stocks.** Rapid depletion of fish stocks due to overfishing and inadequate management practices pose a significant threat to the sustainability of Myanmar’s marine resources.
- (ii) **Illegal, unregulated, and unreported fishing.** Myanmar faces challenges related to illegal fishing practices, including underreporting. Unreported catches are estimated to have significant economic implications.
- (iii) **Governance and capacity.** Limited governance capacity and nascent fishery scientific and management structures hinder effective fisheries management in Myanmar.

3.2. Marine Biodiversity

Myanmar’s mangrove coverage – the fourth largest in Asia – declined by 52% from 1996 to 2016, with annual net loss rates of 3.60%–3.87%. (Alban et al., 2020) Specifically, from 2000 to 2012, 88% of mangrove loss in Myanmar was due to conversion to rice agriculture (Forest Department, 2015). Marine pollution, including that of microplastics, is also a rising problem, as concentrations of microplastics in Ayeyarwady coastline waters can reach up to 28,000 particles per square kilometre.⁵ At the same time, the Ayeyarwady River transports about 119 tonnes of plastic pollution daily into the ocean (Thant Myanmar, 2019). Other threats to the sector include:

³ The first pillar, ‘Peace and Stability’, is dedicated to promoting internal peace and stability, addressing conflicts, and ensuring a secure environment. The second pillar, ‘Prosperity and Partnership’, focusses on fostering economic prosperity and establishing partnerships for sustainable development. The third pillar, ‘People and Planet’, underscores the dual commitment to enhancing the well-being and quality of life for its citizens while also championing environmental sustainability and responsible management of natural resources.

⁴ Ocean Health Index, Myanmar, Global Scores, <https://oceanhealthindex.org/regions/myanmar/> (accessed 18 April 2023).

⁵ The rising problem of microplastics pollution in Myanmar is a consequence of increased plastics production and consumption globally, as well as inadequate waste management practices at the local and regional levels. It is compounded by rapid urbanisation, population growth, and expansion of industries that rely on plastics.

- (i) **Pollution and marine debris.** Man-made pollution, such as plastic waste, oil spills, and sewage discharge, negatively impact marine ecosystems and contribute to habitat degradation. The degradation of coastal habitats poses a significant threat to marine biodiversity and ecosystem resilience.
- (ii) **Climate-change impacts.** Climate change exacerbates the challenges faced by marine ecosystems, including rising sea levels, increased sedimentation, and changes in ocean temperature and acidity.

3.3. Tourism

Myanmar's tourism sector experienced significant disruptions due to the COVID-19 pandemic and a 2021 military takeover, from a peak tourist arrival number of 4.3 million visitors in 2019. Between 2010 and 2015, the number of registered hotels in Myanmar nearly doubled, with coastal regions such as Rakhine State and Tanintharyi Region experiencing rapid development.⁶ The *Myanmar Tourism Master Plan, 2013–2020* emphasised zoning practices, climate-change adaptation, and green technologies for sustainable tourism, and outlined additional regulations for hotel development in beach areas, including socially inclusive and environmentally sustainable conditions. However, major issues confronting the sector remain, including:

- (i) **Environmental impacts.** Hotel development and increasing visitor numbers in coastal areas can lead to habitat loss, pollution, and increased pressure on biodiversity and ecosystem services. The construction and expansion of hotels often require land clearance, which can lead to the destruction of natural habitats such as mangroves and wetlands. This habitat loss can disrupt local ecosystems and harm the wildlife that depends on these areas for survival.
- (ii) **Social impacts.** Tourism development often failed to prioritise social inclusion, benefit local communities, and respect cultural heritage. While some residents are employed in low-skilled, low-paying jobs within resorts (e.g. as cleaners or gardeners), they do not benefit significantly from the tourism revenue generated. Most of the profits flow out of the region, benefitting external investors and corporations rather than the local economy.
- (iii) **Climate change.** Climate change poses challenges for coastal and marine areas, requiring adaptation measures in tourism planning and infrastructure development. For example, Rakhine State has been a growing destination for tourism, but the impacts of climate change – including beach erosion and storm-related disruptions – threaten the sustainability of

its tourism sector, affecting the livelihoods of those dependent on it.

