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Connectivity and Cooperation in the Bay of Bengal Region

EDITED BY

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SAMBANDH

Regional Connectivity Initiative

Connectivity and Cooperation in the Bay of Bengal Region

EDITED BY

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AMITENDU PALIT

Report Summary

While the Bay of Bengal is located at the fulcrum of the Indo-Pacific, between the Indian subcontinent and Southeast Asia, it continues to act more as a divider than a link between land and maritime neighbours such as India, Sri Lanka, Bangladesh, Thailand or Indonesia. With the rise of competing connectivity initiatives, especially between China and the Indo-Pacific powers, there are growing concerns about conflict over natural resources, securitization of sea lines of communication, or environmental sustainability. This risks depleting or fragmenting the Bay of Bengal regional commons and reduces the prospects of stability and welfare. New connectivity initiatives will therefore not have the desired developmental benefits unless there are commensurate cooperative and coordination mechanisms between different states and extra-regional stakeholders. This report addresses nine areas of growing interdependence in the Bay of Bengal region and proposes solutions to reduce the connectivity-cooperation gap. The chapters review the opportunities and risks of rising connectivity and recommend policies to address them cooperatively. The contributing experts located in and around the region suggest collaborative ways to leverage geography (supply chains, trade corridors and sub-regional connectivity), build new infrastructure (railways, transhipment hubs and mutual standards) and manage the commons (maritime security, complex emergencies and sustainable fishing).

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Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
ATTI	Agreement on Freight Train Transfer and Inspection
BBIN	Bangladesh, Bhutan, India, Nepal
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BOBLME	Bay of Bengal Large Marine Ecosystem
BRI	Belt and Road Initiative
CAP	Conformity assessment procedures
CBD	Convention on Biological Diversity
CEPA	Comprehensive Economic Partnership Agreement
CMEC	China-Myanmar Economic Corridor
EAO	Ethnic Armed Organisations
EDB	Export Development Board
EIC	Export Inspection Council
FDI	Foreign direct investment
FSSAI	Food Safety and Standards Authority of India
FTA	Free Trade Agreement
GPS	Global Positioning System
HFTC	Highly Facilitated Trade Corridor
IFC-IOR	Information Fusion Centre – Indian Ocean Region
IMCG	Inter-Ministerial Coordination Group
IOM	International Organization for Migration
ISFTA	India-Sri Lanka Free Trade Agreement
JICA	Japan International Cooperation Agency
LPI	Logistics Performance Index
MEA	Ministry of External Affairs
MFN	Most Favoured Nation
MPA	Marine Protected Area
MRA	Mutual Recognition Agreement
MVA	Motor Vehicles Agreement
NABL	National Accreditation Board for Testing and Calibration Laboratories
NER	North East Region
NTB	Non-tariff Barriers
PDF	People's Defense Forces
PIB	Press Information Bureau
REG-TF	Regional Trade Facilitation
RFID	Radio Frequency Identification
RITES	Rail India Technical and Economic Service Limited
SAARC	South Asian Association for Regional Cooperation
SAC	State Administration Council
SAFTA	South Asian Free Trade Agreement
SCRI	Supply Chain Resilience Initiative
SOP	Standard Operating Procedure
TBWG	Transportation Border Working Group
TDA	Transboundary Diagnostic Analysis
UIC	International Union of Railways
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNHCR	United Nations High Commissioner for Refugees
UNODC	United Nations Office on Drugs and Crime
WIM	Weigh-in-motion

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Preface

SHIVSHANKAR MENON

It is hard for a resident of the subcontinent to overestimate the significance of the Bay of Bengal. Throughout history it has been the cradle of civilisations and cultures that traded, travelled, and exchanged goods, ideas, and people. These exchanges were so intimate that we see the results even today. There is no land border in the littoral that does not have trans-border ethnicities and communities, which is not porous, and which is not criss-crossed by traditional trading and migration routes. The Bay itself, with its seasonal monsoon winds, provided a cheap and predictable medium for transport, and enabled the development of deep-water sailing long before it came to most other oceans.

Then why is this one of the least integrated sub-regions of the world today in terms of formal trade and investment within itself and with the rest of the world?

Part of the answer lies in the modern attempt to create nation-states in the plural and open geography of maritime southern Asia. Intrinsic to the modern nation-state has been the creation of hard borders and unitary loyalties, with contested citizenship and imagined identities cutting across the patterns of history and geography. It has taken technology and globalisation, and the growth of trans-boundary value and supply chains to bring attention back to the benefits to our people of connectivity and cooperation across the Bay of Bengal region.

The tension, however, remains between the economic and welfare logic of connectivity and the contradictory pulls of political nationalism and identity politics, as is evident from the Rohingya refugee crisis. Reading this volume suggests that one possible way to deal with the tension between the demands of domestic politics in some littoral states and the economic logic presented here might be to take discrete steps among those who are willing and able to provide public goods such as maritime security, and in other aspects of managing and securing the commons. That is probably a work for the future.

For the present we have here a volume that makes the argument, based on solid academic scholarship, for the feasibility of connectivity within the Bay of Bengal region and between the region and the rest of the world. The arguments marshalled here make clear the benefits and positive outcomes that could be expected from a push to renew and build connectivity in the Bay of Bengal region. The editors and authors are to be congratulated for this academically rigorous and timely reminder of the opportunities that exist for us to enhance the welfare of our peoples around the Bay of Bengal through connectivity and cooperation.

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01

Introduction: Fostering Cooperation to Connect the Bay of Bengal Region

CONSTANTINO XAVIER, *Fellow, Centre for Social and Economic Progress.*

AMITENDU PALIT, *Senior Research Fellow, and Research Lead (Trade and Economics), Institute of South Asian Studies, National University of Singapore.*

Abstract

Despite being at the heart of what is now called the Indo-Pacific region, the Bay of Bengal has long been more of a geo-economic divider than a link between the Indian subcontinent and Southeast Asia. From India and Sri Lanka to Indonesia's Sumatra and from the Ganges and Irrawaddy deltas to the Andaman and Nicobar Islands, this is a geography marked by abysmal levels of connectivity, missed economic opportunities, and rising security risks. This introduction addresses the sources of these gaps, identifies solutions to mitigate challenges and proposes ways to cooperatively enhance connectivity in the Bay of Bengal region.

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In its most narrow scientific definition, the Bay of Bengal includes the littoral states of Sri Lanka, India, Bangladesh, Myanmar, Thailand, and Indonesia. Yet in a wider environmental and economic sense, any development in the Bay of Bengal is also intertwined with the destinies of the Himalayan states of Nepal and Bhutan, the Maldivian archipelago and the Malacca Strait's funnel state of Malaysia. Over two billion people live in and around this region which has recently seen unprecedented economic growth but also persistent challenges to sustainable development, including devastating cyclones and military conflicts.

From the broadest geostrategic lens, the Bay of Bengal is also a constituent of the Eastern Indian Ocean which connects to the Pacific Ocean via the neighbouring South China Sea and the twelve seas and two gulfs of the East Indian Archipelago, mostly part of Indonesian waters. This wider space is assuming increasing centrality as the world's demographic and geo-economic weight shifts to the East, predominantly shaped by the economic and security interests of India, China, Japan, and other Asian actors but also those of other extra-regional actors, including the United States, Europe, Russia, and Australia.

Reviving connectivity: Opportunities and risks

The Bay of Bengal was once one of the most connected, integrated regions of the world, featuring an enviable density of interactions and exchanges. Until the mid-20th century, it was the hub of a thriving Indian Ocean region, knit together through dense economic, social, and political interdependencies (Amrith, 2015). The Bay of Bengal was then a pivotal part of global supply chains, a period when the prosperity of a South-eastern Indian city like Madras was deeply tied dependent on that of its intra-regional peers such as Calcutta or Rangoon. The Bay of Bengal was then a region in its own right, featuring high levels of intra-regional connectivity, as well as inter-regional connectivity with the rest of the Indian Ocean and Asia. This economic centrality naturally found geopolitical expression in the visions of "one Asia" that drove the developmental and foreign policy visions of regional leaders like Nehru in the 1950s (Singh, 2011). Of the five co-sponsors of the Bandung Conference, four were leaders of Bay of Bengal countries: Jawaharlal Nehru (India), Sukarno (Indonesia), U Nu (Burma), and John Kotelawala (Ceylon).

Today, however, the contrasting reality is rather different and grim. Whether it is trade or transportation, people to people exchanges, or cooperative institutions and frameworks, the Bay of Bengal continues to feature deep divides and formidable barriers. From New Delhi it is often still faster and cheaper to ship a container all the way to Singapore than to the geographically closer cities of Dhaka or Yangon. While one of South Asia's once busiest railway routes (Kolkata-Dhaka) was restarted in 2008, after 43 years, dozens of links between India and Bangladesh remain inactive (Xavier, 2018).

The same barriers are also apparent in today's limited air connectivity, contrasting with the 1970s when the Northern Sri Lankan city of Jaffna had direct flight connections to several South Indian cities and one could also fly from Burma's Sittwe across to Chittagong, in Southern Bangladesh. Human mobility poses a further challenge to intra-regional connectivity: for example, it is easier for a citizen of China to get visas for countries in the Bay of Bengal region than for most people from *within* the region to cross borders to visit the neighbouring country (Xavier & Sinha, 2020). By most definitions of integration and criteria of connectivity, the last few decades have eroded the reality of the Bay of Bengal as a distinct region.

These barriers to mobility reflect almost half a century of economic and strategic divergence between the states of the Bay of Bengal, from the late 1950s until the 1990s. For decades, India found refuge in the comfort of economic insulation and subcontinental isolation, drifting apart from the rest of Asia. The Western and security-oriented focus on

Pakistan also led India to neglect its eastern borderlands, including the landlocked North-eastern states. During much of the late Cold War period, after the 1970s, India perceived the Bay of Bengal as a buffer region separating the subcontinent from the US-centric security alliances and increasingly China-centric economic developments to the east, in Indochina and Southeast Asia. The idea of regional cooperation and integration in South Asia, which made a belated institutional appearance in the 1980s in the form of the South Asian Association for Regional Cooperation (SAARC), was thus naturally a controlled experiment limited to the Indian subcontinent.

India's economic opening after 1991 was the precondition for change, leading New Delhi to adopt the Look East policy and a variety of new sectoral, dialogue, and summit partnerships with the Association of Southeast Asian Nations (ASEAN). The most visible expression of this economic reorientation towards the Bay of Bengal came with the formation of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) in 1997. Founded in Bangkok and initially premised as a sub-regional initiative, BIMSTEC was more of an inter-regional initiative, seeking to transform the Bay of Bengal into a bridge between the two geo-economic poles of South and Southeast Asia. On the other hand, in tandem with a strong economic embrace of China, Myanmar's entry into ASEAN in 1997 reflected the military regime's priority towards Southeast Asia. BIMSTEC was meant to balance that with a Westwards focus to the subcontinent, but this met with limited success.

Twenty five years later, the idea of a connected and cooperative Bay of Bengal as a pivot between South and Southeast Asia remains to be fulfilled. As a regional organization, BIMSTEC remains weak, understaffed and unable to deliver on the promise of a free trade agreement that all members committed to back in 2004. And despite cyclical military rule and political strife, Myanmar's economic and strategic outlook has determinedly shifted eastwards, towards the East Asian growth engines and the Southeast Asian regional integration process.

While progress since the late 1990s has thus been limited, there are a few positive trends emerging with the promise to correct the Bay of Bengal's connectivity gap. The last few years have seen a flurry of new initiatives. They are creating new interdependencies and throwing up opportunities to accelerate integration but, at the same time, they are also increasing new tensions and risks. Witnessing a moment of convergence, driven by economic and geostrategic interests, the region's states and other stakeholders are finding ways to enhance interdependence (CUTS International, 2019).

For instance, regional transport infrastructure is witnessing rapid development, with a record number of new deep sea ports being planned or established along the littoral, including in India (Paradip and Kamarajar), Sri Lanka (Hambantota, Colombo), Bangladesh (Matarbari), Myanmar (Sittwe, Kyaukphyu, Dawei), Thailand (Ranong) and Indonesia (Sabang). States are also investing in new road, rail and air linkages with their neighbours, including under the Asian Development Bank's initiative for South Asia Subregional Economic Cooperation (SASEC). The region's large consumer markets and consistent growth rates, most notably in India and Bangladesh, are driving new demands to link up the Bay of Bengal through new supply chains with Southeast and East Asia. This positive trend towards connectivity is bringing countries closer together, but it also brings up the challenge of coordination to explore these opportunities and expand cooperation. The consequent policy paradox is clear: *while the Bay of Bengal is seeing rising levels of physical infrastructure connectivity, this has not been commensurately matched by new cooperative habits. There is a manifest lack of cooperative mechanisms to manage and sustain regional connectivity.*

While the deficit of such collective governance instruments may decrease developmental benefits, growing regional interdependencies also generate risks and costs that are less visible. This is a negative side-effect of growing connectivity that is often neglected but warrants urgent attention. New areas of friction and tension are emerging as the Bay of Bengal shrinks as a geo-economic, cultural, and political space. Competition and conflict over resources will pose an added burden if not addressed jointly. The rising complexity and disruptive effects of such transnational challenges require cooperative solutions.

Climate change is having a disproportionate destabilizing impact on the region, affecting weather patterns, forcing population displacement and aggravating the destructive impact of cyclones. Political conflicts have generated refugee waves, as most recently seen with the Rohingyas from Myanmar to Bangladesh. The lack of coordinated action between different naval forces and coast guards continues to enable various transnational criminal networks to operate across the Bay of Bengal, from illegal fishing to the trafficking of people, narcotics, and weapons (Stable Seas, 2020). *The gap between rising connectivity initiatives and absent cooperation habits risks slowing down the developmental convergence for the entire region, with negative consequences for the rest of Asia.*

This reports addresses these two contrasting facets of growing interdependence in the Bay of Bengal region. It reviews both the positive (opportunity) and negative (risk) dimensions of rising connectivity and suggests ways to address them cooperatively, between different states and institutions that shape the region's rapidly changing reality.

Proliferation of connectivity initiatives

Reducing the connectivity-cooperation gap in the Bay of Bengal is particularly urgent now that the region is becoming the site of growing global attention and competition. The proliferation of connectivity initiatives risks turning into a policy burden for countries whose state capacity remains limited and increasingly exposed to external pressures. Sri Lanka's systemic collapse in 2022 serves as an apt reminder of how perennial state fragility poses a major threat for countries navigating the turbulent regional context, including rising expectations demanding difficult strategic choices. Other countries in the Bay of Bengal region, including Myanmar and Bangladesh, are among Asia's worst performers on economic, political or security resilience, with frail governance frameworks (OECD, 2022).

This institutional fragility is particularly challenging as countries in the region are witnessing a rapid change, moving from the past problem of scarcity to a new problem of plenty: Which of the many connectivity initiatives to engage, and with what priority and on what terms? How to scrutinize, implement, and sustain infrastructure projects with external assistance even while not falling into a debt trap or other forms of dependency that impinge on sovereignty? How to coordinate across different, often also competing bilateral, regional, and multilateral connectivity initiatives?

First, at the country- and bilateral level, there is a flurry of new initiatives, including the India-Bangladesh connectivity partnership, or the modernization of Sri Lanka's port sector. India, Bangladesh, and Thailand have all realized the importance of interdependence, devoting growing priority and resources to foster regionalism. New Delhi has reoriented its Neighbourhood First policy eastwards, manifest in its developmental focus on the Northeast region, as well as new lines of credit and other economic instruments to support Bangladesh, Myanmar, and Sri Lanka.

The landlocked Himalayan states of Nepal and Bhutan have prioritized energy and transportation links with the Bay of Bengal littoral to stimulate exports and access the ASEAN markets. Despite the coup in 2021, Myanmar's military regime has continued

to push for more connectivity projects with India, including the India-Myanmar-Thailand highway or the Kaladan multi-modal project. And Thailand is betting on a land bridge and a new deep sea port on the Andaman Sea to foster trade opportunities between Southeast Asia and the Indian subcontinent.

Second, at the regional level, there are also several new developments, including the revitalization of BIMSTEC and its growing focus on regional connectivity since 2016. The organization has streamlined and reduced the number of its focus areas from 14 to 7, adopted a new charter and held more regular summits, and adopted a more realistic and practical agenda of cooperation. The 2022 BIMSTEC Masterplan for Transport Connectivity reflects the regional focus on the fundamentals of upgrading physical infrastructure before seeking to reach higher hanging fruits such as a free trade agreement. BIMSTEC has also been making progress on developing a sub-regional power grid and it has served as an important socialization platform for officials from across the region to share best practices and institutional expertise on a wide range of sectors, from disaster management to tourism and cybersecurity.

Third, and most importantly, there is a new extra-regional dimension to connectivity in the Bay of Bengal. Following their economic opening, countries have diversified their trade baskets and investment partnerships. Their growing consumer markets are attracting a variety of global stakeholders. And the rise of Sino-American tensions in Asia has increased the Bay of Bengal's strategic importance, as a site for economic power projection and strategic influence (Raja Mohan, 2020). Such centrality was last seen during World War II, albeit then with a military focus and largely destructive effects. Today, *the Bay of Bengal is the object of growing economic attention, but that will only translate into beneficial impact if states in the region are able to make informed, independent, and strategic choices.*

China's Belt and Road Initiative had the most important extra-regional role in spurring the agenda of growth and connectivity in the Bay of Bengal. Driven by massive investments in new trade and infrastructure initiatives that connect China's hinterland to the Eastern Indian Ocean, Beijing has persistently delivered where many others had failed in the past. Wherever China found obstacles to connect with the Bay of Bengal, for example via an economic corridor from Yunnan to Bangladesh via Myanmar and India (the BCIM corridor), it developed alternatives, especially by bypassing India. The record is mixed, as apparent in the ongoing debate about the causes of Sri Lanka's debt, but it is now clear the BRI played a catalyst role in accelerating connectivity in the Bay of Bengal.

This encouraged several other extra-regional players to deepen their own engagement. Japan has been pushing its vision of a Free and Open Indo-Pacific through an emphasis on what it calls "quality infrastructure." With Bangladesh and like-minded partners, Tokyo has pursued the vision of BIG-B (The Bay of Bengal Industrial Growth Belt), which is being implemented since 2014 with support from Japan International Cooperation Agency (JICA) and The Japan Bank for International Cooperation (JBIC). Japanese investments in the transportation sector span the entire Bay of Bengal littoral, including the construction of the first deep sea port at Matarbari, in Bangladesh, and various economic initiatives to enhance connectivity through new supply chains between India, Bangladesh, and the Southeast and East Asian manufacturing hubs.

Tokyo has also coordinated its Bay of Bengal engagement with India, Australia, and the United States. The Quad has featured exercises on humanitarian assistance and disaster relief in the Eastern Indian Ocean, as well as discussions on infrastructure financing and supply chains. The United States has also been deepening its engagement with the Bay of Bengal, most notably through new USAID-financed development and connectivity initiatives focused on Bangladesh, Sri Lanka, and Thailand.

The region's new geostrategic and economic importance has also attracted the attention of other, traditionally less visible actors. In 2022, Australia announced a new financial programme to foster connectivity in the Eastern Indian Ocean focused on maritime shipping, disaster resilience, and information sharing. And guided by the European Union's new Indo-Pacific strategy, the European Investment Bank is also now on the lookout for strategically salient projects in the region, mostly focused on Bangladesh and the Bangladesh, Bhutan, India, Nepal (BBIN) sub-region.

All these new, extra-regional and bilateral connectivity engagements are developing in parallel to similar efforts by international financial institutions and multilateral groupings. The Asian Development Bank has played a pioneering role with the SASEC initiative, since 2001. The World Bank, traditionally focused on encouraging South Asia's Western connectivity initiatives between India and Pakistan, has also been redirecting its efforts eastwards. And most recently, the Asian Infrastructure Investment Bank (AIIB) has also entered the Bay of Bengal race to connect South and Southeast Asia.

Lagging capacity and cooperation

The recent financial collapse of Sri Lanka does not augur well for other states in the region seeking to navigate this increasingly competitive context of contending connectivity initiatives. *A more crowded region with competitive connectivity pressures from extra-regional powers will further stress state capacity and institutional resilience to make and enforce strategic choices for sustainable development.*

As with the resource curse for many African countries in the past, which stifled their developmental prospects after the focus on oil and other natural resources, states in the Bay of Bengal risk turning into the victims of an analogous connectivity curse. Burdened by external pressures to align with one or the other connectivity initiative, states have often succumbed to policy paralysis or top-down, short-sighted political decisions. Lack of technical expertise and eroding institutional and technocratic autonomy have all led to missed opportunities and new risks, exposing the region's systemic frailties.

With rising competition between different connectivity initiatives, especially between China and the Indo-Pacific powers, there are growing concerns about conflict over natural resources, securitization of sea lines of communication, and environmental sustainability. These Bay of Bengal commons now risk being depleted or fragmented, reducing the prospects of stability and welfare in the region.

