

## Towards an Integrated 'Blue Economy' Framework in the Bay of Bengal

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**ABSTRACT** The Blue Economy (BE) is a resonant theme among Bay of Bengal states. Despite recent efforts by governments in the region to promote blue growth, however, there is yet no comprehensive, region-wide agenda for marine governance. This brief looks at ways in which Bay states can harmonise their BE approaches to develop an integrated strategy. By collectively investing in technology, innovation, and governance systems, the governments of these littoral states can find the balance between the need for environmental sustainability and development imperatives.

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## INTRODUCTION

In recent years, 'Blue Economy' (BE) has emerged as a new paradigm for coastal management and development of marine resources. The concept, based on the idea of a healthy ocean supporting productive and sustainable ecosystems, is bringing about an integration of ocean activities with the principles of social inclusion, environmental sustainability, and innovative, dynamic business models.<sup>1</sup> BE's central proposition is that the ecological health and productivity of marine and coastal ecosystems can be increased by shifting to a more sustainable economic model that taps their national potential – from generating renewable energy and promoting ecotourism, to sustainable fisheries and transport.<sup>2</sup> The idea involves a transition from a conventional economy to a 'Blue' or sustainable economy in the marine space involving significant investment. While promising, however, BE has risks and challenges.<sup>3</sup>

In the Indian Ocean Region, enthusiasm for BE has been palpable. At the third ministerial conference of the Indian Ocean Rim Association (IORA) in Dhaka in 2019, participants unanimously called for sustainable use of the blue economy resources.<sup>4</sup> The Dhaka Declaration included ideas, principles and norms of BE, to ensure a balanced approach between conservation and development<sup>5</sup> emphasising food and nutrition security, mitigation and adaptation of climate change, and generation of sustainable and inclusive livelihoods. Similarly, BE cooperation has been a focal point of interest for the Bay of Bengal Initiative for Multi-Sectoral and Economic Cooperation

(BIMSTEC), the high-level multilateral grouping of states in the region. At the 4<sup>th</sup> ministerial summit in Kathmandu in September 2018, BIMSTEC leaders agreed to establish an Inter-governmental Expert Group to develop an action plan on BE, keeping in mind the particular needs and circumstances of individual member states.<sup>6</sup> Regional capitals have stressed the need for sustainable practices in harvesting the resources of the sea, flagging the potential risks of rampant exploitation of marine wealth.

## A COLLAPSING MARINE ECOLOGY

The subject of 'sustainable development' is particularly resonant among Bay states, comprising Sri Lanka, India, Bangladesh, Myanmar and Thailand, with a combined population of over 1.5 billion people or 22 percent of the world population.<sup>7</sup> Almost 200 million people in the Bay region live in coastal areas, with a substantial proportion either partially or wholly dependent on fisheries. Rich in natural resources including energy and minerals, the Bay is not only a source of livelihood but also a valuable resource for foreign exchange. Its Large Marine Ecosystems (LME) support a wide range of habitats including extensive tracts of mangroves, coral reefs (eight percent of the world's coral reefs) and sea grass beds.<sup>8</sup> This area of high biodiversity is home to a large number of endangered and vulnerable species.

But marine harvesting has been a vexed issue in the Bay of Bengal. Since the late 1960s, the region has been plagued by a problem of overfishing. There are over

400,000 fishing boats, with over 4.5 million people employed in fisheries and associated activities, and around 6 million tonnes of fish are caught annually, with a value of US\$ 4 billion.<sup>9</sup> Over the years, licensed fishing activity (both mechanised trawlers and non-motorised boats) have severely damaged the natural habitat of the region, leading to a sharp decline in fish stocks.<sup>10</sup> Popular fish species such as the Hilsa, West Bengal's favourite seafood, are on the verge of extinction. To make matters worse, destructive fishing practices like bottom trawling and the use of seine nets in shallow spaces like the Palk Bay have further depleted marine wealth.<sup>11</sup> An expanding dead zone in the middle of the Bay now spans an estimated 60,000 square kilometers.<sup>12</sup>