3.4. Energy

Myanmar's natural gas production – mainly located at offshore sites in the Bay of Bengal – contributes to foreign income from sales to China and Thailand as well as to domestic power generation. In 2017, natural gas accounted for 38.9% of total power generation in Myanmar, and oil and gas exploration projects brought the largest foreign direct investments to the country.⁷ Many offshore and deep-water areas in exclusive economic zones are underexplored, however. Other major challenges include:

- (i) **Political and economic obstacles.** Ongoing political crises and Western economic sanctions have discouraged investments in Myanmar's oil and gas sector.
- (ii) **Depleting offshore gas resources.** Limited exploration and a focus on lower-cost projects have limited significant discoveries in offshore areas.
- (iii) **Climate-change and environmental impacts.** Hydropower resources face challenges from climate change and environmental concerns, necessitating alternative energy sources.

4. Policy Recommendations

To develop a Blue Economy successfully and avoid becoming a 'resource pit' – where a country primarily exports valuable natural resources like minerals, timber, and fish to neighbouring or foreign economies without significantly benefiting from the added value or economic development of these resources within its own borders – Myanmar must harmonise its approaches and seek closer partnerships with neighbouring economies. This requires agreeing upon a common definition of the Blue Economy and synchronising procedures and operating principles for utilising marine resources. Knowledge sharing and capacity building – especially in scientific research – are crucial for informed Blue Economy approaches. Stronger frameworks and joint planning between economic actors and decision-makers are also needed to ensure long-term policies for sustainable use of ocean resources. Participatory and multi-stakeholder approaches, such as marine spatial planning, can help address conflicts and allocate ocean space for competing resource utilisation activities. Involving the private sector is essential for adopting eco-friendly technologies and innovative practices to reduce environmental impacts. Regulatory frameworks and incentives must be in place to attract private investments in Blue Economy infrastructure and advanced technologies.

Specific policy recommendations may include:

- (i) **Optimal energy mix.** Since Myanmar relies heavily

⁶ Statista, Number of Hotel, Motel and Inn Rooms in Myanmar from 2010 to 2019, <https://www.statista.com/statistics/1068042/myanmar-number-hotel-motel-inn-rooms/>

⁷ Central Statistical Organisation, Infographic Information, <https://www.csostat.gov.mm/InformationAndReport/InfographicInformation>

on offshore natural gas revenue, developing an optimal energy mix can reduce reliance on depleting fossil resources while balancing it with the use of renewable energy sources – such as solar and wind energy – to diversify the energy mix. The government should encourage domestic and foreign investments in renewable energy projects and establish partnerships with international companies and organisations with expertise in renewable energy technologies.

- (ii) **Regulatory reforms.** The government should enforce stricter regulations and laws to address overfishing and to improve the collection of revenue from fishing communities. The control of illegal, unregulated, and unreported fishing practices through improved monitoring and enforcement measures can be achieved with electronic licensing systems to promote better management practices and transparency in fisheries licensing. Economic development projects should conduct environmental and social impact assessments prior to implementation of these projects in accordance with zoning practices.
- (iii) **Research and development.** Research and data collection are needed to improve understanding of baseline conditions, restore ecosystems, and develop sustainable management strategies. Scientific research and monitoring programmes are vital to improve understanding of marine ecosystems, assess biodiversity status, and inform evidence-based conservation policies and actions.
- (iv) **Capacity building.** The government should develop and strengthen institutional management capacities in the fisheries, tourism, and energy sectors while organising local community involvement in development projects. It can also accelerate technology-transfer initiatives to enhance the knowledge and skills of local communities and stakeholders in oil and gas exploration and other energy development projects.
- (v) **Conservation management and climate-change adaptation.** The government should implement measures to protect remaining mangroves and to restore degraded areas through sustainable land-use practices and reforestation efforts. It also needs to strengthen the governance of Marine Protected Areas that safeguard marine species, habitats, and ecosystems. At the same

time, immediate steps are required to address marine pollution, including plastic waste, through measures such as plastic taxation and bans, awareness campaigns, business incentives, and reduction of plastic packaging. In the tourism sector, the government must develop and implement policies and guidelines on sustainable tourism, balancing considerations for ecological sensitivity and ecosystem services. The government must also integrate climate-change considerations into sectoral planning as well as marine conservation efforts, including the development of resilient coastal infrastructure and implementation of adaptation strategies for vulnerable ecosystems.

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Economic Research Institute
for ASEAN and East Asia
Sentral Senayan II, 5th, 6th, and 15th floors
Jalan Asia Afrika No.8
Senayan, Central Jakarta 10270, Indonesia
Tel: (62-21) 57974460
Fax: (62-21) 57974463
E-mail: contactus@eria.org