Connectivity will not have the desired developmental and stabilizing effects in the Bay of Bengal unless there are commensurate cooperative and coordination mechanisms between different states and extra-regional stakeholders. Yet this gap is growing by the day, leaving the regional commons unregulated and ungoverned.

Habits of cooperation remain largely absent from this region, creating a vacuum for competition and growing unilateral behaviour. Institutionally, organizations like BIMSTEC remain weak and under-resourced to address these transnational challenges. From India and Sri Lanka up to Thailand and Indonesia, the maritime space of the Bay of Bengal and Eastern Indian Ocean continues to lack basic governance mechanisms. *Whether to regulate fishing and shipping, to respond to non-traditional security challenges such as refugee flows or natural disasters, or to coordinate infrastructure financing in ports or underwater sea cables, the cooperation deficit is rising.*

Geography, infrastructure and the regional commons

This report is the outcome of a two-year-long research project under the Sambandh Initiative of Regional Connectivity at the Centre for Social and Economic Progress in New Delhi.

The main objective was to generate actionable policy recommendations, based on evidence-based research, to bridge the Bay of Bengals' connectivity gap in different sectors through cooperative mechanisms. By engaging experts principally located in this region through research workshops and policy dialogues, the project also aimed at building capacity and habits of collaboration between scholars in South and Southeast Asia.

We asked contributing experts to focus on one sectoral issue in the Bay of Bengal region that reflects a cooperation deficit. Each brief thus focuses on three dimensions—1) identify a specific, sectoral connectivity and cooperation gap in the region and describe its implications for the region; 2) set a policy target or objective within a specific time horizon to correct this cooperative deficit; and 3) recommend a policy path with actionable steps towards achieving that objective. We organized the nine papers in three clusters: leveraging geographic location, building transportation and regulatory infrastructure, and managing the region's non-traditional commons.

The first set of three papers explores ways for the Bay of Bengal to reclaim its past centrality by leveraging its geography. First, at the broadest level, how can the region play a more prominent role in a rapidly changing global context? Chapter 2 by Amitendu Palit offers a macro picture, situating the Bay of Bengal in an increasingly competitive geo-economic environment. He argues that the Bay of Bengal could a) emerge as a new regional hub for global supply chains that are in the process of restructuring and reshoring; b) that the regional organization BIMSTEC should play a central role in anchoring these new regional supply chains; and c) that their implementation should rely on significant investment from global financing partnerships, including from India, Japan, and Australia.

Second, how can the Bay of Bengal region correct its internal connectivity gaps? Rather than an impediment, can its geographic diversity be transformed into strength? Chapter 3 by Pritam Banerjee focuses on this intra-regional dimension, arguing that the Bay of Bengal requires a collaborative approach between border, transport, and regulatory operations to link up the hinterland's economic clusters to the coastal areas and Indian Ocean's sea lines of communication. Banerjee recommends the establishment of Highly Facilitated Trade Corridors to bridge this gap, with a strategic and holistic approach to multi-modal transportation and communication.

A third, an even closer geographic lens shows that the Bay of Bengal is also composed of multiple sub-regions. Such clusters offer distinct comparative advantages but their political economies often also transcend political borders. In Chapter 4, Shahidul Haque focuses on the most significant case of the BBIN sub-region, with special emphasis on India's North-eastern states. Haque explains why it is in Bangladesh's developmental interest to leverage its location as a maritime link to these landlocked areas and proposes policies to enhance such sub-regional connectivity between East South Asia and the wider Indo-Pacific.

The report's second section then moves on to the critical challenge of building truly transnational and regional infrastructure to correct the inter-country connectivity gaps. This requires a dual focus on "hard" or physical infrastructure—from ports to roads, rail and digital—as well as on the "soft" or regulatory infrastructure, including joint standards and the digital realm. Free trade agreements, for example, have proven largely futile when not matched by improvements in trade facilitation, especially through transportation, logistics, and regulatory cooperation. Building the Bay of Bengal's infrastructure is thus a fundamental precondition to lock in patterns of interdependence and integration.

Chapter 5 by Riya Sinha and chapter 6 by Chathumi Kavirathna focus on the "hard" dimensions of railways and ports respectively. Kavirathna makes the economic case for more strategizing and cooperation on developing

trans-shipment hubs in the Bay of Bengal. Amidst rising competition between major ports, her case studies suggest that there is significant potential to develop a hub and spoke system with smaller ports and coastal shipping feeding into global maritime routes.

Sinha, on the other hand, argues in chapter 5 that the region's developmental ambitions, including through export-oriented manufacturing hubs, will also rely on a rail route to the Southeast Asian markets and beyond. Railways are the last, missing transportation link to connect South and Southeast Asia over land. While the India-Myanmar-Thailand Highway (IMT) is making slow but steady progress, Riya Sinha shows that it must be complemented with a railway link, especially for India and Bangladesh to truly act East.

Chapter 7 by Subhashini Abeysinghe and Hasna Munas focuses on the "soft" dimension of connectivity infrastructure. They show how rather than large and complex tariff-focused agreements, small and targeted policy initiatives can work wonders to enhance economic interdependence in the Bay of Bengal region. Their case study on processed food exports from Sri Lanka to India examines the benefits of mutual recognition agreements in testing and standards and argues for replicability between other Bay of Bengal countries.

The report's third section focuses on ways for states along the Bay of Bengal to cooperatively manage the regional commons. Connectivity initiatives cannot be thought of in a vacuum, divorced from political ground realities and the security environment. The governance deficit is large in the region, marked by a myriad of active conflicts, latent civil wars, and cyclical humanitarian and environmental crises. The Rohingya refugee crises have made this apparent in recent years, stalling several important land connectivity projects. While connectivity and interdependence are often seen as enhancing the prospects for inter-state peace and cooperation, the opposite also applies: connectivity projects will not progress unless there is political stability and popular support on the ground.

Chapter 8 by Collin Koh Swee Lean examines the maritime space of the Bay of Bengal as a regional common that requires more cooperative approaches, especially in the Andaman Sea. He proposes better maritime domain awareness and information-sharing mechanisms to address irregular human migration and illicit drug trade. Beyond a sum of bilateral initiatives, he also emphasizes the need to improve upon existing regional initiatives such as the Bali Process and BIMSTEC.

Chapter 9 by Bhanubhatra Jittiang lays out the growing systemic failures in the region and how a "complex emergency" exposes regional governance deficits to address social, economic, and political turbulence. He argues that states in the Bay of Bengal region should recognize the limitations of non-interference and their adamant adherence to the national security agenda and instead adopt new cooperative principles like ASEAN's "flexible engagement."

Finally, chapter 10 by Aaron Savio Lobo takes on an "aquascape" approach that looks at the Bay of Bengal from a natural resources angle, with a focus on its waters as an environmental common. He cautions that states are competing to safeguard their dwindling fish stocks, leading to a blind competition that impedes the sustainable management of blue foods. Lobo proposes a multi-level, coordinated governance approach at the local, national and regional levels to manage the Bay of Bengal marine ecosystem that considers the entire watershed from the Himalayan mountains to the Indian Ocean.

Policy parameters to foster cooperation

From leveraging geography to building the infrastructure and managing the commons,

the nine papers in this report contain valuable and practical recommendations to bridge the gap between growing connectivity and lagging cooperation in the Bay of Bengal region. While they address different sectors and geographies, there are five lines of continuity that stand out in these contributions.

First, all papers alert to the rising costs of non-cooperation between different states and other stakeholders in the region. *The failure to collectively address the region's transnational policy challenges represents a growing loss of welfare.* The European Union, for example, regularly estimates the quantitative "cost of non-Europe" in different sectors, from the single market, to energy, environment, or justice (Mayer, Vicard, & Zignago, 2019). In the Bay of Bengal, these costs are even more significant. While the much wealthier EU member-states may be willing to absorb the costs of non-cooperation or integration for political reasons, in a least-developed region like the Bay of Bengal this an unsustainable proposition. Whether it is on trade, climate or mobility, lack of cooperative habits will stifle development and, in some cases, also increase the risks of conflict with severe repercussions for regional stability.

Second, the papers also refer to the changing global context, marked by an economic slowdown and growing geostrategic competition. The pandemic and the Russia-Ukraine war have hit developing countries in the Bay of Bengal particularly hard, as manifested in the Sri Lanka crisis, and mounting economic stress in Bangladesh and Nepal. *The economic slowdown will continue to have political implications across the region, with inflationary pressures, growing inequality, social discontent and governance instability that deter much-needed external financing.*

Geostrategic competition is also expected to accelerate in the region. China's subdued response to Sri Lanka's financial collapse has left many wondering to what extent Beijing is either unable or unwilling to support developing countries in hard times such as these. This has also generated much introspection on whether countries in this region are sufficiently equipped to manage external offers, expectations, and pressures. If one looks, for example, at professional debt management as a critical indicator of state capacity, the panorama in the Bay of Bengal region looks rather bleak. *Extra-regional actors will have to consider the decreasing marginal utility of more financing for big-ticket infrastructure projects and how to shift resources to the increasing need to build institutional capacity and resilience through technical assistance.*

Third, several contributions refer to the neglected normative dimension of connectivity. Trade and infrastructure are often described as neutral elements that are fungible, developed in an ideological vacuum. In fact, however, even physical infrastructure is developed in a deeply political context that varies according to regime type: building a bridge either in China or in Bangladesh is a fundamentally different exercise that is shaped by contrasting governance realities and political principles.

Setting standards and reforming regulatory contexts are processes that require states to make informed choices, for example on the degree of accountability and transparency during environmental and social assessments of infrastructure connectivity projects. In line with the Sustainable Development Goal principle 16 on peace, justice and strong institutions, the *Bay of Bengal states will have to find ways to ensure that connectivity initiatives are developed through decision-making that is responsive, inclusive, participatory and representative at all levels* (United Nations, 2022).

Fourth, many of the recommendations in these papers also stress the importance of regional institutions to foster connectivity in the Bay of Bengal. While bilateral initiatives may be tempting for they often offer quick solutions, they are not always perfect substitutes for minilateral or multilateral settings. The sum of

several bilateral relations does not amount to a multilateral process. *Almost all contributions stress the importance to strengthen formal top-down organizational initiatives like BIMSTEC or more flexible cooperative platforms like BBIN*.

There are also recommendations for the Bay of Bengal states to adopt and adapt different cooperation mechanisms from the far more advanced ASEAN framework. Especially in larger countries like India, policy-makers will naturally be inclined to follow the more expedient bilateral route, but there will also be occasions where they must adopt a longer horizon to realize more sustainable, inclusive connectivity initiatives through larger, regional cooperation frameworks.

The exact modalities of cooperation depend on the issue area and actors involved. In some cases, cooperation can start with the low-hanging fruit of bilateral agreements that can be replicated in succession. In other cases, cooperation can be fleshed out as flexible minilateral initiatives, focused on consultations and coordination in a specific sector, without formal agreements. This is the case of the BBIN initiative on water or transportation connectivity. Finally, at the highest level, cooperation in the Bay of Bengal can assume an institutionalized and multilateral form, such as through BIMSTEC or other regional organizations.

Fifth and finally, the nine contributions also reflect the reality of an increasingly open, inclusive Bay of Bengal. As with the outdated xenophobic mantra of "Asia for Asians," which even China has begun to abandon, there is no value to insist on keeping the Bay of Bengal closed to extra-regional, global influences. *Historically at the cross-roads of different economic, social and political currents, the region will only develop and thrive if it returns to its role as a connector with adjacent regions and the rest of the world*.

This condition of geo-economic and strategic openness was presciently noted by Bangladesh's Prime Minister Sheikh Hasina back in 2011: "the South Asia of the future has to be a region connected by physical linkages as well as through ideas, individuals and initiatives within and *beyond* South Asia." (Bangladesh Ministry of Foreign Affairs, 2019, emphasis added). The same holds true today for the Bay of Bengal: deeper connectivity *within* the region will require more cooperation *beyond* the region.

References

Amrith, S. S. (2015). *Crossing the Bay of Bengal: The furies of nature and the fortunes of migrants*. Cambridge, Massachusetts: Harvard University Press.

CUTS International. (2019). Bridging the East: Trade and Transport Connectivity in the Bay of Bengal Region. Retrieved from https://www.cuts-international.org/bbinmva/pdf/Project_Report_on_Bridging_the_EastTrade_and_Transport_Connectivity_in_the_Bay_of_Bengal_Region.pdf

Mayer, T., Vicard, V., & Zignago, S.: The cost of non-Europe, revisited. *Economic Policy, 34*(98), 145–199.

Bangladesh Ministry of Foreign Affairs (2019). Selected Speeches of Prime Minister Sheikh Hasina during official visits. Retrieved from https://mofa.gov.bd/sites/default/files/files/mofa.portal.gov.bd/publications/32c5e7ea_bdcd_4b42_ac9c_e93789035ab4/Select%20Speeches%20of.pdf p. 50.

OECD (2022), States of Fragility 2022, OECD Publishing, Paris. Retrieved from https://doi.org/10.1787/c7fedf5e-en

Raja Mohan, C. (2020). The Bay of Bengal in the Emerging Indo-Pacific. *ORF Issue Brief No. 416*, Observer Research Foundation. Retrieved from https://www.orfonline.org/research/the-bay-of-bengal-in-the-emerging-indo-pacific/

Singh, S. (2011). From Delhi to Bandung: Nehru, 'Indian-ness' and 'Pan-Asian-ness'. *South Asia: Journal of South Asian Studies*, *34*(1), 51–64.

Stable Seas. (2020). Bay of Bengal. Retrieved from https://www.stableseas.org/post/stable-seas-bay-of-bengal

United Nations. (2022). The Sustainable Development Goals Report. Retrieved from https://www.un.org/sustainabledevelopment/peace-justice/

Xavier, C. (2018). Reactivating a legacy of integration through BIMSTEC. *Seminar 703*, Retrieved from https://www.india-seminar.com/2018/703/703_constantino_xavier.htm

Xavier, C. & Sinha, R. (2020). Regional connectivity and India's BIMSTEC policy. *National Security*, *3*(1), 34–51. Retrieved from https://www.vifindia.org/sites/default/files/national-security-vol-3-issue-1-article-CXRS.pdf

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02

Can the Bay of Bengal be a New Hub for Regional Supply Chains?

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Abstract

The COVID-19 pandemic has set off an exhaustive reorganisation of supply chains. The restructuring was precipitated by sourcing dependencies of several major chains (e.g., semiconductors, pharmaceuticals, energy, and food) in a few countries and the functional risks arising from sourcing disruptions in those locations. Anxieties over prominent sourcing hubs 'weaponizing' economic influence for extracting geopolitical benefits are also motivating the restructuring. Noteworthy multi-country initiatives for safeguarding strategic supply chains include the Supply Chain Resilience Initiative among India, Japan, and Australia and the efforts by the Quad (United States, India, Australia, and Japan). As chains restructure and re-shore, specific regional geographies are poised to emerge as new hubs of supply chains. The Bay of Bengal region is a distinct possibility in this regard. The region's economic heterogeneity makes it a suitable geography for hosting a variety of supply chains. Much of its success in hosting new supply chains will depend on the degree to which it can accelerate the growth of intra- and extra-regional connectivity, enabling easy movement of goods, capital, technology, and people.

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Supply chain restructuring and the Bay of Bengal

The COVID-19 pandemic is the most catastrophic global public health crisis since the Spanish Flu in 1918. It has also been a huge disruptor for supply chains. No other event in the last few decades has drawn as much attention to the vulnerability of supply chains as COVID-19.

Production halts across the world following the pandemic outbreak led to complex and spatially fragmented global supply chains rupturing rapidly. The meltdown began from Wuhan in central China's Hubei province, the first city in the world to go into lockdown on 23 January 2020 (Illmer, Wang, & Wong, 2021). The closure had a profound impact on global supply chains, several of which were linked to the city. More than 200 Fortune Global 500 firms were present in Wuhan, and more than 100 Fortune 1000 firms had direct Tier 1 suppliers in Wuhan and its neighbourhood (Kilpatrick & Barter, n.d.).

As the lockdown became prolonged, supply chain managers across the world began panicking over dwindling inventories of raw materials and intermediates sourced from China. In India, the biggest concern was over diminishing stocks of drug intermediates and active pharmaceutical ingredients (APIs). Further concerns for India arose over disruptions in imports of coal, fertilisers, electrical machinery, automobile parts and components, and a large number of other essential items.

Geopolitics of sourcing and resilience initiatives

India and several other large economies with significant import dependencies on China, such as Australia, Japan, the United Kingdom, and the United States, were worried about not being able to access essential imports from China. These anxieties underpinned the importance of securing sourcing. This realisation was backed by the worry that countries like China, enjoying near-monopoly prominence as sourcing hubs for critical natural resources, raw materials, and industrial components could, if they wished, exploit their advantage for geo-political ends.

With supply chains getting rocked by sourcing malfunctions and being identified as instruments of geopolitical 'power' projection, efforts began for safeguarding sourcing and supplies. Regional efforts to safeguard chains have focused on minimising risks arising from unexpected disruptions from unforeseen events such as the pandemic, or deliberate 'weaponization' of the strategic advantage enjoyed by the sourcing locations (Palit, 2022). The major initiatives for reorganising supply chains for making them secure and resilient include the Supply Chain Resilience Initiative (SCRI) between India, Japan, and Australia, and efforts by the Quad (US, India, Australia and Japan).

Bay of Bengal and supply chains in the Indo-Pacific

As supply chains restructure and re-shore, specific regional geographies are poised to emerge as new hubs of supply chains. The Bay of Bengal region is a distinct possibility in this regard.

The Bay of Bengal has an interesting economic geography. In a geographically contiguous sense, it comprises countries on the rim of the Bay of Bengal—India, Bangladesh, Myanmar, Thailand, and Sri Lanka. Formalisation of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)—the most prominent regional architecture of the Bay of Bengal—has added Nepal and Bhutan to the Bay of Bengal's core community. The pan-economic understanding of the region, however, stretches well beyond this community.

A maritime vision of the Bay of Bengal drawn from cross-continental passenger and cargo shipping routes links the waters of the Bay of Bengal to the Strait of Malacca and the Pacific Ocean to the east, the Indian Ocean to the south, and the Gulf of Mannar and the Arabian Sea to the west. Moving further west and

south-west, the region connects to the Persian Gulf and the African continent.

The maritime perspective of the Bay of Bengal region leaves no doubt that it is a pivotal part of the geo-strategic vision of the 'Indo-Pacific.' The Indo-Pacific, as articulated by the former Japanese Prime Minister Shinzo Abe in his address to both Houses of the Indian Parliament on August 22, 2007, is a 'confluence of the two seas', the Pacific and the Indian Oceans (Abe, 2007).

As supply chains scramble to reorder within the Indo-Pacific region in the aftermath of COVID-19, they are searching for amenable locations. The Bay of Bengal's attractiveness in this regard is undisputed.

From a supply chain perspective, the Bay of Bengal's appeal arises from the significant agglomeration benefits it offers to cross-border back-and-forth movements of goods and people. It connects by water to extensive stretches of maritime traffic across the eastern and western hemispheres. By land too, it connects the East European, Central, West, and South Asian regions to Southeast Asia—through Myanmar and the former French Indo-China group of countries (Cambodia, Laos, and Vietnam)—to the Malaysian peninsula.

Thus, the Bay of Bengal region's success in emerging as an active hub of supply chains depends crucially upon its connectivity capacities—both within itself and with other regions. Strong and well-managed connectivity can be a true enabler for accommodating a variety of supply chains in the region.

Supply chains and regional connectivity

It is important for the Bay of Bengal economies and the BIMSTEC to comprehend the significance of the economic and strategic prospects for the region that can accrue from its maturing into an energetic hub for supply chains.

Benefits of hosting supply chains

Greater integration of the region with global and regional supply chains would bring it substantial benefits through higher trade in goods and services. More supply chains would result in greater movements of commodities across borders, both intra- and extra-regional, leading to enhanced goods trade. Strong supply chains would also lead to greater movement of business visitors, along with an increase in several cross-border services such as shipping, rail, aviation, finance, education, and retail, leading to a substantial increase in several segments of the services trade.

Growth of supply chains would also facilitate new investments. These investments, apart from their focus on creating new production facilities within the Bay of Bengal economies and thereby generating new jobs and livelihoods, would also flow into infrastructure services for expanding regional connectivity.

A supply-chain focused investment outlook makes prospects of long-term foreign direct investment (FDI) from Japan, Australia, Singapore, the United Arab Emirates (UAE), and the US in regional logistics facilities particularly bright. These countries, which are major capital exporters and core actors in various supply chains, are keen on committing to a new generation of resilient supply chains diversified in sourcing and concentrated in strategic parts of the Indo-Pacific geography like the Bay of Bengal.

