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# Unlocking *the* Blue Potential

Bay of Bengal's Strategic Significance for BIMSTEC  
Countries and the Imperative of Ocean Literacy





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**FRIEDRICH NAUMANN  
FOUNDATION** For Freedom.

South Asia





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**Authors:** Nadia Samad, Sudeshna Maiti

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# Abstract

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This paper delves into the pivotal role played by the Bay of Bengal in the regional dynamics of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), comprising Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand. Investigating a spectrum of dimensions including trade and commerce, energy security, sustainable fisheries, disaster resilience, ecotourism, water transport, environmental challenges, and maritime security, this paper underscores the critical need to promote ocean literacy within these nations. Ocean literacy is regarded as a fundamental prerequisite for comprehending, appreciating, and conserving the vast resources offered by the oceanic environment.

## Key Words

Ocean literacy, collaboration, BIMSTEC

# Research Methodology

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The research methodology employed primarily follows a qualitative approach, incorporating secondary data analysis and adopting a descriptive research design.

This method involves the collection of information from diverse sources, encompassing websites, academic journals, books, reports, conference papers, and publications. To ensure the acquisition of pertinent articles during data collection, we employ effective search algorithms, keywords, and filters.

Our investigation encompasses tasks such as data extraction, categorization, and the identification of relevant subjects within the blue curriculum. We also aim to discern trends and gaps within nations' education systems reliant on the Bay of Bengal.

Furthermore, we recognize the significance of engaging key stakeholders and professionals in the field. We have identified and consulted with these experts to facilitate an in-depth analysis of the subject matter. Their insights contribute to the development of recommendations and solutions that are well-informed and comprehensive.

The primary objective of this research is to provide a comprehensive overview of the imperative need for marine and maritime education systems within the South Asian region. It seeks to underscore the growth potential associated with the establishment of an accessible, comprehensive, and inclusive blue curriculum.



# Introduction

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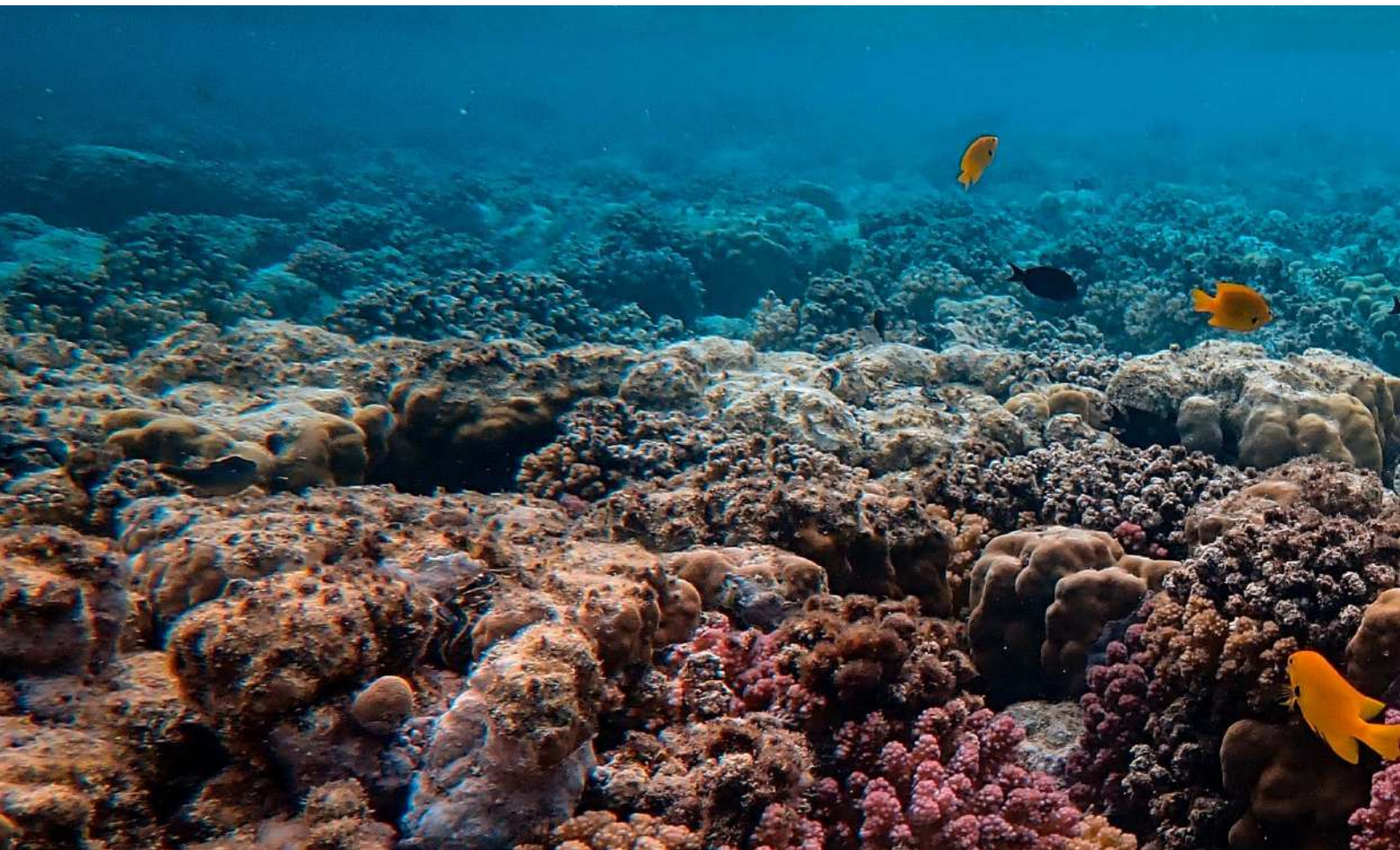
Nestled at the confluence of South and Southeast Asia, the Bay of Bengal emerges as a strategic maritime nexus for BIMSTEC member countries. This expansive water body serves as a linchpin, fostering interconnectivity across various sectors while carrying substantial economic, ecological, social and strategic significance. The Bay of Bengal plays a pivotal role for both littoral and landlocked countries, historically serving as a key route for transport, trade, and cultural exchange between South Asia and Southeast Asia. The effective utilization of its potential and preservation of its resources mandate an in-depth understanding of the ocean—an insight that can be achieved through the lens of ocean literacy.