To add to the grim picture, many Bay countries, including India, run huge subsidy programmes to support smaller fisherfolk.<sup>13</sup> The sops on offer such as supply of fuel, motorisation of boats, and provision of gear are helpful for the coastal communities, but have also led to overcapacity and overfishing, resulting in a significant rise in illegal fishing. The subsidies have prompted the local population around the bay to shift from small-scale fishing to mechanised export-oriented fisheries, which has had a damaging effect on the marine ecosystem.

The other problem affecting the ecology of the Bay of Bengal is hydrocarbon exploitation. Rich in hydrocarbon (with oil and gas finds in India, Bangladesh and Myanmar), the Bay has witnessed oil and gas exploration on an unprecedented scale in recent years.<sup>14</sup> A high-risk industry, oil and gas development causes high levels of pollution and environmental

hazards in the region. Meanwhile, shipping activity along the coastline and in the busy Sea Lanes of Communications (SLOCs) has contaminated the marine environment. Oil and residue discharge from cargo and feeder ships are a major contributor to pollution. The amount of synthetic trash generated in the Bay too is rising exponentially, with India's coastal regions witnessing their most rapid expansion of plastic pollution.<sup>15</sup> Studies show that of the US\$ 13 billion in annual estimated damage to the marine ecosystem, a significant portion comes from Asia's seas, including the Bay of Bengal.<sup>16</sup>

Unfortunately, Bay states have not been able to arrest the decline in marine health. Notwithstanding nascent efforts to partner with international organisations such as the Global Environment Facility, the Asian Development Bank, and the Food and Agriculture Organization, regional countries have yet to come around to effectively addressing the challenges to marine governance: unsustainable fishing, pollution and destruction of habitat, and vulnerability of coastal communities to a changing climate.<sup>17</sup>

The problem, seemingly, is that many Bay states have policies that encourage resource exploitation, often in breach of sustainability norms.<sup>18</sup> Despite pronouncements by national governments supporting BE goals and principles, ecosystem preservation and community development remains a neglected area. As ocean activities have expanded in the Bay, so has the plunder of marine resources. In the rush to capture ocean resources and augment incomes, environmentalists say, sustainability issues are being overlooked.<sup>19</sup>

## OCEAN GOVERNANCE

Demographic projections point to continued population growth in the Bay of Bengal region in the coming decades. This would suggest an even more substantial impact on food security and economy from depleting marine resources.<sup>20</sup> The Bay of Bengal faces multi-dimensional challenges from climate change impacts such as sea-level rise, ocean acidification, and extreme weather events, leading to changes in distribution of aquatic species, community structures due to migration, and decreased economic productivity. Under the circumstances, effective governance of sea spaces is going to be critical for Bay states.

Not only is ocean governance fundamental to maintaining the health of the marine habitat, it is a vital prerequisite for regional efforts to meet the Sustainable Development Goals (SDGs).<sup>21</sup> A comprehensive ocean governance framework in the Bay of Bengal could balance sustainable economic activity and marine conservation, and create a positive impact on the lives of coastal communities.<sup>22</sup> It might also help Bay states in addressing the 'skills gap' that is endemic in the region. The lack of innovation and technological developments in BE sectors constitutes a significant barrier. Beyond a lacking proficiency in ocean-related vocations, it is the absence of awareness and limited ocean literacy that has hurt the prospects of marine conservation and industry in the region.

Marine experts say that the situation vis-à-vis BE could vastly improve once the private sector agrees to participate.<sup>23</sup> Private participation in important Blue areas, such as

deep-sea mining and offshore energy, is crucial to creating the momentum needed by marine scientific and economic initiatives. Yet, industry has so far been skeptical about BE. The private sector's reluctance in this segment is driven by doubts about the profitability of Blue ventures and the challenges involved in turning them into viable economic propositions—this is a key impediment in the larger BE endeavour.<sup>24</sup> Not surprisingly, private industry has largely desisted from funding research in any of the marine-science disciplines—biology, chemistry, geo-science, and physics.