Supply chains, logistics and trade facilitation

A supply-chain focused approach will attract extra-regional investments into logistics and augment national logistics capacities of the Bay of Bengal economies, most of which are currently low on global logistics performance indicators. Except Thailand and India, which are ranked 32nd and 44th in the global logistics performance index (LPI) of the World Bank, the remaining BIMSTEC economies are ranked quite low in the LPI (The World Bank, 2018). Low LPI ranks reflect relatively higher costs of cross-border transportation and are obstructive to the growth of a diverse range of supply chains.

The COVID-19 pandemic has emphatically reinforced the role of logistics in safeguarding supply chains. As cracks began surfacing in supply chains due to sourcing problems during the pandemic, businesses and countries realised that the disruptions were not only due to factories closing down; they were significantly attributable to logistics failures as well.

Ports were congested as containers faced long delays in offloading and onloading cargo with the number of on-site staff reducing fast due to rising infections. The same problem hit the invoicing and back-end movement of cargo from various ports to their hinterlands. The problems were greater in ports that were relatively more labour-intensive in on-site functions. Digitized 'smart' ports were able to avoid these problems to a large extent. Such ports, however, are rare in the Indo-Pacific region, with the exceptions of Shanghai, Singapore, Busan, and Adelaide.

The emphasis on supply chain resilience in initiatives like the SCRI and Quad focuses strongly on the digitisation of logistics functions. This is just what the Bay of Bengal region needs for drawing investments into new generation logistics facilities enabled by cutting-edge trade facilitation. Better trade facilitation improves the quality of logistics and brings down the cost of cross-border movement of goods. The emphasis on supply chains will encourage investments in trade facilitation geared towards institutionalising regional best practices.

Extra-regional economies and major stakeholders in the Indo-Pacific such as Japan, Australia, Korea, and Singapore, could be long-term partners for the Bay of Bengal in investing in 'best practices' for trade facilitation, like paperless systems for documenting exports and imports. Investments in such 'smart' logistics would also contribute to the greater goal of sustainable development.

Supply Chain Resilience and the BIMSTEC Transport Connectivity Master Plan

An important condition for the Bay of Bengal region in increasing its appeal as a location for supply chains is to dovetail its vision of connectivity to that of safeguarding regional supply chains. Unfortunately, till now, the congruence between fostering efficient supply chains and connectivity has hardly been featured in discussions on connectivity within BIMSTEC. This emphasis needs to be promoted urgently for drawing closer the imperatives of supply chain resilience initiatives in the Indo-Pacific with those of connectivity growth in the Bay of Bengal.

How can supply chain resilience projects in the Indo-Pacific, such as the SCRI, be aligned with connectivity initiatives in the Bay of Bengal? The obvious solution is to do so through the transport connectivity master plan of the BIMSTEC, developed in collaboration with the Asian Development Bank (ADB, 2022).

The transport connectivity master plan, approved at the last BIMSTEC summit held in Colombo during March 30-31, 2022, has several projects that can contribute to the goal of making supply chains resilient, thereby serving both the objectives of securing supply chains and expanding regional connectivity. Indeed, a robust regional transport infrastructure, as envisioned in the master plan, would be of great help in making supply chains secure by minimising disruptions in the movement of products through various trade routes, both intra-region as well as those between the region and the rest of the world.

Supply chains and connectivity: The policy agenda

Safeguarding supply chains requires intra- and extra-regional cooperation, and addressing trade facilitation issues in various segments of multi-modal connectivity. This cannot be achieved without scaling up the perspective and vision on regional connectivity from a limited view of land and maritime links within the BIMSTEC to one where various transport and systemic connections link businesses and customers seamlessly between the BIMSTEC and extra-regional Indo-Pacific economies.

A comprehensive set of policies is required for a regional connectivity agenda that would create enabling conditions for safeguarding supply chains and encourage their positioning in the Bay of Bengal region. Some of the key elements of the policy agenda are as follows:

1. BIMSTEC members should commence Track 1.5/ Track 2 dialogues with extra-regional member economies—Japan, Australia, Singapore, Korea, Vietnam—that have commendable records of trade facilitation in regional connectivity and major presence in regional supply chains. The dialogues should focus on 'learning' of best practices in cross-border supply chain management.

2. BIMSTEC, in consultation with major regional economies engaged in supply chains, should identify industries whose supply chains have strong prospects in the region. It would be sensible to identify a priority group of industries for maximising trade facilitation and connectivity efforts. India, Thailand, and Bangladesh should take the lead in identifying industries.

3. India is part of the SCRI initiative. As the largest BIMSTEC member and a key stakeholder of SCRI, it must work on exploiting the synergies between SCRI and the BIMSTEC transport connectivity master plan.

4. The Advanced Logistics Project (REG-TF-029)[1] in the BIMSTEC Transport Connectivity Master Plan—a regional flagship project—can become a part of SCRI. The project resonates with the SCRI's intent to 'facilitate joint projects for supply chain resilience' and 'promote supply chain principles in the region' (*Joint Statement on the Supply Chain Resilience Initiative by Australian, Indian and Japanese Trade Ministers*, 2022).

5. The Advanced Logistics Project was to be implemented from 2019–2023. However, it is yet to find funders. A close engagement between key investment promotion agencies such as Austrade, Invest India, and JETRO, can help in identifying funders. Funding opportunities can also be identified through the Bay of Bengal connectivity partnership between Australia and India, being implemented through the Australia-India Infrastructure Forum (Minister of Foreign Affairs, 2022).

6. India should work with other Bay of Bengal economies to extend its initiative of digitisation of bills of lading and trade documents (e.g., e-delivery orders, e-certificates of origin, letters of credit) across the region. The trade facilitation has been enabled through a blockchain platform and is currently operational at 19 ports connecting more than 16,000 corporate stakeholders (The Maritime Executive, 2020). Prospects of supply chains in the region would greatly expand if other BIMSTEC members adopt the practice.

The biggest challenge that BIMSTEC and the Bay of Bengal community must overcome is the sluggishness that has historically characterised policy implementation in the region. A weak BIMSTEC secretariat with limited capacity for steering connectivity projects is a hindrance to progress, as is a lack of focused discussion and understanding of supply chain management issues within the grouping. Summoning the necessary energy for expediting a policy agenda addressing the twin needs of supply chain management and connectivity won't be easy. A lot will depend on the proactive role played by the leading BIMSTEC members, India and Thailand, and extra-regional actors like Japan and Australia, in committing to the policy agenda.

[1] REG-TF-029: Regional Trade Facilitation project for the development of advanced logistics (e.g. Supply chain management, less than container load [LCL] services, last mile or kilometer logistics. The estimated cost as of 2018 stood at $5 million and the estimated timescale set between 2019-2023. The project will improve logistics performance in BIMSTEC member states.

References

Kilpatrick, J. & Barter, L. (n.d.). *COVID-19: Managing supply chain risk & disruption*. Delloite. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/Risk/COVID19-Managing-Supply-Chain-Risk-and-Disruption.pdf

Palit, A. (2022). *The Geopolitical imperative for reorganising global supply chains* (ORF Issue Brief No. 533). Observer Research Foundation. Retrieved from https://www.orfonline.org/wp-content/uploads/2022/04/The-Geopolitical-Imperative-for-Reorganising-Global-Supply-Chains.pdf.

Abe, S. (2007). "Confluence of the two seas" speech by H.E.Mr. Shinzo Abe, Prime Minister of Japan at the parliament of the Republic of India [Speech transcript]. *Ministry of Foreign Affairs of Japan*. Retrieved from https://www.mofa.go.jp/region/asia-paci/pmv0708/speech-2.html.

Asian Development Bank. (2022). *BIMSTEC masterplan for transport connectivity*. Manila & Dhaka: Asian Development Bank and BIMSTEC. Retrieved from https://www.adb.org/sites/default/files/institutional-document/740916/bimstec-master-plan-transport-connectivity.pdf.

Joint Statement on the Supply Chain Resilience Initiative by Australian, Indian and Japanese Trade Ministers. (2022, March 15) [Press Release]. Ministry of Economy, Trade and Industry of Japan. Retrieved from https://www.meti.go.jp/press/2021/03/20220315008/20220315008-1.pdf.

The Maritime Executive. (2020, June 11). India launches digitization of the bill of landing and trade documents. *The Maritime Executive*. Retrieved from https://www.maritime-executive.com/article/india-launches-digitization-of-the-bill-of-lading-and-trade-documents.

The World Bank. (2018*). International LPI global rankings 2018* [Interactive Map]. Retrieved from https://lpi.worldbank.org/international/global.

Illmer, A., Wang Y., & Wong, T. (2021, January 22). Wuhan lockdown: A year of China's fight against the Covid pandemic. *BBC News*. Retrieved from https://www.bbc.com/news/world-asia-china-55628488.

Press Information Bureau Delhi. (2021, April 27). *Australia-India-Japan Trade Ministers' Joint Statement on Launch of Supply Chain Resilience Initiative* [Press Release]. Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1714362.

The White House. (2021, September 24). *Fact Sheet: Quad Leaders' Summit* [Press Release]. Retrieved from https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/24/fact-sheet-quad-leaders-summit/#:~:text=Launch%20a%20Semiconductor%20Supply%20Chain,semiconductors%20and%20their%20vital%20components.

Minister of Foreign Affairs. (2022, February 14). *Strengthening out ties with India* [Press Release]. Retrieved from https://www.foreignminister.gov.au/minister/marise-payne/media-release/strengthening-our-ties-india.

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03

Conceptualising Highly Facilitated Trade Corridors in Southern Asia

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Abstract

Most of the global trade takes place between corridors that connect major economic or logistics clusters. The efficient operation of these corridors, therefore, assumes great importance for the trading economies connected through them. Some of the most important corridors criss-cross overland borders with road, rail, inland water, and coastal linkages between economies. As India advances on an integrated approach to transport infrastructure development under its ambitious Prime Minister's Gati Shakti initiative that includes several industrial and economic corridors, it is important to understand how these programs to improve connectivity within the Indian hinterland can be synergised with cross-border regional connectivity to further regional economic integration. An important aspect of achieving such synergy would be to develop a holistic framework for agencies of the countries in the corridors to work together and address the physical and regulatory bottlenecks that impede the efficient movement of goods across borders. Such cooperation should focus on coordinated development of border infrastructure, use of technology to simplify processes on both sides of the border, and protocols for information exchange between regulatory agencies. This policy brief builds on these ideas and focuses on the concept of a Highly Facilitated Trade Corridor (HFTC). An HFTC can be considered to be a combination of initiatives to address all major impediments to efficient transport and border operations and ensure effective regulatory collaboration. Developing such HFTCs focusing on the most important trade corridors connecting countries in the Bangladesh, Bhutan, India, and Nepal or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation sub-regions would not only support better regional integration, but the demonstration effect of operationalising such a corridor would lead to the adoption of similar facilitation measures in other cross-border corridors resulting in an overall improvement in regional integration objectives across the region.

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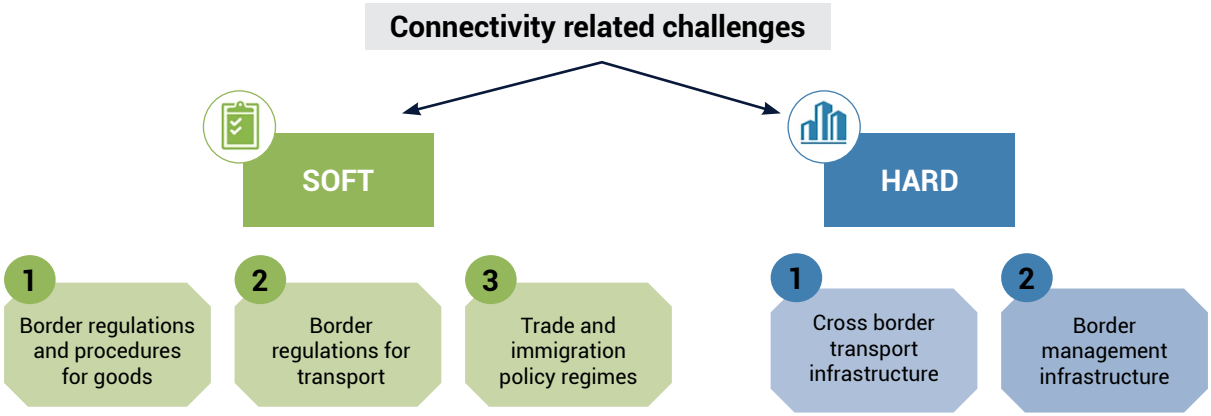
Shortfalls in regulations and procedures

The basic premise of an efficient global market is the smooth flow of goods, services, technology, and people across borders, in other words, connectivity. Literature on trade and transaction costs has dealt extensively with the idea of political borders as barriers (Bougheas, Demetriades, & Morgenroth, 1999). The lack of effective economic connectivity has been a much-discussed policy issue in the context of the Bangladesh, Bhutan, India, and Nepal (BBIN) sub-region (Banerjee, Sengupta, & Stobdan, 2010) The borders between India and Bangladesh that dissect the BBIN region have long been considered one of the worst managed and subjected to the most severe transaction costs (Lakshmanan, Subramanian, Anderson, & Leautier, 2001). Generally, poor infrastructure and a small number of operational rail and road cross-border corridors create congestion which is further aggravated by the poor governance of border procedures (i.e., enforcement of customs and other allied regulations) and lack of institutional solutions to facilitate trade (Roy & Banerjee, 2010).

Statistics show that tariff reduction under South Asian Free Trade Agreement (SAFTA) has not helped improve economic integration beyond a certain level. Most studies indicate improvement in connectivity including the institutional and procedural aspects of connectivity that will be the key to improving economic integration in the BBIN region (Raihan, 2015).

Regional integration in the BBIN sub-region has been held hostage by connectivity-related barriers. The BBIN sub-region is a part of the larger geography that I would like to call Southern Asia, including the BBIN and all of mainland South-East Asia (i.e., Myanmar, Thailand, Cambodia, Vietnam, Laos, Peninsular Malaysia, and Singapore). Such connectivity-related barriers can be broadly categorised under hard infrastructure-related issues and soft policy and procedural issues. More specifically, they can be summarised under five distinct categories as represented in Figure 1.

Figure 1: Connectivity-related issues



Source: Developed by the author

Border regulations and procedures for goods and people refer to trade facilitation and immigration issues, respectively. Border regulations for transport define the rules and procedures that govern the cross-border movement of vehicles (including trucks) and trains, such as the physical inspections and paperwork to comply with such regulations.

For example, most trucks take anything between 60 to 100 hours to cross the Petrapole-Benapole land port at the India-Bangladesh border. Typical border crossings in the US-Mexico border or the border between European Union (EU) and non-EU border states take less than 30 minutes.

Trade policy regimes relate to tariff and non-tariff measures that are applied to goods, while the immigration policy regime refers to the rights and privileges of foreign citizens as defined by the visa requirements and rules.

Cross-border transport infrastructure challenges refer to last-mile connectivity between many border points and the main trunk infrastructure. A good example of challenges in this context is the road between Kolkata and Petrapole leading to the India-Bangladesh border that runs through congested towns with several illegal encroachments along this route. There is also a busy railway crossing en route where trucks have to stop and wait for trains to pass, thereby adding to transit time. Other challenges include examples of inadequate infrastructure such as the Bangabandhu Bridge in Bangladesh which is currently unable to bear the weight of fully-loaded container trains impeding direct container rail connectivity between Dhaka and the Indian border.[1]

Border management infrastructure consists of an ecosystem of land ports (serving both rail and road) that act as gateways through which the cross-border movement of goods and people is regulated. Inadequate or poorly planned infrastructure at the border can thus impede the efficient movement of goods and people.

Conceptualising Highly Facilitated Trade Corridor in Southern Asia

This policy brief introduces the concept of Highly Facilitated Trade Corridors (HFTC) which provides a holistic approach for addressing all of these connectivity-related challenges except trade and immigration policy (issue no. 3 in figure 1).

Most of the global trade takes place between corridors that connect major economic or logistics clusters. The efficient operation of these corridors, therefore, assumes great importance for the trading economies connected through them.

Such corridors can represent a land-based corridor connecting contiguous countries. A good example of this is the Lobito Corridor that connects the hinterlands of landlocked Zambia and the Democratic Republic of Congo (DRC) with the port of Lobito in Angola. This corridor will link these three countries, as well as link landlocked Zambia and DRC with other countries through the port of Lobito.

Such corridors can also be multi-modal. For example, EU-China Smart and Secure Trade Lanes (SSTL) corridor covers both the overland railway route connecting China with the EU via Kazakhstan and Russia, as well as the maritime linkages connecting the main ports in Belgium, France, Germany, and Italy with the port of Shanghai.

The HFTC can be considered to be a combination of initiatives to address all major impediments to efficient transport and border operations, and ensure effective regulatory collaboration. Developing such HFTCs focusing on the most important trade corridors connecting countries in the BBIN sub-region would not only support better regional integration, the demonstration effect of operationalising such a corridor would also lead to the adoption of similar facilitation measures in other cross-border corridors leading to an overall improvement in regional integration objectives across the board.

There are four inter-related objectives for developing an HFTC for land corridors:

1. *Facilitate seamless cross-border transport operations*: By focusing on eliminating trans-shipment between trucks of the neighbouring countries at the border, congestion can be reduced. This can be further streamlined by minimising

[1] A new multi-purpose rail and road bridge is under development, along with new road and rail linkages. Located much further south of the current route, it would provide a more direct route between Dhaka and Kolkata.

customs-related procedures and inspections currently undertaken at the border locations on both sides.

2. *Collaboration between customs and other regulators at the border to minimise time and complexity for clearance of goods*: Achieving the first objective is not possible without the active cooperation and trust between regulators on both sides of the border with proper institutional mechanisms for sharing information, intelligence, and putting in place formal systems for operational cooperation. Ideally, such collaboration could lead even to regulators working together with single-point clearance, sharing facilities and conducting joint physical inspections, wherever possible

3. *Systems inter-operability between regulators and land ports*: The second objective requires institutionalised protocols for information exchange between regulators that would provide information in advance for faster clearance of cargo. Digital exchange of information would eliminate the need for physical documents issued/endorsed by one administration to be submitted across the border to the other administration which adds to delays in clearance.

4. *Coordinated border infrastructure development and management*: Efficiency of cargo throughput, including dwell time at land ports, depends on the quality of infrastructure on both sides of the border. Otherwise, the side with inadequate/ inferior infrastructure will become a bottleneck. Coordinated development (which includes upgrading existing infrastructure deemed inadequate or inferior on both sides) ensures that such impasses do not arise.

In the context of the fourth objective, the BIMSTEC Masterplan for Transport Connectivity developed by the Asian Development Bank (ADB), in partnership with BIMSTEC member governments, assumes importance.[2] This Masterplan identifies most of the last-mile to-the-border and at-the-border infrastructure gaps, making it integral to the ten-year action plan. These identified gaps, as also applied to the HFTC, have to be addressed on priority.

The next section provides a concise deliberation of the key actionable items and specific interventions required to achieve the four objectives.

Building blocks of HFTC

Developing HFTCs would broadly require the following ten interventions, under the two broad umbrellas of a) ensuring seamless cross-border transport operations and movement of goods, and b) maintaining efficient border infrastructure.[3]

Seamless cross-border transport operations

1. *Managing the temporary admission of vehicles*: This includes a set of comprehensive protocols that will allow the right of trucks and other commercial vehicles to cross borders by eliminating the need for trans-shipment between vehicles. These protocols would define the rights and obligations of foreign vehicles, as well as issues of vehicular standards, driver licensing, insurance, transit fees, and customs guarantees related to the vehicle. The BBIN Motor Vehicles Agreement (MVA) and BIMSTEC MVA would provide such protocols in the Southern Asian context. The greater operational flexibility the protocols allow, the more optimal and efficient transport operations would be (elaborated in point 2 below). Mandatory use of technology such as the Global Positioning System (GPS) would provide maximum assurance to

[2] BIMSTEC Master Plan for Transport Connectivity, Asian Development Bank accessible at https://www.adb.org/documents/bimstec-master-plan-transport-connectivity.

[3] These ten interventions are important as per this author's view, and should be viewed more as a perspective rather than a rule.

regulators while allowing for minimum pre-requisites.

2. *Allowing the movement of trailers and flatbeds, and not just trucks and change of drivers*: Critical flexibilities in the MVA protocols will include allowing trailers and flatbeds to cross-borders, for e.g., allowing an Indian trailer/flatbed to switch to a Bangladeshi tractor (prime-mover) at the border. It should also allow change of drivers at the border, for e.g., allow a Myanmar driver to take over the truck from a Thai driver at the border.