## Littoral Countries

**Bangladesh, India, Indonesia, Myanmar, Sri Lanka, and Thailand** are interconnected through the Bay, relying on its resources for trade, food, and energy. Key ports and regions serve as hubs for economic activity and connectivity.

## Landlocked Countries

**Bhutan** and **Nepal** are interconnected with the Bay of Bengal, relying on transit agreements with coastal nations for maritime access.





# Ocean and its Interconnectedness

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The Bay of Bengal serves as a pivotal maritime nexus, fostering trade and collaboration among the BIMSTEC nations, encompassing Bangladesh, India, Indonesia, Myanmar, Sri Lanka, and Thailand. Its intricate network of maritime routes functions as the lifeblood of the region, sustaining economic vibrancy and fostering integration. Key ports like Chennai, Chittagong, and Yangon play indispensable roles in facilitating not only regional but also international trade. Hidden beneath the Bay's surface lies a treasure trove of oil and natural gas vital for ensuring regional energy security, making responsible resource management paramount for sustainable development. The Bay teems with marine resources that sustain coastal communities across countries like Bangladesh, India, Myanmar, and Sri Lanka, underscoring the necessity of effective fisheries management to ensure both food security and the preservation of fragile marine ecosystems. Given the region's susceptibility to natural disasters such as cyclones and tsunamis, collaboration in knowledge sharing, preparedness, and resilience-building is imperative to mitigate the catastrophic impact of these events on coastal populations including on development of green-gray coastal protection mechanisms. The coastal regions along the Bay of Bengal possess both natural beauty and rich cultural heritage, attracting tourism and economic activity. However, the challenge lies in striking a balance between promoting ecotourism growth and preserving the environment, with a commitment to ensuring that future generations can continue to enjoy these treasures. In the face of formidable environmental challenges like pollution and climate change, collective efforts are essential to protect the delicate equilibrium of the Bay's ecosystem and mitigate the adverse effects of a changing climate. Furthermore, maritime security is a pressing concern that transcends national boundaries, demanding effective strategies and cooperation to safeguard shared interests and maintain peace and stability in the region.