## A QUESTION OF PRIORITIES

BE implementation in the Bay of Bengal is mostly a matter of state priority. Not only do Bay countries have their own interpretations of BE, they also differ in their areas of focus. Of the 14 sectors of cooperation in BIMSTEC, at least eight are linked to the BE: transport and communication, energy, tourism, technology, fisheries, counterterrorism and transnational crime, environment and natural disaster, and climate change.<sup>25</sup> Yet, each Bay state displays a fairly independent approach.

Bangladesh, for example, has a pragmatic BE policy that focuses both on growth and sustainability. Dhaka has taken a number of steps such as establishing an Oceanographic Research Institute in the Maritime University, and a National Adaptation Program of Action as part of developing a strategy to better govern marine resources under its 7th five-year development plan.<sup>26</sup> It also has a SDGs Implementation Strategy and Climate Change Resilience Action Plan. The objective of Bangladesh's Blue Economy initiative is to

promote smart, sustainable and inclusive growth and employment opportunities in the short, medium and long-term.<sup>27</sup>

Thailand, on the other hand, has prioritised sustainability over monetisation of resources. Bangkok views the BE as a means to advance conservation and sustainable management of oceans, fisheries and aquaculture in support of sustainable development and economic growth of the country.<sup>28</sup> With the fisheries and aquaculture sector playing an important role, the government has looked to promote BE models of investment and business, including district-level programmes for shrimp and seaweed aquaculture. Sri Lanka, too, has emphasised the reduction of ocean pollution, protection and management of marine resources, and promotion of sustainable fishing.<sup>29</sup>

Meanwhile, India has sought to pursue growth, sometimes at the cost of marine health. New Delhi has focused on port development through the Sagarmala initiative that has been the mainstay of India's BE efforts. Since 2017, eight ports—i.e. Kolkata, Paradip, Chennai, Cochin, New Mangalore, Mumbai, Jawaharlal Nehru Port Trust (JNPT), and Kandla—have registered positive growth in traffic, which Indian officials see as a positive outcome of implanting the BE concept.<sup>30</sup> A 'Deep Ocean Mission' aims to explore the 75,000 sq km of sea bed that comes under India's purview for exploitation of mineral wealth.<sup>31</sup> The Indian government has also implemented a scheme on the development and management of the fisheries sector, even notifying in December 2015 a national policy on the subject meant to usher in a nation-wide 'Blue Revolution'

(*Neel Kranti*).<sup>32</sup> There is a plan to create a new ministry of Blue Economy to deal with issues such as strategy, security, energy needs, transportation, fisheries, and sea bed exploration under one umbrella.<sup>33</sup>

New Delhi's normative framework for BE, however, has failed to abide by the tenets of sustainable ocean systems, particularly in the areas of environment-friendly technology and ecosystem regeneration.<sup>34</sup> India's industrialisation efforts have focused on the creation of growth corridors, port infrastructure, raw material landing zones, and coastal economic zones – an activity that many see as a form of 'ocean grabbing'.<sup>35</sup> Critics say India has not geared up for a fisheries revolution.<sup>36</sup> Not only has the country's fisheries sector been poorly regulated, its policies have been detrimental for ocean ecology. Despite an overall increase in fish production (from 5.3 million tonnes in 2000-01 to 12.3 MT in 2017-18—primarily on account of a rise in inland fisheries), ocean fish production has stagnated, with growing over-capitalisation, marine pollution, and the impact of climate change.<sup>37</sup> The problem, many say, is that budgetary allocations by state governments to fisheries have been inadequate to ensure sustainable growth.<sup>38</sup> With little money spent on making the sector energy efficient, the fisheries' carbon footprint remains high. Meanwhile, subsidies to fisherfolk continue to incentivise harmful practices.<sup>39</sup>

With India's vision differing considerably from other Bay littorals—it has not been easy to develop a comprehensive pan-regional view of what constitutes sustainable growth. Notwithstanding grand declarations by

governments in the region, the focus largely remains on leveraging resources, rather on ensuring sustainable practices. In the rush to harness ocean resources, the vital need for inclusive social development, environmental balance and ecological security has been neglected. The move to promote public and private investment in a Blue architecture has never gained as much urgency.