3. *Customs Related Protocols that allow for inland clearances*: The most important facilitation would be to allow the seamless movement of sealed containerised cargo (or closed trucks in general) between hinterland customs stations along the corridor, without any procedures being done at the borders. This could be facilitated using Radio Frequency Identification (RFID) e-seals for containers/closed trucks and the use of non-intrusive inspection technologies at border crossings. Containers/trucks would be sealed and cleared by customs in an inland location (say, Kolkata in India) and e-sealed. The truck would be scanned and weighed using advanced X-ray scanners allowing non-intrusive inspection and weigh-in-motion (WIM) technology, and the RIFD seal would be checked by sensors for any violation, all of this in a matter of minutes, and the truck would be allowed to cross across the border. It would proceed to an inland customs location (say in Dhaka) and customs and other clearance of goods would take place there. The concept of inland clearances would also apply to the movement of cargo by trains along the corridor. Point 5 below expands on the additional facilitation that should be applicable to the movement of cargo by rail. Similar facilitation should be extended to trucks/trains transiting through foreign territory (for e.g., a Nepalese truck transiting India to travel to Bangladesh). Protocols should allow for trusted transporters and trusted trader schemes (adoption of mutually recognised AEO programmes). [4]

4. *Cooperation on operational and safety standards and associated physical inspection and handover of trains between administrations*: International Union of Railways (UIC) has developed the framework Agreement on Freight Train Transfer and Inspection (ATTI) to help enable seamless handover of trains between two different rail administrations across borders.[5] HFTCs should adopt a framework (or a guiding principle) through which institutionalised cooperation will ensure seamless movement of freight trains with minimum duplication of inspections, checks, documentation etc. without compromising on security, while developing shared best practices in standards and their enforcement.

5. *Institutional mechanism to enable seamless cross-border movement*: Effective management of cross-border movement requires close institutional cooperation between multiple agencies of different countries in a corridor. In light of this, it is important to put in place a formal institutional mechanism for cooperation. A good example of such an institutional framework can be found in the US-Canada Transportation Border Working Group (TBWG) that brings together multiple transportation and border agencies, and other organisations, to coordinate transportation planning, implement policy, and deploy technology to enhance border infrastructure and operations. Such an institution can also be tasked with the responsibility of developing operational

[4] AEO or Authorised Economic Operator is a trusted trader/operator program based on World Customs Organization framework. Entities qualifying as AEOs received a number of additional facilitations including lesser degree of scrutiny and inspections and faster clearances.

[5] See Agreement on Freight Train Transfer Inspection (ATTI) at https://uic.org/special-groups/atti/#What-is-ATTI.

protocols and SOPs between different sets of regulators or border managers that ensure smooth management of cross-border movements and expeditious solution to any challenges that arise.

Coordinated planning, development, and management of land border facilities

6. *Focus on infrastructure and inter-operability*: Critical focus is required in two areas. First, the upgradation or development of adequate road capacity between the land ports and economic centres along the corridor, including bridges to handle heavy freight movement and a large volume of traffic. Second, the development of rail linkages that allow inter-operability, for e.g., double gauging (provision for both metre gauge and broad gauge). This will require standardisation in signals and other operational aspects of railroad movement for thorough end-to-end operations between the different systems and the upgradation or development of bridges with adequate load-bearing capacity.

7. *Coordinated development of cross-border gateways with best-in-class design, technology and management Standard Operating Procedures (SOPs)*: Investing in border facilities without coordinating with the other side is a poor strategy. The throughput at any border facility, no matter how advanced, will always be subject to limitations on the other side of the border. This is where land borders fundamentally differ from maritime and air gateways. Since resources are always limited, the concept of developing HFTCs would have to include the identification of mutually agreed cross-border points on which countries on both sides of the border would focus their energies. This has indeed been the global best practice in all successful land-border corridors. Essential features in such border facilities will have to include infrastructure to support the technology enablement needed for seamless cross-border movement of trucks and trains, i.e., dedicated lane/pass through facility equipped with:

   - Weigh-in-motion (WIM) devices to capture the axle and gross-vehicle weights of passing trucks/train wagons.
   - Advanced X-Ray inspection systems used for scanning cargo containers, trucks, train wagons and other vehicles in high-volume operations.[6]
   - Overhead RFID e-seal scanners that check whether seals put in place by customs have remained intact in transit.

   In addition, large proportion of this trade in the Southern Asian region is related to bulk goods (industrial raw materials) and agro-produce which is often not containerised. Such shipments would still undergo checks and customs clearances at the border posts. Managing such cargo would require the following facilities to be in place:

   - Modern customs bonded warehouse with adequate space for temporary storage.
   - Well-designed truck parking bays equipped with handling equipment that allows fast, safe, and efficient loading and unloading of goods.
   - Facilities for handling and storage of special products. These include food, agro, and pharma requiring temperature-controlled environment.
   - Container yard and holding bays for loaded trailers with containers/bulk or oversized goods within the bonded secure area. This would facilitate cross-border moves where the parties do not want trucks, but the loaded containers/ trailers to cross borders.

8. *Joint deployment of regulators and shared facilities*: Given the significant quantum of physical infrastructure, equipment,

[6] Examples of this in use in cross-border facilities include the VACIS IP6500 Integrated X-Ray Inspection System.

and associated operational and regulatory human resources required for a well-functioning road and rail land border facility, opportunities need to be explored for developing business processes that reduce repetitive activities for regulating human resources, especially customs. Further, customs and other regulatory administrations from both countries at the border can devise protocols that allow joint inspections and scrutiny of documentation.[7] This can be further facilitated by digital integration between customs systems, and protocols for sharing data discussed subsequently.

9. *Digital integration and information exchange protocols*: A critical trade facilitation measure for customs and other clearances related to the overland movement of goods is the exchange of pre-arrival (i.e., arrival at the land border check post) customs declaration data between neighbouring customs administrations. The receipt of such information a few hours prior to the arrival of a truck or train (empty or carrying goods) at the border allows customs administration to carry out risk assessment and clearance protocols in advance, thereby significantly speeding up the process of actual clearance.

10. *Joint Monitoring mechanism and total transit time, time release study, and dwell time*: Last but not the least, countries across the corridor should set up a joint monitoring mechanism that regularly tracks the total transit time for cargo across the corridor, joint time release studies for customs processes on both sides of the border to establish total time taken for goods clearance, and release end-to-end at a land-border involving regulators of both countries, and combined dwell time of cargo at both ends of a land-border. To the extent possible, real-time data available from multiple digital sources can be used to measure total transit time, helping to pinpoint specific issues and impediments as they happen (Banerjee, 2020). Joint monitoring and identification of problems will help create a joint sense of purpose and ownership for all countries in the corridor.

Implementation plan for HFTC

HFTC interventions can be staggered and implemented in phases. A successful HFTC would first require a comprehensive agreement between the countries in the corridor outlining the specific interventions and related protocols associated with different initiatives that both countries would need to implement in each phase. Post this, in-principle commitment to the set of reforms and interventions required to achieve the connectivity and facilitation-related objectives of the HFTC, a time-bound implementation plan needs to be put in place.

In this context, given that India accounts for a bulk of the geography, especially in the BBIN sub-region, the recently launched PM Gati Shakti initiative, which intends to provide seamless multi-modal connectivity across India, including last mile linkages to the major land border gateways, provides a great opportunity for more integrated regional planning and corridor development. There is an urgent need for greater coordination between India's PM Gati Shakti program, and the infrastructure and economic corridor development programs in Bangladesh and Nepal to start with. Such coordination will provide an overall implementation framework for the expedited development of the physical infrastructure of roads and railways. In combination with the interventions highlighted in this article, this will provide a broad structure for HFTC development.

One way to achieve such coordination on both the infrastructure, as well as the procedural reforms and technology-adoption

[7] There are existing global best practices in this regard is the Laredo bi-national inspection facility. Details available at Innovative Customs Procedures in Laredo, Texas Accelerate U.S. Exports to Mexico, Blog from International Trade Administration, US Federal Government, viewed at https://blog.trade.gov/2019/11/18/innovative-customs-procedures-in-laredo-texas-accelerate-u-s-exports-to-mexico/.

initiatives, is to set up a working group for HFTC implementation that includes all the key departments and agencies responsible for regulating the flow of goods and conveyances across borders of the countries in the identified corridor. This would include customs, transport authorities, border security agencies, land-port authorities, and agencies enforcing product-related regulations connected to human, animal, and plant health and safety, product standards, and the environment.

The HFTC working group should be made responsible for implementation with deadlines, and employ an SOP for escalation to higher officials if specific challenges to on-ground implementation arise and lead to delays. The progress in implementation being made by the working group should be subject to regular monitoring by the political leadership in the corridor countries to underline their commitment to its achievement. In addition, the BIMSTEC Transport Connectivity Working Group can proactively monitor progress and support the HFTC working group to escalate challenges with governments and their agencies.

The successful development of one such HFTC in Southern Asia will not only act as a catalyst for regional integration, and have a multiplier effect on economic growth and employment, but also provide a working model for the development of other HFTCs in the region and beyond, thus bringing transformational change in the way this region manufactures, trades, and does business.

References

Banerjee P. Sengupta, S, and Stobdan P. (2010). Economic growth, exports and the issue of trade facilitation: Integrating East India with Bangladesh and North India with Central Asia. In Barua, A. & Stern, R.M. (eds). *The WTO and India: Issues and negotiating strategies* (pp.169-195). Hyderabad: Orient BlackSwan.

Banerjee, P. (2016, May 25). How to create a united Southern Asia. *The Diplomat.* Retrieved from https://thediplomat.com/2016/05/how-to-create-a-united-southern-asia/

Banerjee, P. (2016). Operationalizing connectivity and trade facilitation: Role of BBIN Motor Vehicles Agreement. *Asian Journal of Transport and Infrastructure*,*19*(2), 72–89.

Banerjee, P. (2017). *Development of East Coast economic corridor and Vizag-Chennai industrial corridor: Critical issues of connectivity and logistics* (ADB South Asia Working Paper Series, 50). Manila: Asian Development Bank. Retrieved from https://www.adb.org/sites/default/files/publication/225626/sawp-050.pdf.

Banerjee, P. (2020). *Transforming logistics performance in BBIN Countries: Towards creating a lasting legacy* (CUTS Discussion Paper). Jaipur: CUTS International. Retrieved from https://cuts-citee.org/pdf/discussion-paper-transforming-logistics-performance-in-BBIN-countries.pdf.

Banerjee, P. (2021). *Improving land connectivity around the Bay of Bengal is essential for integration* (Asia Pacific Bulletin no. 562). Washington D.C.: East West Centre. Retrieved from https://www.eastwestcenter.org/system/tdf/private/apb562.pdf?file=1&type=node&id=40081

Bougheas, S., Demetriades, P.O., & Morgenroth, E.L. (1999). Infrastructure, transport costs and trade. *Journal of International Economics*, *47*(1), 169–189. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0022199698000087

De, P. (2020). Bay of Bengal integration: The new agenda. In *trade and regional integration in South Asia* (17–32). Singapore: Springer.

Lakshmanan, T.R., Subramanian, U., Anderson, W.P., & Léautier, F.A. (2001). *Integration of transport and trade facilitation: Selected regional case studies*. Washington D.C.: The World Bank. Retrieved from https://elibrary.worldbank.org/doi/epdf/10.1596/0-8213-4884-1.

Raihan, S., (2015). South Asian economic union: Challenges and tasks ahead. *South Asia Economic Journal*, *16*(2_suppl), 3S–18S. Retrieved from https://doi.org/10.1177/1391561415594727.

Roy, J, & Banerjee, P. (2010). Connecting South Asia: The centrality of trade facilitation for regional economic integration. In Sadiq Ahmed, Saman Kelegama, & Ejaz Ghani (eds). *Promoting economic cooperation in South Asia: Beyond SAFTA* (pp 110-138). India: *SAGE Publications and The World Bank.*

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04

The Role of Bangladesh in Sub-Regional Connectivity

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Abstract

The geographic location of Bangladesh makes it a critical player in several inter- and intra-regional connectivity initiatives, including the Trans-Asian Railway and Asian Highway. Furthermore, as the founding member of the two regional cooperation processes in the sub-region—SAARC and BIMSTEC—Bangladesh is now the epicentre of the key regional and sub-regional frameworks. This makes regional connectivity an important component of Bangladesh's foreign policy. Moving beyond large regional institutions, Bangladesh has shown the readiness and flexibility to work through sub-regional mechanisms to take the connectivity agenda forward. Over the years, Bangladesh has also adopted a multifaceted approach to connectivity by focussing simultaneously on hard infrastructure development while also advocating soft connectivity through increased people-to-people interactions in the region. This brief delves into Bangladesh's changing approach to connectivity over the years while also highlighting the challenges and progress in implementing some of the regional connectivity plans, including the land ports and regional inland waterways. It concludes by highlighting that the success of many connectivity initiatives within and beyond South Asia would depend on bilateral and sub-regional relations between the countries.

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Recovering past linkages

Bangladesh is located at the top of the Bay of Bengal, one of the world's largest Deltaic plains, crossed by three major river basins. It shares maritime and land boundaries with India and Myanmar, making it a key gateway from South to Southeast Asia. The Bengal Delta approximates today's territory of Bangladesh and the Northeast Region (NER) of India together, which forms a subregion with common historic, economic, and political ties. For many centuries, this was the nodal hub for a vibrant Bay of Bengal region, acting as a 'maritime highway' between India and China (Amrith, 2013, p. 24).

Before the 1947 partition of the subcontinent between India and Pakistan, the Bay of Bengal region was a unique space, integrated both geographically and economically, and more developed compared to many other parts of British India. The goods produced in this region were transported to other parts of India by rail and road through East Bengal (today's Bangladesh) or exported globally through the Chittagong Port (Hasan & Naim, 2021). It was an economically viable and thriving area until the 1930s.

The partition of the Northeast region (NER) of British India into India and Pakistan (then East Pakistan) resulted in the creation of eight states of NER which were disconnected from the rest of India, except through the narrow Siliguri corridor (also known as Chicken's Neck). Geographic, ethnic, and religious fragmentations, as well as separatist movements coupled with disrupted connectivity, resulted in the economic decline of the NER since 1947. The hostile relationship between India and Pakistan failed to bring back the integrated nature of the sub-region.

The independence of Bangladesh in 1971, however, brought changes in the geopolitics and geo-economics of this subregion. The visionary leadership of the Father of the Nation of Bangladesh, Bangabandhu Sheikh Mujibur Rahman, realised the economic and business potentials of a connected Bangladesh. During his first state visit to India in 1972, Bangabandhu stated,

"Let there be an end, once for all, to the sterile policy of confrontation between neighbours. Let us not fritter away our national resources but use them to lift the standard of living of our people. As for us, we want to cooperate with all concerned for creating an area of peace in South Asia where we could live side by side as good neighbours and pursue constructive policies for the benefit of our peoples." (Hussain, 2020)

But the vision of Bangabandhu remained unrealised for decades. Despite the obvious logic of gains through connectivity between Bangladesh and India's NER, political rivalries in the then East Pakistan, coupled with the fact that Bangladesh, in the post-1971 period, did not take any steps to create a larger economic space in the subregion until the 2000s, impacted the economic potential of the region.

However, following a series of bilateral engagements—most notably the visit of the Prime Minister of Bangladesh Sheikh Hasina to India in January 2010 and the visit of then Prime Minister, Dr Manmohan Singh, to Bangladesh in September 2011—the agenda for Bangladesh, India, Nepal, and Bhutan sub-regional connectivity gained momentum (Ministry of External Affairs [MEA], 2010; 2011b). The two Prime Ministers agreed to put in place a comprehensive framework of cooperation for development in the areas of power, water resources, transportation and other forms of logistics, food security, tourism, education, environment and sustainable development to mutual advantage. The Framework Agreement on Cooperation for Development was signed during the 2011 visit and further consolidated the intent of the highest political leadership by agreeing to harness the advantages of sub-regional cooperation (MEA, 2011a).

The Foreign Ministers of Bangladesh and India carried forward this resolution and

the first meeting of the Joint Consultative Commission (JCC), held in May 2012, welcomed the formation of technical-level teams for sub-regional cooperation in water, power, physical connectivity, and transit (MEA, 2012). Later, during the second and third JCC meetings, the idea of connectivity was consolidated and many connectivity projects were initiated. Also, in the joint statements issued following the visits in 2015 and 2017, the two Prime Ministers emphasised the advantages of sub-regional cooperation in the areas of connectivity for mutual benefit (MEA, 2017).

The logic of cooperation on Bangladesh-India connectivity in the wider sub-regional context was also captured during the exchange of visits between Bangladesh and Bhutan at the highest levels (Islam, 2020). Through these visits, a broad understanding has been reached by the two countries to cooperate in a multitude of areas.

Bangladesh's renewed approach to connectivity

As part of global and regional supply chains, deepening connectivity is essential for Bangladesh. Encouraged by the Association of Southeast Asian Nations (ASEAN) and Greater Mekong Sub-region (GMS), Bangladesh has opened up over the decades to its extended neighbourhood. Its approach is to link all nodes, ports, growth centres, and connectivity networks in a seamless way with the goal to create a contiguous landscape from the Far East through Bangladesh to India and beyond. This logic of connectivity underpins Bangladesh's engagements in the various connectivity initiatives in Asia-Pacific, specifically in the sub-region (Bangladesh and NER). In the latter, it is expected that the opening-up of economies and societies through multimodal connectivity will naturally create a new re-alignment in terms of market synergies and economies of manufacturing and distribution across borders.

Beyond the geographical coverage, Bangladesh's approach to connectivity is also multi-faceted, ranging from infrastructure and logistics connectivity to that between people, institutions, and services (Bhuiyan, 2019). It argues that well-connected regions surely contribute to securing peace and stability across communities.

Prime Minister Sheikh Hasina articulated her vision of connectivity during the 18th South Asian Association for Regional Cooperation (SAARC) Summit in Kathmandu in 2014,

"Physical connectivity is important in ensuring overall peace, progress, and stability across South Asia. Multimodal physical connectivity links territories and communities …… Bangladesh approaches connectivity in a wider context. We believe in connecting ideas, knowledge, technology, culture, people, road-rail-air, movement of goods, services and investment" (SAARC, 2014).

Bangladesh believes that the people are at the centre of all endeavours for any form of connectivity. Connectivity is about securing well-being, dignity, and realising the right to development for people and communities, especially for the people at the grassroots. It is also about the realisation of sustainable development.

Bangladesh provides a critical link to any inter-regional connectivity initiative, particularly of the Trans-Asian Railway and Asian Highway initiatives. At the same time, as the founding member of the two regional cooperation processes in our sub-region—SAARC and BIMSTEC—Bangladesh is now at the epicentre of these key frameworks. It is engaged with its development partners to help actualise the sub-regional gateways, measures, and infrastructure. It assumes that the connectivity projects will connect and integrate Bangladesh with its neighbouring regions particularly bordering areas of NER of India as well as countries like Nepal and Bhutan, and eventually also with the ASEAN region.

Sub-regional connectivity: Progress and opportunities

In terms of connectivity in the Bangladesh and NER sub-region, road, rail, and waterways play a vital role. In 2018, Bangladesh and India formalised the cooperative use of the Chittagong and Mongla ports (Ministry of Shipping, 2018). It provided access to the two Bangladeshi sea ports to India's Northeast, Nepal, and Bhutan, through Bangladesh territory. Bhutan was also allowed to use a northern airport in Bangladesh. Talks in an advanced stage are underway to establish a transit corridor for Bangladesh through India to Bhutan and Nepal. Direct bus services have been launched connecting two key cities in North-east India (Guwahati, Shillong), and Kolkata and Agartala through Dhaka. More bus and train services are in the pipeline to connect cities (Khulna, Jessore) with Kolkata (Press Trust of India, 2015). The old rail links in western and eastern Bangladesh are being revived. A Dhaka-Kolkata passenger train service is operating since April 2008. A container-handling yard is being planned in south-west Bangladesh (Jashore).

Sub-regionally, India has granted Bangladesh access (Rohanpur-Singhabad and Radhikapur-Birol routes) for rail transit to Nepal through India (Jha, 2021). Talks with Nepal are in progress for a bilateral agreement for the carriage of transit/trade cargo so that Nepal can carry out third-country trade through Bangladesh seaports. Bangladesh authorities are in talks with Nepal for Dhaka-Kathmandu bus and rail services. Bhutan can also do the same. The ongoing Bangladesh and Bhutan transit agreement will allow Bhutan's transit cargo through Bangladesh territory and ports for third-country trade. Dhaka is also working on a Dhaka-Thimpu direct bus service. Riverine connectivity with Bhutan and Nepal also holds promise for transit cargo using Bangladesh's inland waterways.

Under a coastal Shipping Agreement, India and Bangladesh have agreed to the development of connection ports along the coastline. Trials have been conducted successfully. Small traders across the two countries are particularly upbeat as this will eventually establish direct coastal shipping up to Sri Lanka, the Maldives, Myanmar, and further afield. It will also allow goods to be taken through the riverine hinterland deep inside Bangladesh. Additionally, Bangladesh and India are also discussing the movement of containerised cargo on a commercial basis, beginning with trans-shipment arrangement through Bangladesh.