## Definition and Importance of Ocean Literacy

**Ocean literacy** is the understanding of the ocean's influence on you - and your influence on the ocean. It is a way to understand the essential principles and fundamental concepts about the functioning of the ocean, communicate about the ocean in a meaningful way, and make informed and responsible decisions regarding the ocean and its resources.

**Ocean literacy** is important because the ocean is vital to our planet and our lives. It provides us with food, oxygen, transportation, recreation, and jobs. It also plays a critical role in regulating the climate and supporting biodiversity. However, the ocean is facing many challenges, including pollution, overfishing, and climate change. Ocean literacy can help us to address these challenges and protect the ocean for future generations. It can also help us to make more sustainable choices in our own lives.

## History of ocean literacy

Ocean literacy is a relatively new concept, but it's quickly gaining momentum. In the early 2000s, the United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the Ocean Literacy for All initiative. This initiative aims to promote ocean literacy worldwide through education and outreach.

# Ocean Literacy for Sustainable Development in BIMSTEC Countries

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- » **Economic Opportunities:** Ocean literacy can help communities and policymakers understand the vast economic potential of the ocean, including fisheries, ecotourism, shipping, and renewable energy resources like offshore wind and tidal energy. This awareness can lead to the development of sustainable ocean-based industries that create jobs and boost the regional economy.
- » **Blue Economy:** Encouraging the concept of the blue economy, which emphasizes sustainable use of ocean resources, can result in the responsible exploitation of marine resources. This approach can support sustainable development while minimizing environmental degradation.
- » **Integrated Coastal Zone Management (ICZM):** Ocean literacy can facilitate the adoption of ICZM practices, helping coastal communities plan and manage their resources more effectively, reduce land-based pollution, and protect critical coastal ecosystems.

## Marine Conservation:

- » **Ecosystem Understanding:** Ocean literacy programs can educate people about the importance of marine ecosystems, their biodiversity, and the services they provide. This knowledge can lead to greater efforts to protect and conserve marine habitats.
- » **Sustainable Fishing:** Educating fishermen and communities about sustainable fishing practices can help reduce overfishing and bycatch, preserving fish stocks for future generations.

- » **Marine Protected Areas (MPAs):** Ocean literacy can lead to greater support for establishing and maintaining MPAs, which are essential for safeguarding marine biodiversity and ensuring healthy ecosystems.
- » **Plastic Pollution Mitigation:** Increasing awareness about plastic pollution and its impact on marine life can drive initiatives to reduce plastic waste and promote responsible waste management practices.

### Disaster Preparedness:

- » **Tsunami Awareness:** Ocean literacy can educate coastal communities about the risks of tsunamis and how to recognize early warning signs, leading to more effective evacuation and disaster response plans.
- » **Cyclone Preparedness:** In a region prone to cyclones, ocean literacy can help communities prepare for and respond to cyclones, including understanding storm surge risks and developing resilient infrastructure.
- » **Climate Change Resilience:** Ocean literacy can contribute to understanding the link between climate change and ocean-related disasters. This knowledge can drive climate adaptation measures and policies that reduce vulnerability.

### Cross-Border Collaboration:

- » **Shared Knowledge:** Promoting ocean literacy in the BIMSTEC region can facilitate cross-border collaboration on marine conservation, sustainable development, and disaster preparedness. Shared knowledge and resources can lead to more effective regional strategies and initiatives.





# Implementation Plan

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A Blue Curriculum is essential for future sustainability. To bridge existing gaps, we need to strengthen institutions, collaborate with industries, and invest in infrastructure. This curriculum can provide a holistic framework for the blue economy, integrating subjects like marine sciences, maritime law, and oceanography into regular curriculum. It should also encompass sustainable practices, raise awareness about conservation, and highlight the key role played by the oceans in our daily lives.