## THE WAY AHEAD

The Blue model is unlikely to deliver results in the Bay of Bengal, unless it is implemented in ways that truly balance the need for economic growth with nurturing sustainable ecosystems. Bay states must move to harmonise their BE approaches to develop an integrated strategy. This goes beyond agreeing upon a common definition, syncing procedures and operating principles. What the region's capitals need is to collectively invest in technology and innovation that would enable Blue sectors to develop processes and technologies to boost BE productivity, whilst still preserving the Bay's marine ecosystem. The Blue revolution must recognise opportunities to unlock the seas' latent potential, yet allow the regional habitat the space it needs to regenerate.

First and foremost is the need to create a knowledge economy to power the 'Blue' movement. The Bay of Bengal needs strong scientific research and adequate ocean observations to deliver a sustainable ocean. There is also a need for widening participation of regional stakeholders in marine spatial planning – a policy process to organise the different uses of the ocean space across time. Firmer frameworks need to be evolved for

economic actors and decision-makers to device policy for the sustainable harnessing of ocean resources.

Second, the region's states must collaborate to create a more operational kind of ocean science to support sustainable economic goals. The application of ocean science to fisheries management can be used to protect and preserve endangered fish species. The Bay region needs ocean scientists who can respond to the challenges and demands of the blue economy; ocean technocrats, who can focus on development of knowhow, transfer of technology, and capacity development. Beyond supporting evaluation and monitoring of fishing activity, ocean science can lay the foundation for a genuine ocean sustainability framework. Through new inter-state contracts between governments and their populations, between researchers and policymakers, Bay states can ensure that the best efforts and investments are channeled to developing a sustainable ocean-based economy.


Third, regional governments must collectively focus on marine spatial planning (MSP). MSP is a proven effective policy process to bring together public and private stakeholders to analyse and allocate ocean space for competing human activities (tourism, renewable energy, fisheries, and conservation) in coastal and marine areas. It could prove invaluable in facilitating sustainable uses of marine resources in the Bay region by de-conflicting the maritime commons, mitigating adverse environmental impacts, and facilitating reasonable utilisation of marine resources. Of particular utility might be the participatory governance

approach involving fisherfolk and local self-governance institutions. Bay states could collectively implement the rules for fishing in the seas, with emphasis on sustainable management.

Fourth is the need to involve the private sector in BE initiatives. It must play a more significant role in supporting nascent BE projects in the region. Governments in the region must undertake to incentivise private investment in green infrastructure, technology, and innovative practices to reduce environmental risks and ecological stress. There must be a framework in place, comprising green-friendly technology, as well as institutional processes and production and management systems to create new asset classes that would reduce investment risk, and help transition to a genuine blue economy that would enhance sustainable development and human well-being.

## CONCLUSION

Governments in the Bay of Bengal region must go beyond lip service to action in promoting Blue growth. Stakeholders, especially private companies, should be encouraged to get involved in blue growth early, to pool resources and to work constructively with scientists, governments, and advocacy groups, solving problems and minimising risks. States must be willing to support an entire pipeline of projects for entrepreneurs and investors, even if they have to absorb initial losses.

Through a holistic, cross-domain effort, the BE endeavour in the Bay region could be made less expensive, more affordable and even profitable in the long-run. There should emerge a universal awareness that a 'Blue Economy revolution' is an idea whose time has come. 

### ABOUT THE AUTHOR

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## ENDNOTES

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