Beyond the road-rail connections, the work on developing and tapping the region's power and energy potential is progressing well. SAARC already has a Framework Agreement for Energy Cooperation and for creating a Market for Electricity. Through the Bangladesh-India Power Grid, Bangladesh is importing 500 MW from eastern India. Plans are afoot to import another 600 MW from North-East India (Tripura). A cross-border pipeline carries diesel from a refinery in Northeast India (Assam) on a commercial basis. Another commercial pipeline carries LNG from Indian points to Bangladesh. The private sector in India is also discussing the possibility of more pipelines to carry LPG from India to a plant in Chittagong and for future supply to India.

Upgrading land border management

The sub-regional transportation and power connectivity initiatives discussed above also require simultaneous improvements in border management. Given the geographical contiguity and historical physical links, addressing the challenges in land-border management in the sub-region will play a key role in facilitating many of these connectivity plans by reducing the time and cost of the initiatives. In the last decade, the development and modernisation of land-border management infrastructure has received some attention in Bangladesh, India, and Nepal.

Strengthening the Integrated Check Posts/ Land Ports

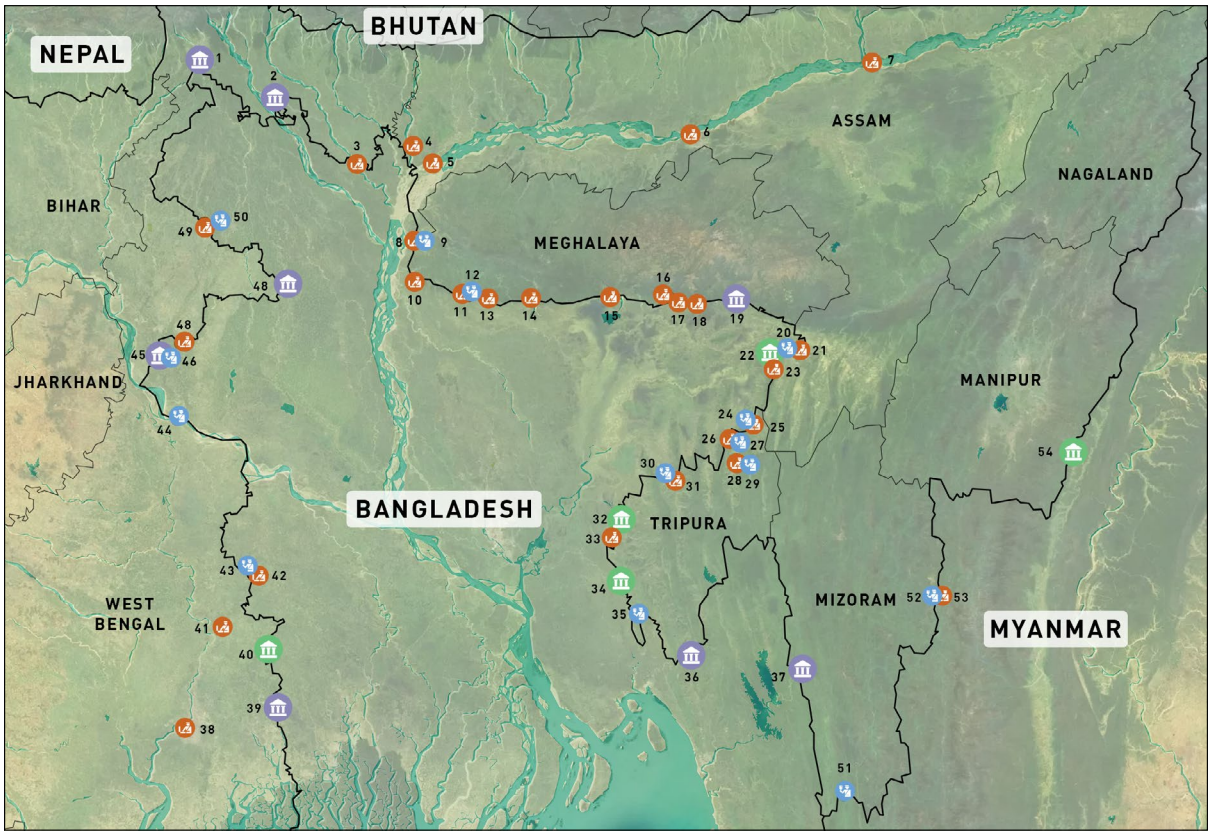
India's Integrated Check Posts (ICPs) are sanitised zones at India's land border that

play a key role in facilitating cross border movement (both for trade and travel). These are land border entrance and departure points that house a variety of facilities like customs, immigration, and border security, among others, all inside a single-facilitation zone. At present, India has four active ICPs with Bangladesh, including at Petrapole, Agartala, Sutarkandi, and Srimantapur. In 2019–20, 40% of India's total trade with Bangladesh was routed through the ICPs (Sinha, 2022).

In recent times, the Government of Bangladesh has focussed on facilitating export-import through land routes. The major activities include infrastructure development, efficient cargo handling, improvement of storage facilities, and fostering public-private partnerships for effective and better service delivery. It has also been decided that Bangladesh would build port infrastructure in an integrated manner like India's ICPs to enhance the efficiency of the port operation.

So far, overall, 24 Land Customs Stations (LCSs) nearing neighbouring countries, both with India and Myanmar, have been declared as land ports. The Bangladesh Land Port Authority currently operates seven (out of 11) land ports with India at Benapole, Bhomra, Burimari, Akhaura, Nakugaon, Tamabil, and Sonahat. Private participation at the land ports in Bangladesh is also active with four ports along the border with India (Sonamasjid, Hili, Bibir Bazar, and Banglabandha) being operated by the private players on a Build, Operate, and Transfer (BOT) basis. More land ports are also being developed by private operators (Bangladesh Land Port Authority [BLPA], n.d.).

Figure 1: India's land border checkpoints with Bangladesh and Myanmar



Source: Linking land borders: India's Integrated Check Posts (Sinha, 2021)

In some cases, LCS/ ICPs, as part of development activities, are to be developed within 150 yards along the Bangladesh-India international border. Para no. 38 of the Joint Statement endorsed during the visit of Hon'ble Prime Minister of Bangladesh to India in 2017 said that "both leaders directed their respective agencies to ensure that development work including construction of lCPs/ Land Ports will be allowed within 150 yards of zero line on the prior intimation from other side" (MEA, 2017).

Sometimes, construction work of LCSs/ ICPs is stalled due to objections raised by either the Border Security Force (BSF) of India or the Border Guards Bangladesh (BGB). Objections may arise out of design-layout of LCSs/ ICPs, design of fencing, number of gates, time of construction (day/ night), etc. Additionally, several common challenges exist across the LCSs/ICPs, including harmonisation of working hours with neighbouring countries, limitations in truck movement, absence of partner government agencies such as plant and animal quarantine, paucity of warehousing space, lack of digitisation on both sides, port limits due to a lack of cargo-handling infrastructure (Sinha, 2021). Both the countries want to address the existing challenges in order to promote seamless regional trade and logistics.

Reviving regional waterways

In the last few years, India and Bangladesh have strengthened cross-border transportation through the inland waterway network. This provides a viable alternative to the congested land routes of travel and is also in line with India's primary interest "to efficiently connect the northeast with the main hinterland by using the waterways" (Chawla, 2017, p. 4).

Bangladesh and India signed the Protocol on Inland Water Transit and Trade (PIWTT) in 1972, with an agreement to renew it every two years. Despite this, the renewal remained irregular. It was only in June 2015 during Prime Minister Modi's visit to Bangladesh that the two governments decided to renew and move forward on the protocol (Chawla, 2017).

Through the PIWTT, India and Bangladesh have re-opened and upgrade another route for trade and commerce. It also established the standard operating procedure, including on expense sharing, voyaged permissions, and tonnage. In May 2017, the two governments also decided to start day-to-day passenger services and cruise vessels through an MoU (Ministry of Shipping, 2017).

Exemplifying interests in bilateral economic and political cooperation, India and Bangladesh have implemented their plans on waterways efficiently. Since a major part of the PIWTT routes inevitably passes through Bangladesh, this will give Bangladesh leverage to control the river routes.

According to Vasudha Chawla (2018), Bangladesh is also seeking to use the inland waterway routes to its advantage. For instance, it is argued that Bangladesh, with a dominant vessel fleet in the region, has a strategic advantage over India and can leverage this for geopolitical ramifications especially in terms of making India sign the Tessta Water Treaty.

Beyond geopolitics, however, there are several challenges that the waterways need to navigate for efficient use and functioning. The seasonal changes in the region and their impact on the water levels, siltation of rivers (especially in the Sundarbans delta), requirement of regular dredging, and installation of additional infrastructure (such as locks) will need to be addressed to make the waterways navigable.

The way ahead

Bangladesh is set to graduate from the UN's Least Developed Status to a middle-income economy by 2024. This carries several economic implications for the country including a likely increase in exports. Therefore, investing in regional connectivity projects to gain economic dividends and offset the removal of concessional financial benefits becomes important.

For sub-regional connectivity, Bangladesh can leverage its strategic location, in particular access to the sea. The connections between Bangladesh and the NER of India will open new avenues for trade, commerce, investment, and other activities, which can be further facilitated through the development of protocol routes of waterways. The effective development of the waterways, rail, and road routes might also benefit the BBIN agreement if Bhutan opts for waterways to supplement roadways. In addition to BIN (leaving out Bhutan from BBIN), the implementation of the proposal to establish a South Asian Sub-Regional Economic Cooperation (SASEC) consisting of Bangladesh, India's NER, Nepal, and Bhutan could be a productive way to connect this sub-region. SASEC could also complement the BIMSTEC infrastructure and logistic initiative. It will help to enable a continuous geo-economic space for Bangladesh and Northeast India.

The realisation of the full potential of the Bangladesh-NER of India region will also depend on bilateral relations. The resolution of some of the outstanding issues between the two countries such as the Teesta River Agreement and joint water management of other transboundary rivers will add to the peaceful and productive connectivity in the subregion.

The immediate agreement on the proposed Bangladesh-India Comprehensive Economic Partnership could bring in added momentum to the Bangladesh-NER of India sub-regional cooperation.

References

Amrith, S.S. (2013). *Crossing the Bay of Bengal: Furies of nature and fortunes of migrants*. Cambridge, Massachusetts: Harvard University Press. P. 1.

Bangladesh Land Port Authority. (n.d.). *Overview*. Retrieved from http://bsbk.portal.gov.bd/sites/default/files/files/bsbk.portal.gov.bd/page/1da6d5ad_5287_4dc7_8146_0326260b1894/overview%20%28Nov%2717%29.pdf.

Bhuiyan, H.K. (2019, November 13). Dhaka prefers regional economical, development initiatives to political, social coalitions. *Dhaka Tribune*. Retrieved from https://archive.dhakatribune.com/bangladesh/dhaka/2019/11/13/dhaka-prefers-regional-economical-development-initiatives-to-political-social-coalitions

Chawla, V. (2017, June 16). *India-Bangladesh maritime trade: protocol on inland water transit and trade (PIWTT)*. New Delhi: National Maritime Foundation. Retrieved from https://maritimeindia.org/india-bangladesh-maritime-trade-protocol-on-inland-water-transit-and-trade-piwtt/ https://maritimeindia.org/india-bangladesh-maritime-trade-protocol-on-inland-water-transit-and-trade-piwtt/

Hasan, V.A.H.R. & Naim, S.J. (2021). Bangladesh and Northeast India: Planning communication links under GATT Article. In H. Srikanth, & M. Majumdar (Eds). *Linking India and eastern neighbours*: *Development in the northeast and the borderlands*. New Delhi: Sage Publishing.

Hussain, S.A. (2020; October 24). The architect of Bangladesh foreign policy. *Daily Sun*. Retrieved from https://www.daily-sun.com/printversion/details/513625/The-Architect-of-Bangladesh-Foreign-Policy.

Islam, M.T. (2020). *Bangladesh and Bhutan: Fostering win-win bilateral relations*. Institute of South Asian Studies [ISAS] Insights. Retrieved from https://www.isas.nus.edu.sg/papers/bangladesh-and-bhutan-fostering-win-win-bilateral-relations/.

Jha, R. (2021, February 9). India facilitates transit traffic from Bangladesh to Nepal. *DD News*. Retrieved from https://ddnews.gov.in/international/india-facilitates-transit-traffic-bangladesh-nepal.

Ministry of External Affairs. (2010, January 12). *Joint Communiqué issued on the occasion of the visit to India of Her Excellency Sheikh Hasina, Prime Minister of Bangladesh, Ministry of External Affairs*. Retrieved from https://mea.gov.in/bilateral-documents.htm?dtl/3452/

Ministry of External Affairs. (2011a, September 6). *Framework Agreement on Cooperation for Development between India and Bangladesh*. Retrieved from https://pib.gov.in/newsite/PrintRelease.aspx?relid=75687

Ministry of External Affairs. (2011b, September 7). *Joint Statement on the occasion of the visit of the PM of India to Bangladesh*. Retrieved from https://mea.gov.in/bilateral-documents.htm?dtl/5147/Joint+Statement+on+the+occassion+of+the+visit+of+the+PM+of+India+to+Bangladesh.

Ministry of External Affairs. (2012, May 7). *Joint Statement by India and Bangladesh on First Meeting of the India-Bangladesh Joint Consultative Commission*. Retrieved from https://mea.gov.in/incoming-visit-detail.htm?19864%2F

Ministry of External Affairs India. (2017, April 8). *India-Bangladesh Joint Statement during the State Visit of Prime Minister of Bangladesh to India*. https://www.mea.gov.in/bilateral-documents.htm?dtl/28362/India++Bangladesh+Joint+Statement+during+the+State+Visit+of+Prime+Minister+of+Bangladesh+to+India+April+8+2017.

Ministry of Shipping. (2018, October 25). *Standard Operating Procedure of MoU on Passenger and Cruise Services on the Coastal and Protocol Route between the Government of the People's Republic of Bangladesh and the Government of the Republic of India*. Retrieved from https://shipmin.gov.in/sites/default/files/1516954744aggrement2.pdf

Ministry of Shipping. (2018, October 25). *Agreement on the Use of Chattogram and Mongla ports for movement of goods to and from India between the People's Republic of Bangladesh and the Republic of India*. Retrieved from https://shipmin.gov.in/sites/default/files/agree.pdf.

Press Trust of India. (2015, June 6). Two Bus Services Launched Between India and Bangladesh. *The Hindu*. Retrieved from https://www.thehindu.com/news/national/Prime-Minister-Narendra-Modis-two-day-Bangladesh-visit/article60327487.ece

SAARC. (2014, 26 November). *Prime Minister Sheikh Hasina's statement at the 18th SAARC Summit*. Retrieved from https://www.mofa.go.kr/cntntsDown.do?path=www&physic=SAARC_summit_declaration.pdf&real=SAARC_summit_declaration.pdf.

Sinha, R. (2021). *Linking land borders: India's integrated check posts* (CSEP Working Paper 9). New Delhi: Centre for Social and Economic Progress. Retrieved from https://csep.org/working-paper/linking-land-borders-indias-integrated-check-posts/.

Building the Infrastructure

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05

Roll East: A Proposal for India-Myanmar-Thailand Railway Connectivity

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Abstract

Railways have become an important geo-strategic infrastructure in South Asia. In the last decade, India has focussed on expanding its rail connectivity in the neighbourhood with the revival and inauguration of railway lines with Bangladesh and Pakistan, and the commencement of the first India-Nepal passenger rail service in 2022. However, a railway line connecting India and Myanmar is yet to be developed, despite various steps taken in the past. Beyond domestic and regional needs, the increasing emphasis on expanding rail connectivity also comes in the backdrop of China's increasing investment in the development of pan-Asian railway connectivity in Southeast Asia within which infrastructure linkages between Myanmar and Thailand are crucial. This policy brief makes a case that the India-Myanmar railway is both geo-strategically and economically important for India. Furthermore, this rail connectivity will only be beneficial if it is a part of an economic corridor between South and Southeast Asia, and is connected further with Thailand. The brief also highlights several challenges in the implementation of rail projects between India, Myanmar, and Thailand and charts out various policy options for the governments in the region.

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Expanding rail links to Myanmar and Thailand

India's emphasis on increasing connectivity with its neighbouring countries through investments in strategic infrastructure stands at the heart of its neighbourhood policy today. The focus on increasing linkages through rail, road, and waterways reflects the need to correct decades of regional insularity by diversifying the transport links to increase cross-border commerce and strengthen people-to-people connectivity. In the last two decades, India has operationalised nine Integrated Check Posts with the neighbouring countries for cross-border movement of trade and passengers, moved goods to Northeast India via Bangladesh using the India-Bangladesh Inland Waterways Protocol route, and built South Asia's first petroleum pipeline with Nepal, with a second one under construction with Bangladesh.

The railway sector has seen significant progress including the revival of five railway lines with Bangladesh and the inauguration of the first India-Nepal passenger rail service in April 2022. From having a dense network of railways in the 19th and early 20th centuries (developed during the colonial period), South Asia today lags in rail connectivity. Between 1996 and 2016, the rail density within South Asia (India, Bangladesh, Pakistan, and Sri Lanka) has only grown by 5% (The World Bank).[1] Furthermore, cross-border movement by rail (freight and passenger) is among the lowest in the South Asian sub-region. This is also reflected in the trade figures. In 1948, intra-regional trade in South Asia was 18%, which dropped to 6-7% in 2010. Today, trade stands at a mere 5% (The World Bank, 2018). The logistics cost in the region is among the highest in the world at 14% (Logistics Performance Index). For passengers, road and air are the predominant modes of cross-border travel (Sinha & Sharma, 2020).

In the last decade, India has revived the old (and developed new) cross-border railway links with Nepal, Bangladesh, and Pakistan. However, a railway line connecting India and Myanmar is yet to be developed. In December 2020, the former Indian Foreign Secretary, Harsh Shringla, while delivering an address at the Northeast Festival, highlighted that it is possible to think about railways linking India to Myanmar and further to Thailand and other Southeast Asian countries in the future (Das, 2021). In his Independence Day speech in 2021, Prime Minister Narendra Modi announced that all state capitals in India's Northeast Region (NER) will be connected with rail service, and under India's Act East Policy, the NER, Myanmar, and other Southeast Asian countries will also be connected (Modi, 2021).

The India-Myanmar rail link is important for two reasons—first, it is a crucial link in India's Act East Policy to strengthen inter-regional connectivity between South and Southeast Asia. Second, it is also important for the economic development of NER, connecting it to the key seaports of the region and developing commerce and people-to-people linkages.

In Myanmar, there is also a dire need for the upgradation of rail infrastructure. The country is surrounded by three economic giants, including India, China, and the ASEAN countries. Yet it has not been able to reap many benefits from the economic rise of its neighbours. The Asian Development Bank (ADB), in its 'Myanmar Transport Policy Note' (2016) estimated transport investments worth approximately US$ 60 billion (2016-2030). It also highlighted that the abysmal condition of roads, railways and highways has left almost 20 million people without basic access. A bilateral railway link between India and Myanmar may not be enough to exploit the untapped potential of the region. There is also a need to consider expanding the link to Thailand and other Southeast Asian countries to increase access to the markets. Several regional value chains with high trade potential have already

[1] Calculated by the author using data from the Rail Lines Data, The World Bank, https://data.worldbank.org/indicator/IS.RRS.TOTL.KM.

been identified by the Government of India (GoI) in the sectors including the textile and garment sector, pharmaceuticals, gems and jewellery, automobiles, processed foods, etc. (Das, 2016).

In Thailand, facilitating connectivity and acting as a link between the Indian subcontinent and Southeast Asia, especially through the institutional mechanism of the Bay of Bengal Multi-Sectoral Initiative for Economic Cooperation (BIMSTEC), is a priority. At the BIMSTEC Summit (2018), General Prayut Chan-o-cha, Prime Minister of Thailand, emphasised that both South and Southeast Asia are the 'strategic link' between the two major oceans of the world—the Indian Ocean and the Pacific—and better infrastructure connectivity between both corresponds with Thailand's Look West and India's Act East policies. Thailand is interested in developing a high-speed railway line along its North-South and East-West economic corridors. The latter links the Andaman Sea to Vietnam, which is of importance to India's connectivity plans in the Indo-Pacific and requires investments for development.