Incorporating the ocean into subjects like geography, history, science, and social sciences is crucial. Environmental awareness programs, Eco Clubs, and Home Science Clubs can introduce concepts like water and energy conservation, ocean stewardship, blue economy, climate change, waste reduction, and pollution control to students. Plantation drives and visits to organic farms can highlight the importance of preserving natural resources.

Establishing connections with local Maritime Institutes can help students access expertise and accurate information for pursuing careers in the field. The Blue Curriculum aligns with sustainable development goals, integrating ethics and best practices to nurture environmentally conscious professionals.

Projects for Grades IX-XII at the start of the academic year can encourage students to explore environmental and ocean-related topics. These projects can spark discussions, interviews, and presentations at Science Fairs, promoting active participation among students, parents, and experts.

The Blue Curriculum aims to instill a sense of governance and sustainable development in the next generation. It fosters regional cooperation, knowledge sharing, and collaborative research among member nations. Activities like book clubs, writing for school magazines and newspapers, and creative presentations can spread awareness about ocean conservation.

Faculty members and stakeholders should receive training and workshops to implement crucial policies for a sustainable blue economy. The curriculum's scope and sequence should consider regional variations and adhere to the principles of Ocean Literacy.

Implementing the Blue Curriculum can promote sustainable development in the South Asian region. It equips youth with a deeper understanding of marine ecosystems, encourages environmental awareness, and prepares them to address climate change challenges, support the blue economy, and build a resilient future.





# Recommendations: Way Forward

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In this section, we delve into the imperative need for educational policy reforms that foster sustainability and ocean literacy, particularly in South Asia. We assess existing policies and propose recommendations to integrate comprehensive blue education into school curricula. Our recommendations are informed by a deep understanding of the region's educational requirements and the potential benefits of such initiatives.

## Evaluating Current Educational Policies:

The most recent education policies in India and Bhutan, namely the National Education Policy 2020 and Bhutan's National Education Policy 2019, are commendable for their holistic approach to education. However, there is a noticeable absence of ocean-related content in these policies. This oversight hampers the development of an environmentally conscious generation and the promotion of sustainable practices, coastal resilience, and blue economy potential.

## Strengthening Maritime Education:

While specialized maritime institutions exist in South Asia, such as the Indian Maritime University and others, their focus on ocean-related education is limited. It is imperative to incorporate environmental consciousness, sustainable practices, and coastal resilience into maritime education from the grassroots level. This transformation can only be achieved through enhancing the quality and scope of maritime education.

## Promoting Collaboration:

To realize these goals, effective communication and collaboration between educational authorities, the national teachers' union, and civil society leaders are essential. We align with the recommendations outlined in the UNESCO report 'A new blue curriculum: a toolkit for Policy-makers.' Addressing this policy recommendation should occur at the South Asian regional, national, regional, and organizational/school levels.

## Proposed Curriculum Integration:

Based on extensive research, we recommend the implementation or integration of an elementary-level curriculum focused on ocean literacy in the South Asian region. This curriculum should encompass core aspects of water bodies, marine sciences, maritime law, oceanography, and fisheries. Regular assessments and revisions must ensure the inclusion of blue ocean education principles and adaptability.

## Enabling Education for Reform:

The inclusion of ocean literacy in school curricula worldwide offers a promising avenue to engage future generations and support informed decision-making regarding the ocean and our planet. The NEP 2020 acknowledges the importance of environmental awareness and should integrate blue environmental education into school curricula.

### **Mobilizing Youth:**

Given rapid urbanization and technological advancements, it is crucial to mobilize the youth towards environmental issues, including the health of terrestrial water bodies and oceans. Growing concerns such as water shortages, power outages, territorial conflicts, and deteriorating marine ecosystems necessitate urgent action.

### **National Capacity Building:**

Efforts are required to harness the potential of the younger populace to fulfill the region's dream of paving a way ahead for development. Building a region-wide capacity and evaluating the capability for sustainable practices and ocean stewardship should be a top priority.





# Country-wise Outline, Dependencies on Bay of Bengal

The bay of Bengal serves as a lifeline, bestowing the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries with invaluable economic, environmental, and strategic advantages. The major dependencies, namely Agriculture, Connectivity, Security, Tourism, and Trade, have been analyzed to enable an easier understanding.