For India, expanding the railway line to Thailand will also make economic sense. Currently, India-Myanmar trade is limited, comprising only 0.20% of India's global trade, and 2% of its total trade with the ASEAN countries. India's trade with ASEAN is approximately 10% (2021–22) of its global trade, the majority of which is with Singapore (26%), Indonesia (20%), Vietnam (16%), and Thailand (14%) (Export Import Data Bank, Government of India). Myanmar is an important gateway for the movement of goods to these Southeast Asian economies. Therefore, the India-Myanmar railway will only be beneficial if it is a part of an economic corridor between South and Southeast Asia. In terms of the logistics cost, transportation of a full container (twenty-foot equivalent unit) from Kolkata Port to Bangkok takes between 10-20 days and the average cost is US$ 2,000 per container. Seamless rail connectivity is likely to reduce the time and cost of transportation between India and Thailand. However, according to a former Indian Ambassador to Myanmar, if rail connectivity is built between India and Myanmar, India will have to take the lead and responsibility for its construction.[2]

Beyond domestic and regional needs, the increasing emphasis on expanding rail connectivity also comes in the backdrop of China's increasing investment in the development of a pan-Asian railway connectivity in Southeast Asia within which infrastructure linkages between Myanmar and Thailand are crucial. In August 2021, China inaugurated the high-speed railway line from the Chinese commercial hub of Chengdu to the Myanmar border, which further links China to the Indian Ocean by road. This is a rail-road-sea link China-Myanmar transit corridor (Krishnan, 2021). This link is a part of the China-Myanmar Economic Corridor (CMEC) under the Belt and Road Initiative (BRI). China also has plans to develop a seaport in Kyaukphyu in the Rakhine state in Myanmar and extend it by rail to the Yunan province. As part of the Kunming-Singapore rail connectivity plan, China has already laid out a plan to connect Yangon with Bangkok and then onwards to Singapore. In Thailand, China is invested in the North-South Corridor, constructing a high-speed railway line that connects Bangkok with the Nong Khai province. It is a crucial link in Beijing's plan to connect Kunming to Singapore by rail, providing the country access to land routes that can be used as an alternative to the maritime route (Takahashi, 2022).

India has come a long way from a policy of regional insulation to being actively involved in building strategic infrastructure with its neighbouring countries. This is also in line with the Government of India's assessment in the 2000s that there is a need to complement hard security with other connectivity initiatives for a holistic approach to border management.

[2] Interview with a former Indian Ambassador to Myanmar conducted through email.

Rail connectivity provides a faster and more viable alternative to road transportation. Several routes, at the international, regional, and bilateral levels have been planned.

Planned routes

Historically, no railway line existed between India and Myanmar (or colonial Burma before 1948). After the second Anglo-Burmese war in 1852, the British conducted a survey for a railway line from India to Yunan via Burma. Plans were also made for an Assam- Burma railway project but it remained only on paper. A preliminary survey had been completed in 1896 (Yhome, 2015).

In the last two decades, several multilateral and bilateral plans have been devised to connect India and Myanmar via rail. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) planned a project, the Trans-Asian Rail Network, to create an integrated freight railway network connecting Europe and Asia. Its overall goal is to see the development of an international, integrated, intermodal transport and logistics system for the region. An Intergovernmental Agreement on the Trans-Asian Railway Network drafted by the UNESCAP was adopted in April 2006 and came into force on 11 June 2009. Several countries in the region (South Asia and the Bay of Bengal), including Bangladesh, India, Myanmar, Nepal, Pakistan, Sri Lanka, and Thailand are signatories to the agreement (United National Treaty Collection, n.d.).

At the bilateral level, establishing rail connectivity with Myanmar is an important part of India's Act East Policy to facilitate trade and people-to-people connectivity. The India Transport Report (2014) had suggested that new railway lines with Myanmar, including one from Sittwe in Myanmar to Tirap in Arunachal Pradesh, may be important to improve regional transportation. Over the last two decades, the Indian Railways has been planning a railway link connecting Jiribam in Manipur to Mandalay in Myanmar. A feasibility study for this was conducted by Rail India Technical and Economic Service Limited (RITES) in 2005. This divided the length of railway connectivity in two sections—Section I is the link in India from Jiribam-Imphal-Moreh (236 Km) and section II includes the link in Myanmar from Tamu to Kalay (128 km) (Press Information Bureau (PIB), 2016). The project was rejected in 2008 because it was regarded as financially unviable. However, the project was taken up again in 2019. Construction is ongoing on the Jiribam-Imphal railway line and is expected to be completed by 2024. Former Minister of Railways, Piyush Goyal, stated in a reply to a Lok Sabha question that the anticipated cost of the project is INR 12,264 crores, approximately 90% of which was incurred till March 2020. An additional outlay of INR 800 crore was provided in the budget 2020–21 (PIB, 2020). This exemplifies the renewed focus and allocation of resources on the project since its introduction in 2003–04 and several delays thereafter.

In 2022, India's Railway Board also approved and started work on the location survey of the Imphal-Moreh railway line, citing it as a 'strategic line' (Dash, 2022). The government of India also envisages connecting this line to Thailand to exploit its full economic potential, also as a part of the Trans-Asian Railway Network.

Beyond the focus on cross-border railway links, India has also expanded the construction of railway lines in the Northeast region. This is a significant part of India's Act East Policy, which also focuses on the development of India's Northeast region as an essential prerequisite to connectivity with Southeast Asia. This includes plans to develop the 44 km Sivok-Rangpo line in Sikkim and the 51.38 km Bairabi-Sairang line in Mizoram. In a significant achievement, earlier in January 2022, a passenger train arrived from Silchar in Assam to Vangaichungpao railway station in Manipur, and later in the same month, a goods train reached the Rani Gaidinlu station in Manipur (Laithangbam, 2022). Since 2014, several rail development projects have been commissioned in the region including 270 km

of new lines, 972 km of Gauge Conversion, and 114 km of doubling at an average rate of 193.71 km per year—94% more than the average commissioning during 2009–14 (Deol, 2021).

On the regional front, however, there is a different take on expanding rail connectivity. In BIMSTEC, for example, there is a recognition that railways have become less important for intra-regional transport. Instead, the BIMSTEC Masterplan on Transport Connectivity (April 2022) emphasises on developing railway connectivity between ports, dry ports, and borders, and their hinterlands. There is less emphasis on developing a regional railway network due to technical difficulties.

Decline in regional rail connectivity

There are several reasons for the decline in rail connectivity in the region through the decades, and these pose challenges to its revival as well. First, the partition in the subcontinent and the India-Pakistan wars fragmented many railway connections. The railway lines, developed during the colonial period, were stopped post-independence and subsequent wars between India and Pakistan led to a further decline in rail linkages, especially with Bangladesh (or East Pakistan before 1971). With Myanmar, while a cross-border railway did not exist, the hilly terrain and lack of feeder roads make building rail connection difficult. The resultant issues in the transportation of raw materials for construction make this a very time-consuming and costly infrastructure. Therefore, in India's NER and Myanmar, there is a need for holistic development of infrastructure.

Second, there is heterogeneity in rail gauge systems in the region. Over the last 165 years, Indian railways were built on a multi-gauge system. The GoI decided to change this system in 1991 to a uni-gauge system. Myanmar operates on narrow gauge networks (DLCA, n.d.). Additionally, according to a report, about 60% of Myanmar's railway is in a poor condition which restricts the operating speed of freight train, and the lines and bridges are in a poor condition (DLCA, n.d.). Thailand, on the other hand, operates on a standard gauge system. The governments have to navigate different gauge systems. While the Indian freight railways operate on a broad-gauge railway line, Myanmar railways run on a narrow gauge. It varies further in South-east Asia; for instance, Thailand operates rail on a standard gauge. Therefore, the construction and expansion of inter-regional railways with Myanmar and Thailand will require significant investment and needs to take into account other factors such as the international gauge systems (for inter-regional linkages) and the financial viability of the project. China, for instance, has been developing gauge-changing high-speed trains since 2016 to connect with the neighbouring countries in Central Asia that use the Russian gauge system (Shang-su, 2020).

Third, in both India and Myanmar, high freight costs, infrastructure gaps, and limitations in the standard operating procedures (SOPs) of rail services have contributed to the decline in the popularity of rail as a mode of transport. The cumulative cost of transportation through rail (first and last-mile logistics along with the rail freight) is one of the highest in the region. In Myanmar, freight transportation is mostly done in the northern division (out of 11) from Yangon via Nay Pyi Taw to Myitkyina, in Kachin State, only because it is less costly than road transportation. In other divisions, road transportation is preferred (DLCA, n.d.).

Fourth, there is a need to update the feasibility study conducted on the Moreh (India)-Kalay (Myanmar) rail line by RITES in 2004–05. The Government of Myanmar had requested the Government of India to conduct another feasibility study from Tamu to Mandalay through Monywa, Segyi Kalay with a new alignment (Ministry of Transport and Communications, 2021). However, this is still pending. There is a need for a greater presence of Indian public sector units such as RITES in Myanmar to expedite the railway project.

Fifth, though railways are a faster mode of transportation, the lack of integrated connectivity reduces the chances for a modal

shift. For instance, transportation by road includes first and last-mile connectivity, however, transportation by rail includes the time taken for modal shift from road to rail, rake loading time, long haul, etc.

Finally, the 2021 military coup in Myanmar had led to the suspension of several official development assistance loans for development of Myanmar's critical infrastructure. For instance, the Japan International Cooperation Agency (JICA) was financing the construction of the Yangon-Mandalay railway line, Korea was preparing a project to improve the Mandalay-Myitkina line, and the Ministry of Transport and Communications had approached Asian Development Bank to improve the Yangon-Pyay line (ADB, 2018). These projects were revived six months after their suspension in February 2021, albeit at a slower pace (The Irrawaddy, 2022). The coup has also restricted the Myanmar junta's ability to secure foreign aid and loans.

Policy options

From initial assessments, building a railway link from India to Thailand via Myanmar requires high investments—both in terms of political will and financial resources. However, the strategic nature of this infrastructure makes it essential to construct, especially for India to push forward its Act East Policy. Building rail connectivity with Myanmar (and onwards to Thailand) will require several interventions, both in terms of policy and technical assessments.

First, there is a need to create a focussed sub-group on India-Myanmar-Thailand infrastructure connectivity under the Ministry of External Affairs-led Inter-Ministerial Coordination Group (IMCG) on neighbouring countries. The first meeting of the IMCG was convened and led by former Foreign Secretary Harsh Shringla in April 2022 with participation from various Indian ministries including Ministries of Defence, Railways, Economic Affairs, Commerce, the National Security Council etc. Within the IMCG, a focussed sub-group on the IMT Infrastructure project will enable detailed discussions and track progress. The sub-group should also hold regular consultations with the relevant ministries/ departments in the partner countries. While the IMCG is an inclusive group, it must also learn from the failure of the previous Inter-ministerial group which met only six times between 2010-12. (Ministry for the Development of the North-Eastern Region, 2010).

Second, the proceedings and developments of the IMCG must be included in India's Gati Shakti platform for the exchange of project-related information and developments with all stakeholders. In a press release, the Ministry of Railways emphasised that 'completion of any railway project depends on various factors like quick land acquisition by the State Government, forest clearance by officials of the forest department, shifting of infringing utilities, statutory clearances from various authorities, geological and topographical conditions in the area, law and order situation in the area of the project site, number of working months in a year for a particular project site due to climatic conditions etc., and all these factors differ from project to project and affect the completion time' (PIB, 2020). The Gati Shakti platform would enable transparency and accountability for the timely completion of the projects. For Indian PSUs engaged in the neighbouring countries, this platform can also facilitate tracking the progress of India's external development projects. Additionally, in India's Union Budget 2022–23, it was announced that four multi-modal logistics parks will be developed in the next three years as part of the Gati Shakti plan (Simhan, 2022). The Government of India should focus on developing one of these parks in the NER to facilitate the multi-modal cross-border movement of cargo.

Third, beyond policy issues, there are several infrastructure and regulatory barriers that also need to be addressed. The lack of accessibility to freight wagons, mirror infrastructure on both sides of the border, cargo handling infrastructure, and mechanisation of processes are some of the barriers faced

in rail transportation currently. There is a need to address these on a priority basis to ensure efficient use of the rail connectivity infrastructure by the trade.

Fourth, in the initial phases, there is a need to incentivise a modal shift from roads to railways. More cargo moving through rail would attract competition and price concessions. Additionally, given the risks involved in road cargo transportation in hilly terrain such as the one at the India-Myanmar border, there needs to be increasing engagements by the governments on both sides with the local trading bodies and chambers to communicate the benefits of using rail as the preferred mode of transportation.

Finally, the role of international financial institutions such as the World Bank, Asian Development Bank, European Investment Bank, and the Asian Infrastructure Investment Bank will be key in the construction of the railway line from India- to Thailand via Myanmar. This is a cost-intensive project and requires it to be built around international standards to enable quality connectivity. This is important also in light of China's investments in developing rail connectivity in Myanmar and Thailand.

References

Asian Development Bank. (2016). *Myanmar transport sector policy note*. Retrieved from https://www.adb.org/sites/default/files/publication/184794/mya-transport-policy-note-es.pdf

Asian Development Bank (2018). *Proposed loan Myanmar: Railway modernization project*. Retrieved from https://www.adb.org/sites/default/files/project-documents/47087/47087-006-cp-en.pdf

BIMSTEC Masterplan for Transport Connectivity. (2022 April). Retrieved from https://www.adb.org/sites/default/files/institutional-document/740916/bimstec-master-plan-transport-connectivity.pdf

Das, A.J. (2021, February 23). *Railways linking India, Myanmar, Southeast Asia possible in future: Foreign Secy Shringla.* EastMojo. Retrieved from https://www.eastmojo.com/news/2020/12/19/railways-linking-india-myanmar-southeast-asia-possible-in-future-foreign-secy-shringla/

Das, R.U. (2016). *Enhancing India-Myanmar Border Trade*: Policy and Implementation Measures. Ministry of Commerce and Industry and Research and Information Systems for Developing Countries. Retrieved from https://ris.org.in/sites/default/files/Publication/Enhancing_India-Myanmar_Border_Trade_Report%20%281%29.pdf.

Dash, D.K. (2022, January 5). Railway Board sanctions final location survey of Imphal-Moreh Line within hours after Vaishnaw's reassurance. *The Times of India*. Retrieved from http://timesofindia.indiatimes.com/articleshow/88718329.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst. Accessed on April 20, 2022.

Deol, Taran. (2021, August 17). Modi govt wants all Northeast capitals connected by rail. Here's how many are linked now. *The Print*. Retrieved from https://theprint.in/india/modi-govt-wants-all-northeast-capitals-connected-by-rail-heres-how-many-are-linked-now/716477/ Accessed on June 6, 2022.

Digital Logistics Capacity Assessments. (n.d.) *Myanmar railway assessment*. Retrieved from https://dlca.logcluster.org/display/public/DLCA/2.4+Myanmar+Railway+Assessment

Export Import Data Bank, Ministry of Commerce and Industry, Government of India. https://tradestat.commerce.gov.in/eidb/default.asp

K. Yhome. (2015). The Burma Roads: India's search for connectivity through Myanmar. *Asian Survey*, *55*(6), 1217–1240. Retrieved from: https://www.jstor.org/stable/10.2307/26364333

Krishnan, A. (2021, 31 August). China opens first road-rail transport link to Indian Ocean. *The Hindu.* Retrieved from https://www.thehindu.com/news/international/china-opens-first-road-rail-transport-link-to-indian-ocean/article36210663.ece

Laithangbam, I. (2022, January 29). First-ever goods train reaches Rani Gaidinlu station in Manipur. *The Hindu*. Retrieved from https://www.thehindu.com/news/national/other-states/first-ever-goods-train-reaches-rani-gaidinlu-station-in-manipur/article38343234.ece. Accessed on April 24, 2022.

Ministry for the Development of the North Eastern Region. (2010, April). *Minutes Of The First Meeting Of The Inter-Ministerial Group*. Retrieved from https://mdoner.gov.in/contentimages/files/Minutes_of_the_IMG_meeting_on_Indo_-_Myanmar_Border_Roads_and_Ports_held_on_8th_April_2010.PDF

Ministry of Foreign Affairs, Thailand. (2018, August 30). *Speech for H.E. General Prayut Chan-o-cha, Prime Minister of the Kingdom of Thailand, Fourth BIMSTEC Summit*. Retrieved from https://mofa.gov.np/wp-content/uploads/2018/08/PM-Speech-Thailand.pdf

Ministry of Transport and Communications. (2021). *Rail Sector Development Activities in Myanmar*. Retrieved from https://greatermekong.org/sites/default/files/Appendix%2017%20MyanmaRailways.pdf

Modi, N. (2021, August 15). *Highlights from PM Modi's Independence Day Speech*. Retrieved from https://www.narendramodi.in/2021-the-prime-minister-shri-narendra-modi-addressed-the-nation-from-the-ramparts-of-the-red-fort-on-the-75th-independence-day-556739. Accessed on May 18, 2022.

National Transport Development Policy Committee. (2014). *India Transport Report: Moving India to 2032*. P. 82 Retrieved from https://niti.gov.in/planningcommission.gov.in/docs/sectors/NTDPC/rep_ntdpc_v1.pdf

Press Information Bureau. (2016, May 11). *Indo-Myanmar Railway Network*. Retrieved from https://pib.gov.in/newsite/PrintRelease.aspx?relid=145244

Press Information Bureau. (2020, September 21). *Jiribam- Imphal Railway Line.* Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1657353

Shang-su, Wu. (2020, 18 November). Gauge-changing train is no game changer for China. *The Interpreter*. Retrieved from https://www.lowyinstitute.org/the-interpreter/gauge-changing-train-no-game-changer-china

Simhan, T.E. Raja. (2022, February 1). Big push in budget for multimodal logistics. *The Hindu Business Line*. Retrieved from https://www.thehindubusinessline.com/economy/budget/big-push-in-the-budget-on-multi-modal-logistics/article64961171.ece

Sinha, R. & Sharma, B. (2020). Travel South Asia: India's tourism connectivity with the region. (New Delhi: Brookings Institution India Centre). P. 11. Retrieved from https://csep.org/wp-content/uploads/2020/07/Travel-South-Asia-Tourism-Connectivity.pdf

Takahashi, T. (2022, January 16). China's pan-Asian railway sputters to a halt in Thailand. *Nikkei Asia*. Retrieved from https://asia.nikkei.com/Economy/China-s-pan-Asian-railway-sputters-to-a-halt-in-Thailand. Accessed on April 20, 2022.

The Irrawaddy. (2022, January 14). *Suspended international infrastructure projects resumed in Myanmar*. The Irrawaddy Publishing Group. Retrieved from https://www.irrawaddy.com/news/burma/suspended-international-infrastructure-projects-resumed-in-myanmar.html

The World Bank. (n.d.). *Rail lines data.* Retrieved from https://data.worldbank.org/indicator/IS.RRS.TOTL.KM.

United National Treaty Collection. (2006, April 12). *Intergovernmental agreement on the Trans-Asian railway network*. Retrieved from https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XI-C-5&chapter=11&clang=_en.

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06

Transshipment Hubs in the Bay of Bengal Region

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Abstract

Despite numerous examples to illustrate that dominating the maritime sector is a significant contributor to regional economic growth, the Bay of Bengal region, with its strong geographical advantages, did not explore its full potential in the maritime sector. This region lies strategically halfway along the East-West trade lane, and connects India, a major economy, to the rest of the world. However, the maritime logistics facilities, including seaports, in this region focus on intra-region competition rather than exploring a win-win solution through regional cooperation to develop synergetic power to outperform competitors outside the region. Besides the major ports located in Sri Lanka, India, and Bangladesh, ports in Singapore and Malaysia too, play a vital role in serving the Bay of Bengal region, creating overlapping market coverage. Owing to geographical characteristics, hub and spoke networks dominate in the Bay of Bengal region, allowing major ports such as Colombo and Singapore to be promoted as transshipment hubs. Despite the deviation distance and infrastructure limitations, Indian ports attract some transshipment cargo from Indian feeder ports. However, high network connectivity, together with a strong cargo base, is essential to sustain a transshipment hub in a competitive market. The intense competition among ports in this region discourages the concentration of maritime networks and transshipment cargo at a single port, thereby decreasing competitiveness of the region. While focusing on the transshipment hubs in the Bay of Bengal region, this policy brief addresses the connectivity and cooperation deficit in the maritime sector, and the associated untapped potential that hinders regional development. Best-case scenarios for regional development are presented and analysed. Policy recommendations are provided as actionable steps for realising goals, while also addressing issues concerning stakeholders, and resource constraints.

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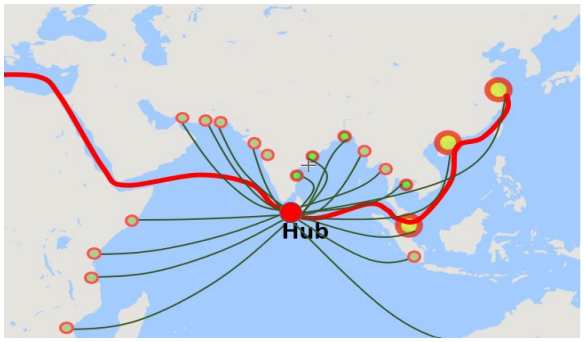
Introduction

As the most economical mode of transportation for international freight distribution, maritime shipping contributes significantly to economic growth, especially in regions that have geographical advantages. The Bay of Bengal region is strategically located halfway along the East-West trade lane. Despite this, the countries in the region have not been able to leverage the full potential of their location. One of the reasons for this is the infrastructural limitation at the hub and feeder ports in the region.

The hub and spoke configuration of maritime networks optimises transport cost by linking the large mainline vessels and small feeder vessels between the origin and destination ports. This model helps to overcome the infrastructure constraints associated with some ports in the region. In the Bay of Bengal region, for instance, the hub and spoke networks are centred on the Port of Colombo, as illustrated in Figure 1, which helps in overcoming the infrastructure limitations at Indian feeder ports, such a draft, terminal handling capacity etc. Other than Hub and Spoke networks, the relay networks improve voyage cost by integrating multiple mainline services. A transshipment hub port is vital in both networks to facilitate an economic space for cargo handling activities.

Figure 1. Hub and spoke networks centred on the Port of Colombo



Source: Author

Considering their contribution to regional economic growth, the key players such as port authorities, terminal operators, logistics service providers, among others in the Bay of Bengal region should embrace new strategies to enhance the entire port-based value chain. However, due to intense market competition and conflicting objectives, the interactions among these players have become complicated. For example, in India and Sri Lanka, different parties operate the ports, and they focus on maximising port-level profit rather than developing a common framework for the economic well-being of the countries and the region (Kavirathna, Hanaoka & Kawasaki, 2022). Although the cost-driven approaches of shipping lines such as strategic alliances, vessel size enlargement, limiting ports of call, and hub hopping encourage port operators to balance their competitive interactions, they still focus on enforcing competitive power over each other.

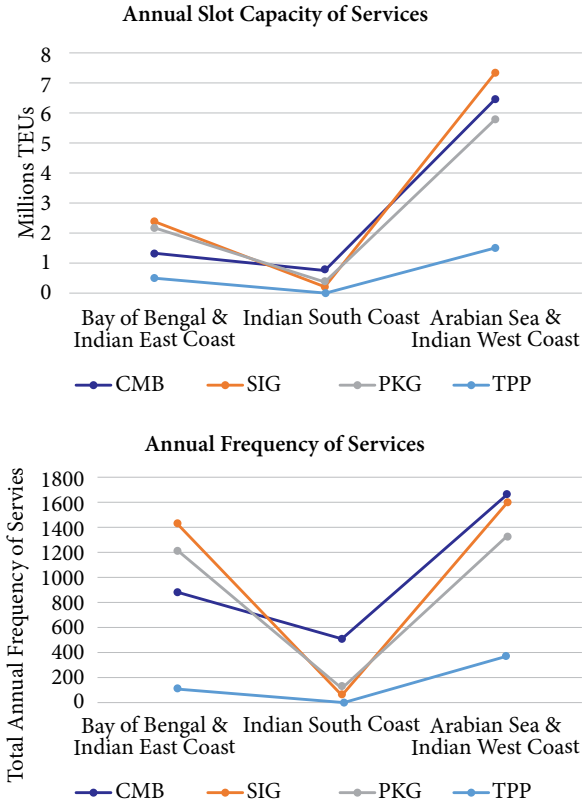
The Hub and Feeder Ports in the Bay of Bengal Region

In the Bay of Bengal region, the Port of Colombo is a significant transshipment hub serving the South Asian and a part of the African feeder markets, with transshipment cargo comprising over 75% of the share in port throughput. Colombo serves the Indian sub-continent feeder market because many major shipping services do not call directly at Indian ports due to the latter's infrastructure limitations in accommodating larger vessels, and the greater deviation from the trunk sea route required to access these ports. However, India has made a significant effort in the last decade to develop port infrastructure, enabling Indian ports to accommodate larger vessels. Due to these developments and the growth in captive cargo volume, mainline services have commenced direct calling at Indian major ports, degrading the transshipment volume at Colombo. As stated by Kawasaki, Tagawa, and Kavirathna (2022), the Colombo and Nhava Sheva ports receive 30 and 16 vessel calls respectively from East Asian services per week, and both ports receive 10 vessel calls from European services per week in 2018. Therefore, Nhava Sheva has only 2.1% transshipment rate at Colombo. However, the

V. O. Chidambaranar Port (also known as Tuticorin port) in Tamil Nadu, India, does not receive vessel calls from European and East Asian direct services, and hence has a 73.5% transshipment rate at Colombo. The authors have highlighted that even relatively smaller Indian ports in the Bay of Bengal such as Tuticorin, Krishnapatnam, and Visakhapatnam would obtain direct routes to Europe and East Asia if high Indian cargo demand and port expansions support potential de-hubbing.

Although the competition between Colombo and Indian major ports is highlighted, a hub port competition can extend beyond regional boundaries. With multiple hub ports possibly serving the same feeder market, the Bay of Bengal region experiences cross-regional hub port competition. Therefore, ports in Singapore and Malaysia also play a vital role in serving the Bay of Bengal region, creating overlapping market coverage for South Asian and Southeast Asian hub ports. Hence, Colombo and Indian major ports experience competition from neighbouring hub ports such as Singapore, Kelang, and Tanjung Pelepas. An analysis of shipping services between the Indian feeder ports and these cross-regional hub ports indicates that except for Tuticorin and Cochin ports in South India, most other feeder ports have a high service frequency with Southeast Asian hub ports (Kavirathna et al., 2018a). Figure 2 shows the total annual frequencies and slot capacities of services connecting Indian East, South, and West-coast feeder markets and four competitive hub ports, indicating strong competition among hub ports in serving these feeder markets. According to the Lloyd's List Intelligence (2020) port ranking, Colombo is ranked below the Southeast Asian hub ports, and Indian ports have even lower rankings. Although Colombo or Indian major ports do not have a significant role in relay networks, other neighbouring hub ports such as Singapore, Tanjung Pelepas, etc. would also take relay transshipments due to their high network connectivity. Despite these challenges from cross-regional hub ports, the South Asian ports compete rather than explore a win-win solution through regional cooperation to develop a synergetic power to out-perform competitors from other regions.

Figure 2. Annual frequency and slot capacity of services connecting hub ports and feeder markets.

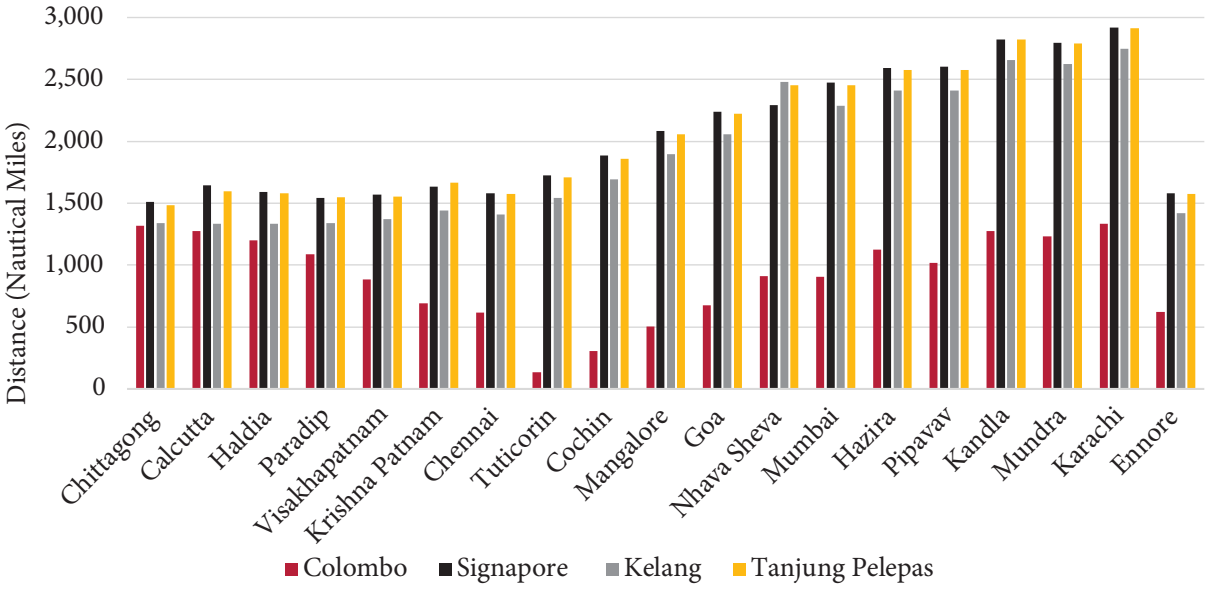


Source: Made by the author based on Data collected from MDS Transmodal Inc.
Note: Colombo, Singapore, Kelang, Tanjung and Pelepas are abbreviated as CMB, SIG, PKG, TPP respectively.

To exploit the advantages of the Bay of Bengal region, its maritime logistics facilities must be utilised most effectively. Shipping lines prefer a minimum voyage cost when optimising a hub and spoke network. Thus, the maximum usage of hub ports in this region would enable shipping lines to reduce feeder costs because these regional hub ports are located closer to the feeder market, as illustrated in Figure 3, where Colombo has significantly shorter distances with all feeder ports than the Southeast Asian hub ports. However, high network connectivity and a strong cargo base are essential for a transshipment hub to attract shipping lines. The intense competition among regional ports discourages the concentration of maritime networks at a single port, thereby decreasing the region's competitiveness. Thus,

the proximity of Colombo or Indian major ports to the South Asian feeder market with a potential of saving voyage costs does not guarantee high transshipment volumes. This is because shipping lines would consider multiple factors beyond the transport cost when selecting a transshipment hub, as illustrated in Table 1 which shows the higher performance of Singapore in numerous hub port selection criteria. As a result, import and export cargo of South Asia would be transported via maritime networks with high voyage costs, degrading their competitiveness in the world commodity market. Moreover, reducing vessel calls at regional ports diminishes the additional income generated from bunkering and other ancillary services. Hence, the cooperation deficits in this region have roots in the untapped potential that hinder regional development. The vulnerability of the transshipment market creates adverse impacts for the entire region.

Figure 3. Feeder link distance between competitive hub ports and feeder ports in the Bay of Bengal



Source: Voyage Planner, Marine Traffic (www.marinetraffic.com)

Maintaining Buoyancy Between Competition and Cooperation

Strategically, an ideal way to address the cooperation deficits in the Bay of Bengal region would be to have an appropriate balance between the extreme ends of competition and cooperation among market players. Such a balanced approach derives strategic implications for players in the same market to create win-win outcomes rather than fostering traditional win-loss outcomes. If this strategy is applied to the ports in the Bay of Bengal region, they would cooperate with each other to create a bigger business opportunity for the entire region while also competing to absorb a large portion of this expanded business opportunity. Since this policy encourages simultaneous competition and cooperation among regional ports, it is essential to identify the areas where they should cooperate or compete with each other.

For example, if the regional ports have an extreme price competition, and each port tries to attract more shipping lines by lowering the port charges than their competitors, this unhealthy competition will eventually result in a discounted average port charge for the entire region, and shipping lines would benefit from a high bargaining power. However, port operators and investors will not benefit from a discounted port charge, and the attractiveness of the entire region would be adversely affected. Also, extreme competition encourages port operators to focus on individual profits

leaving fewer avenues for sharing resources and competencies to reduce negative externalities. Conversely, if ports have an extreme level of cooperation, the market would have a monopolistic high price, which would eventually reduce its attractiveness for the shipping lines. Moreover, extreme cooperation discourages port operators from innovation, specialisation, and enhancing operational efficiencies. Thus, an appropriate balance between competition and cooperation will enable win-win outcomes for the entire region.

Table 1: Performance of competitive hub ports concerning hub port selection criteria

Hub Port Selection Criteria	Rank 1	Rank 2	Rank 3	Rank 4
Location with other Hub Ports	SIG	CMB	TPP	PKG
Hub Port Accessibility	SIG	CMB	PKG	TPP
Location with Indian East Coast Feeder Markets	CMB	SIG	PKG	TPP
Location with Indian West Coast Feeder Markets	CMB	SIG	PKG	TPP
Port Capacity (TEUs)	SIG	CMB	PKG	TPP
Berth Availability	SIG	CMB	PKG	TPP
Frequency of Delays	SIG	CMB	TPP	PKG
Records of Damages	SIG	PKG/TPP	PKG/TPP	CMB
Policies and regulations	SIG	PKG	TPP	CMB
Port Infrastructure	SIG	PKG	CMB	TPP
Port Superstructure	SIG	PKG	CMB	TPP
IT and Advanced Technology	SIG	PKG	TPP	CMB
Logistics Facilities	SIG	PKG	CMB	TPP
Efficiency of Navigational Services	SIG	PKG	CMB	TPP
Efficiency of Husbandry Services	SIG	PKG	CMB	TPP
Professional Employees	SIG	PKG	CMB	TPP
Marleting Efforts	SIG	PKG/TPP	PKG/TPP	CMB
Port's Flexibility	SIG	CMB	TPP	PKG
Financial Clearance Capability	SIG	PKG	CMB/TPP	CMB/TPP
Frequency of Ship's Visits	SIG	CMB	PKG	TPP
No. of Services Calling at Port	SIG	CMB	PKG	TPP
Availability of Dedicated/Own Terminal	SIG	CMB/TPP	CMB/TPP	PKG
Personal Contacts	SIG	CMB	PKG	TPP
Special Preferences on Shipping Lines	SIG	CMB	PKG/TPP	PKG/TPP
Availability of Customers/Captive Cargo	SIG	PKG	CMB	TPP
Availability of Feeder Services	SIG	CMB	PKG	TPP
Opinion/Preference of Shipper and Forwarders	SIG	CMB	PKG/TPP	PKG/TPP
Location of Hub Port with Shipping Line's Services	SIG	PKG	CMB/TPP	CMB/TPP

Source: Kavirathna et al. (2018)

Note: Colombo, Singapore, Kelang, Tanjung and Pelepas are abbreviated as CMB, SIG, PKG, TPP respectively.

Value creation and value capture are the fundamental concepts for drawing up policy objectives. Value creation addresses the common benefit of cooperation among ports in the region such that all ports would benefit from it. For example, value creation efforts can be devoted to enhancing the region's competitiveness by drawing up regional tariff and rebate policies, developing the regional export sector, and creating joint marketing campaigns for shipping lines. With that, the Bay of Bengal maritime market can be expanded with more business opportunities enhancing regional economic growth. On the other hand, value capture is the individual effort made by each port to enhance its competitiveness. Therefore, while maintaining regional cooperation for value creation of the entire region, each port makes an effort at value-capturing to perceive more individual benefits from expanded business opportunities in the region. The next section emphasizes on several policy objectives to address the cooperation deficits among ports in order to exploit the untapped potential in this region, considering the short, medium, and long-term perspectives.

In the short-term, regional ports should cooperate on addressing existing market challenges such as shipping line alliances and hub-hopping, among others. As for value capturing, each port should make an effective port marketing effort which is currently lacking in this region. As discussed by Notteboom, Pallis, and Rodrigue (2022), a survey carried out in Europe revealed that 81% of port authorities lead their port marketing activities, and a survey of 70 cruise ports in the Mediterranean Sea indicates that 71.4% of port authorities lead their port marketing activities. Accordingly, their port marketing strategies deal with a network of stakeholders, including three main categories: business-related stakeholders (e.g., shipping lines, terminal operators, logistics companies), societal groups and local communities, and institutional stakeholders focusing on policy and legislative interventions. Moreover, port operators can cooperate to share underutilised port infrastructure and reduce port congestion. Port performance should also be enhanced considering qualitative aspects because shipping lines consider numerous factors for hub port selection. While attracting transshipment cargo, ports should cooperate on generating additional revenue from ancillary services and common user facilities.

The captive cargo volume can be increased in the medium term by developing regional imports and exports. Moreover, regional ports should consider optimising maritime networks to secure the most economical network configuration for international trade. Hence, the competitiveness of import and export cargo in the world commodity market should be enhanced by lowering transport costs. Since hub port competition is affected by shipping lines, port authorities, terminal operators, and other logistics service providers, an effective integration among them should be one of the medium-term objectives.

In the long term, it is essential to have an effective functional allotment for regional ports and clarify the transshipment hub status. The regional port operators should get together to discuss the directions for port development with a long-term master plan. Port customers should get the best possible deals with service providers without jeopardising their possibilities of enhancing the infrastructure and services. Port efficiency can be enhanced by encouraging private-sector involvement in port operations.

Although policy interventions address the regional cooperation deficit, significant challenges and constraints would influence achieving those objectives. Developing countries in the region have to overcome resource constraints of the maritime sector with the help of all stakeholders, including port administrators and operators, governmental bodies, international organisations, and shipping and logistics companies. The following section recommends measures to achieve these policy objectives.

Policy Options

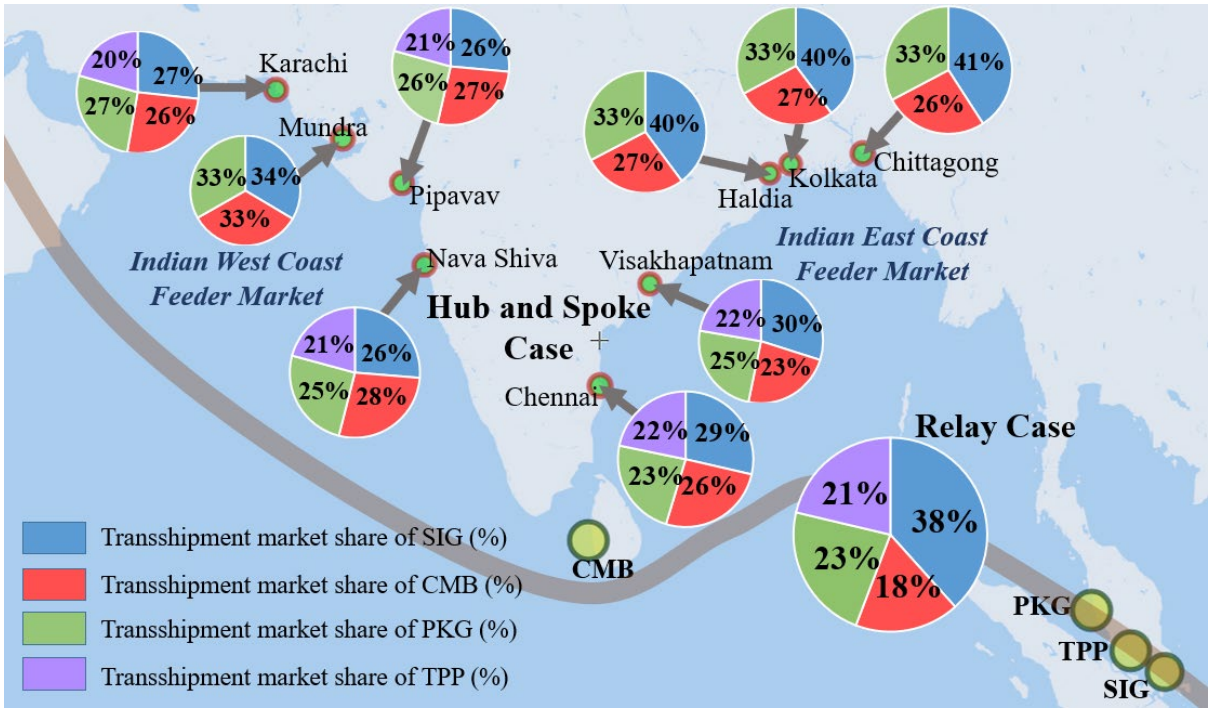
An effective balance between competition and cooperation will not emerge voluntarily. Therefore, it is essential to enforce rules and/or incentives in the short term. Regional port cooperation should share resources and expertise to improve trade volume, assuring a sufficient cargo volume for shipping lines to enable their vessels to call at regional hub ports. Since global terminal operators have competitive advantages with economies of scale, expertise, and increased market power from a worldwide terminal network, inviting them to operate regional ports would enhance the market power of the entire region. Although several shipping services currently call at South Asian and neighbouring regional hub ports such as Colombo and Singapore simultaneously, calling at two adjacent regional ports by the same service will be limited in the future because shipping lines try to reduce their voyage costs. Therefore, vertical integration with shipping lines by offering dedicated terminals, on-arrival berths, and free dwell time for transshipment containers will encourage them to call at South Asian hub ports continuously. Moreover, governments may encourage shipping lines to invest in port infrastructure, giving them a sense of ownership in port facilities; thus, they would take initiatives to enhance port throughput. For example, offering concession agreements such as Build–Operate–Transfer (BOT) to shipping lines and rebates on port tariffs would enable shipping lines to invest in port facilities, especially if the port has geographical advantages. Also, port authorities should focus on developing supporting logistics infrastructure in the hinterland, such as high-capacity logistic corridors, multi-modal hubs, empty container depots, container freight stations, etc., while enabling advanced operations such as multi-country consolidations. A majority of the regional ports, especially in Sri Lanka and India, have severe issues with hinterland connectivity due to congested transport corridors and gaps in logistics infrastructure, which eventually decrease port competitiveness. Since a few shipping alliances dominate this region, vertical integration between alliances and port operators should be encouraged. Apart from developing infrastructure, it is essential to create professionals in maritime logistics to carry out efficient shipping agency functions and customs procedures, etc., to attract global shipping companies.

The possibility of hub port relocation is significant for transshipment markets. For instance, Maersk Sealand relocated its transshipment hub from Singapore to Tanjung Pelepas in 2000. Thus, ports should consider appropriate incentives to encourage shipping lines to relocate their transshipments from external hub ports to the Bay of Bengal region. Moreover, its connected markets should be expanded beyond the Indian sub-continent, especially targeting minor ports in East Africa and the Arabian Sea. Since an effective integration among market players is one of the medium-term objectives, Kavirathna et al. (2020a) highlighted the possible cooperation among terminals in Colombo to reduce port congestion and waiting time. Accordingly, despite their different ownership, Colombo Port's terminals agree to handle excess vessels of competitive terminals when they have idle berth facilities, which guarantees the optimum utilisation of port infrastructure and high customer service with a potential for reducing over 1,600 hours of cumulative vessel waiting time per month at Colombo. The private sector can be involved in port operations by offering concession terminals. However, the profit-oriented objectives of private operators would have both positive and negative consequences; thus, effective enforcement is required from public port administrators.

Kavirathna et al. (2018) have highlighted berth availability as the most critical factor for hub port selection. Moreover, feeder connectivity and high cargo volume are significant for hub and spoke networks. Therefore, this region should attract more feeder operators offering dedicated feeder berths and tariff rebates in the short term. However, improving cargo volume is essential in the long term to maintain a strong feeder network because feeder lines

consider volume stability when allocating their vessel space to multiple mainlines. Moreover, geographical features play a significant role in westbound and eastbound voyages. When considering export cargo originating from India's East coast and destined for the Far Eastern countries, using Southeast Asian hub ports would be an advantage. However, if these exports were destined for European countries, their transshipment at Colombo would be economical. However, these advantages are hard to absorb because the port selection is affected by many other factors. As illustrated in Figure 4, Kavirathna, Kawasaki and Hanaoka (2018) estimated that most Indian East coast feeder ports would offer higher transshipment volumes to Singapore than Colombo due to the high efficiency and network connectivity in Singapore, although Colombo is located closer to these feeder ports. Colombo and major Indian ports have less competitiveness in relay transshipments because of their poor network connectivity. Thus, ports should cooperate on developing a highly connected hub port within this region to optimise their maritime networks. Moreover, having a highly connected hub port would reduce waiting time for shippers and consignees, enhancing regional competitiveness.

Figure 4. Estimated market shares for competitive hub ports



Source: Kavirathna, Kawasaki and Hanaoka (2018)

Note: Colombo, Singapore, Kelang, Tanjung and Pelepas are abbreviated as CMB, SIG, PKG, TPP respectively.

Moreover, structural changes are observed in this region when changing the role of the feeder port to a direct calling port. For example, due to their adequate port infrastructure, Mundra and Nhava Sheva ports receive vessel calls directly from mainline services. Besides, India is trying to develop Vizhinjam port as a transshipment hub in the southern coastal area. Since India has a solid captive cargo base and the potential to serve several South Asian landlocked countries, creating its own transshipment hub would be possible. However, Chittagong port and some Indian minor ports still use Colombo as the central transshipment hub. Considering the least deviation of Colombo from the East-West trunk sea route, concentrating hub and spoke networks at Colombo would be ideal for this region. This is especially important because the feeder costs between Colombo and Indian East, South, and West-coast feeder ports might be lower than the costs of transporting containers via land transport corridors to their own transshipment hub due to the

large land size of the Indian subcontinent. Therefore, port operators should develop a commonly agreed policy on ports' function allotments to avoid over-investment in port development and unhealthy port competition. For example, in Sri Lanka, Hambantota port is being developed as a container port by China Merchant Port Holding, although the potential unhealthy competition between Colombo and Hambantota ports would threaten the transshipment hub status of Colombo (Kavirathna et al., 2020b).

However, attracting relay networks would reduce the vulnerability of Colombo's transshipment volume even with these minor ports' development. Besides, cooperation among regional ports on developing multi-modal transport infrastructure and outsourcing logistics would improve this transshipment market. For example, suppose one regional player has more competency in bunkering service, then other ports may outsource bunkering operations to this player, eventually reducing the overall cost with more economy-of-scale advantages. In the short term, cabotage restrictions can be reconsidered to offer more options for shipping lines to transport cargo within this region. Relaxing cabotage restrictions would encourage more global shipping companies to call at these regional ports, especially considering the potential growth in trade volumes from India and Bangladesh. Thus, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) members should agree on a liberal cabotage law while ensuring positive economic impacts for all members with an effective mechanism for sharing rewards. Due to the transshipment market competition, the market power of individual ports can be threatened if they continue to act as isolated entities. Therefore, port operators should synergise their competitive advantages to develop the Bay of Bengal region as the dominant maritime market in the world.

References

Kavirathna, C.A., Kawasaki, T. & Hanaoka, S. (2018). Transshipment hub port competitiveness of the port of Colombo against the major Southeast Asian hub ports. *The Asian Journal of Shipping and Logistics*, 34(2):71–82. Retrieved from http://doi.org/10.1016/j.ajsl.2018.06.004.

Kavirathna, C.A., Kawasaki, T., Hanaoka, S. & Matsuda, T. (2018a). Transshipment hub port selection criteria by shipping lines: The case of hub ports around the Bay of Bengal. *Journal of Shipping and Trade*, 3(4). Retrieved from https://doi.org/10.1186/s41072-018-0030-5.

Kavirathna C.A., Kawasaki, T., Hanaoka, S. & Bandara, Y.M. (2020a). Cooperation with a vessel transfer policy for coopetition among container terminals in a single port. *Transport Policy*, 89:1–12. Retrieved from http://doi.org/10.1016/j.tranpol.2020.01.010.

Kavirathna C. A., Hanaoka. S., Kawasaki, T. and Shimada, T. (2020b). Port development and competition between the Colombo and Hambantota ports in Sri Lanka. *Case Studies on Transport Policy*, vol. 9, no. 1, pp. 200–211. Retrieved from http://doi.org/10.1016/j.cstp.2020.12.003.

Kawasaki, T., Tagawa, H., Kavirathna, C.A. (2022). Vessel deployment and De-hubbing in maritime networks: A case study on Colombo Port and its Feeder Market. *Journal of Marine Science and Engineering*, 10(3), 304. Retrieved from http://doi.org/10.3390/jmse10030304.

Kavirathna C.A., Hanaoka, S. and Kawasaki, T. (2022). Terminal pricing decisions of the port authority and the global terminal operator of the competing ports in Sri Lanka. *Journal of South Asian Logistics and Transport*, 2(2), pp. 43-77. Retrieved from http://doi.org/10.4038/jsalt.v2i2.49.

Lloyd's List Intelligence. (2020). *One Hundred Ports, The Definitive Ranking of the World's Largest Container Ports*. Retrieved from https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2020

MDS Transmodal Inc. (2016). *MDS containership databank*. Retrieved from https://www.mdst.co.uk/data

Notteboom, T., Pallis, A. and Rodrigue, J. (2022). *Port Economics, Management and Policy*, New York: Routledge. Retrieved from http://doi.org/10.4324/9780429318184.

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07

Improving Trade Connectivity Through Mutual Recognition Agreements in Standards: A Case Study of Processed Food Exports from Sri Lanka to India

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Abstract

Existing free trade agreements (FTAs) among countries in the Bay of Bengal region have failed to effectively address non-tariff barriers (NTBs) to trade, take initiatives to expand existing FTAs, or negotiate new regional agreements. Addressing shortcomings in NTBs is vital to improving trade connectivity in the region. One important NTB that stifles trade is the time and cost taken to demonstrate compliance with importing country standards. This policy paper proposes a solution to this problem that can be implemented outside the ambit of FTAs. It takes the example of the challenges faced by food exporters of Sri Lanka to India by highlighting the time-consuming and complex standards compliance procedures at the point of entry to India. This arises out of India's reluctance to recognise testing and certification conducted outside its borders. The proposed solution is a Mutual Recognition Agreement (MRA) which enables mutual recognition of conformity assessment procedures carried out between recognised institutions in the two countries, and can be easily implemented. An MRA will allow Indian agencies to accept test reports and certifications issued by Sri Lankan agencies, reducing the unnecessary delays and costs incurred in demonstrating compliance with Indian standards, and thereby boost trade between the two countries. This policy brief is prepared based on the research report compiled by Verité Research tilted "Improving Trade with India, Mutual Recognition in Conformity Assessment."

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Introduction

Entering into free trade agreements (FTAs) is a key strategy followed by governments to reduce trade barriers faced by their exporters in partner countries. However, lowering of tariff barriers is not sufficient to guarantee market access. In addition to tariff barriers, exporters face a vast array of non-tariff barriers (NTBs) in the form of rules, regulations, and procedures at the borders of the importing country that increase the cost and time of trading. Failure to effectively address such NTBs prevents exporters from making maximum use of the market access created by the removal of tariff barriers. Lack of strong provisions to tackle NTBs is a key limitation in most existing FTAs among countries in the Bay of Bengal region. This is particularly true of FTAs signed by Sri Lanka with its South Asian neighbours such as Pakistan and India. The agreements exclusively focus on phasing out of tariffs but have no provisions to address NTBs. The new initiatives taken by the countries in the region, including Sri Lanka, to expand/strengthen the existing trade agreements (e.g., the Comprehensive Economic Partnership Agreement (CEPA) between India and Sri Lanka) or to negotiate new agreements (e.g., the Bay of Bengal Multi-Sectoral Technical and Economic Cooperation (BIMSTEC FTA) have made little progress.

This policy brief focuses on an important NTB that stifles trade within the region and offers a simple and practical solution the countries could pursue to overcome it. The NTB in focus is unduly restrictive procedures to demonstrate compliance with the importing country's product standards, also known as conformity assessment procedures (CAPs) (Appleton, 2013). All countries have the right to maintain product standards to achieve legitimate public policy objectives of protecting consumers, the environment, and plant and animal life. Exporters also have a responsibility to ensure that the products exported comply with the importing country's standards. While the right to implement CAPs is recognised globally, it is also acknowledged that CAPs should not be a hindrance to trade by increasing the time and cost of trading (World Trade Organisation, 1995).

To demonstrate the existence and impact of CAPs, this policy brief discusses the experience of processed food exporters from Sri Lanka to India. It serves as a useful case study to understand how, despite duty-free access, standards and regulations can unduly restrict trade, and how exclusively focusing on removing tariff barriers is not sufficient to guarantee market access. The brief also shows how mutual recognition in conformity assessment can be a simple and a practical solution that can be adopted by countries in the Bay of Bengal region faced with such NTBs, without the need for lengthy FTA negotiations.

Background

In 1998, the India-Sri Lanka Free Trade Agreement (ISFTA) was signed to strengthen trade relations between the two countries. The ISFTA came into effect in 2000.

The agreement eliminated tariffs for 4,227 Indian products and 2,802 Sri Lankan products (Institute of Policy Studies, 2017). The product list of India included mostly the fresh and processed foods exported from Sri Lanka to India. The FTA allowed for Sri Lankan food exporters to enter the large and fast-growing Indian market located in close geographical proximity. At the time, no other country had similar duty-free access to the Indian market for food products. Hence, Sri Lanka had a significant competitive advantage over other countries in exporting processed food to India. The Most Favoured Nation (MFN) tariffs imposed by India at the time on processed food imports tended to be prohibitively high. The average tariff rate was over 30%, and tariffs for some products (e.g., processed meat) went up by 100% and 150%. However, the processed food exporters failed to reap the full benefits of this market opportunity due to numerous NTBs that prevented them from entering the Indian market despite having duty-free access.

One key NTB faced by food exporters was the time and cost of adhering to CAPs related to Indian product standards. The problem of NTBs could not be addressed within the FTA framework, as it lacked any provisions to do so.

Challenges for India-Sri Lanka CAPs

To understand why processed food exporters struggled, Verité Research conducted a study of processed food trade between Sri Lanka and India in 2015 (Verité Research, 2015). The study employed a desk-based review of public documents including trade agreements, government publications, and statistics pertaining to trade between India and Sri Lanka as well as key-person interviews with food exporters, standards issuing and testing bodies, and government officials and policy practitioners. The study revealed that the cost and time taken to comply with Indian standards and regulations at the point of entry was the biggest obstacle faced by exporters. The main reason for this, according to the exporters, was the unwillingness of Indian authorities to accept compliance certificates issued by laboratories located outside India for most food products. As a result, even if Sri Lankan exporters obtain certification stating compliance with Indian regulations and standards prior to export, the products were tested again by Indian authorities upon arrival at the Indian port. CAPs at the point of import in India acted as an obstacle to trade due to the following reasons.

1. *Delays*: Depending on the port, the time taken to obtain and issue laboratory test reports varied from 20-30 days and an overall 30-40 days to release goods from customs. Fresh produce such as fruit was held up for up to 5 days while processed foods like cordials, sauces, and jams for up to 3 months. These delays significantly shortened the shelf life and quality of the products, and at times made them unfit for consumption at the time of release from the port. The problem was exacerbated by another rule that required the product to have a shelf life of more than six months at the time of clearance. If not, the goods were not permitted entry by the Directorate General of Foreign Trade (DGFT) in India. Thus, the longer the products were held, the higher the risk exporters faced of not being able to sell their products in the Indian market.

2. *Costs*: As a result of shipments being held at the port due to delays in issuing test reports by the authorities, the exporters have to bear demurrage and storage costs. This is in addition to paying the cost of testing, which was significant for small and medium exporters who shipped smaller quantities.

3. *Uncertainty*: The delay in obtaining test reports and the time taken to clear cargo varied by shipment and by port, causing difficulties for exporters in coordinating marketing and distribution plans with buyers. Since the date of release was unknown, obtaining necessary retail shelf space, warehouse storage, etc. was made more complicated for both Indian importers and exporters who were forced to adopt a 'wait and see' approach. If delays and costs are known and consistent, exporters can account for these and plan accordingly. However, inconsistency and the resulting uncertainty made it challenging for Sri Lankan exporters to retain buyers and continue to export.

Policy Options

Compliance-related costs and delays that result at the point of import were not the only problems faced by food exporters, nor were they unique only to trade between India and Sri Lanka. This is a common CAPs-related barrier to trade faced by many countries and exporters around the world. Much groundwork had already been done across countries in terms of mechanisms to overcome this barrier. Broadly, the study by Verité Research identified four approaches that can address the issue of compliance related NTBs:

1. *Harmonisation of Standards*: The adoption of common or identical standards and regulations by a group of countries can, in principle, be an effective way to reduce duplication of compliance costs, of having to comply with varying sets of standards in different types of exports, and can make international markets more efficient and competitive by reducing transaction costs and improving transparency. However, in practice, it has proven to be a difficult and time-consuming goal to achieve due to lengthy negotiations between countries with different standards, the cost of adjustment, and the restrictions it places on the ability of the countries to choose standards that are more appropriate based on their context.

2. *Equivalency Agreements*: In effect, equivalence allows two different standards to serve as alternatives to each other by allowing countries to maintain differing standards or regulatory procedures for a product parameter but treat them as equal since both standards are implemented to achieve the same objective. While potentially a powerful tool, this system is likely to be more feasible where regulatory differences among jurisdictions are minimal and do not implicate highly sensitive issues.

3. *Accreditation of Foreign Manufacturer*: This refers to the foreign manufacturer directly obtaining accreditation from the national standards body of the importing country. This requires individual exporters to bear the cost of facilitating checks by the national standards body of the importing country. This system of certification, however, will only assist a few large-scale businesses in a country that can afford this certification.

4. *Mutual Recognition of Conformity Assessment Procedures (CAPs)*: Partner countries mutually agree to recognise the competency and capacity of each other's Conformity Assessment Bodies (CABs) to assess conformity of products with the importing country's national standards and regulations. MRA on CAPs require partner countries to work with each other to assess capacity to conduct the testing and certification to ensure compliance certificates issued by the exporting country standards bodies/ laboratories are acceptable to the importing country.

The benefits of an MRA on CAPs compared to the previously discussed solutions is that it allows countries to keep their own standards, and hence can be implemented fairly quickly compared to harmonisation of standards. It can be implemented even between countries with significant differences in standards, and it prevents exporters from having to obtain recognition on an individual basis at a higher cost. It achieves the same outcome expected from other types of arrangements, i.e., reduced time and costs of trading by preventing the products from being retested at the border of the importing country.

In the case of Sri Lankan food exports to India, the proposal on the table at the time Verité Research did this study (2015) was to tackle this problem within the proposed Comprehensive Economic Partnership Agreement (CEPA) between the two countries. There was also a proposal on the table on harmonisation of standards between the two countries. However, the study conducted by Verité Research identified an MRA in CAPs as a far better and a more feasible solution compared to what had been proposed. CEPA negotiations commenced as far back as in 2005 but faced many hurdles, and there is still no end or completion of negotiations in sight. Harmonisation is likely to take a long time, given the differences in standards between the two countries. In contrast, MRA on CAPs is a better option because (i) it allows each country to maintain its own standards within its borders; (ii) benefits both small and large exporters alike; and (iii) it is easier to implement because it focuses on a single issue and can even be implemented at an institutional level. Further, MRA on CAPs is unlikely to attract opposition from the public or domestic industry compared to, for example,

negotiating and concluding CEPA, which covers multiple sensitive sectors and issues.

It is heartening to note that this proposal has received the attention of policymakers. The Export Development Board (EDB) of Sri Lanka initiated discussions in 2018 with the Food Safety and Standards Authority of India (FSSAI). EDB submitted the names of five local state-owned and private sector labs for the approval of the Indian food standards regulator to allow these labs to issue certificates which would not be rejected in India, viz., the laboratories at Registrar of Pesticides (ROP), Industrial Technology Institute (ITI), Tea Board, SGS Lanka Ltd., and Bureau Veritas. At the time, FSSAI had not registered any laboratory outside India (Export Development Board of Sri Lanka, 2018). An audit team comprising officials from FSSAI, the National Accreditation Board for Testing and Calibration Laboratories (NABL), and Export Inspection Council (EIC) to audit these laboratories arrived in Sri Lanka. Following the audit, FSSAI recognised three labs to test processed food exports to India: ITI, SGS Lanka Ltd, and Bureau Veritas (FSSAI, 2018). Thereafter, the FSSAI put forward new policies for the recognition and accreditation of food testing laboratories located outside India (FSSAI, n.d.).

Wider implications for improved trade connectivity in the Bay of Bengal

Unlike FTAs, which cover many sectors, products, and issues requiring lengthy negotiations, MRAs on CAPs can be implemented relatively quickly to improve trade connectivity by reducing standard compliance-related NTBs faced by traders. In fact, an agreement is required only for the national standards body in the importing country, in this case FSSAI, which accepts certificates of conformity issued by recognised, competent, and accredited CABs in the exporting country (i.e., food testing laboratories in Sri Lanka), confirming that the product meets with the importing country's standards and regulations. Since conformity is assessed and confirmed at the point of export, exporters do not have to go through the hassle of proving compliance at the border of the importing country. Another advantage of the MRA approach is it can fast-track priority export products before being gradually extended to other products as local laboratories expand their capacities to certify for importing-country standards.

Given the pace of trade negotiations among the countries in the region, the MRA approach presented in this case study can be a quick and effective way of dealing with compliance-related NTBs, especially given the lack of standards and regulations for common products. It is especially relevant for neighbouring countries seeking to boost their exports in a large and fast-growing Indian market. In fact, several countries, especially in the ASEAN region, have included MRAs in their trade negotiations and agreements with India in recent years, such as Singapore, Malaysia and Korea, among many others (Department of Commerce, 2005; 2011 and; 2009)

References

Appleton, A.E. (2013). Conformity assessment procedures. In T. Epps and M.J. Trebilcock (Eds.). In *Research Handbook on the WTO and Technical Barriers to Trade* (pp. 81-119). Gloucestershire, The UK: Edward Elgar Publishing.

Department of Commerce. (2009). *Comprehensive Economic Partnership Agreement between India and Korea*. New Delhi: Ministry of Commerce and Industry. Retrieved from https://commerce.gov.in/wp-content/uploads/2020/05/INDIA-KOREA-CEPA-2009.pdf.

Department of Commerce. (2005). *Comprehensive Economic Cooperation Agreement between The Republic of India and the Republic of Singapore – Chapter 5*. New Delhi: Ministry of Commerce and Industry. Retrieved from https://commerce.gov.in/wp-content/uploads/2020/05/ch5.pdf.

Department of Commerce. (2011). *India Malaysia CECA*. New Delhi: Ministry of Commerce and Industry. Retrieved from https://commerce.gov.in/wp-content/uploads/2020/12/Chapter-07-TBT.pdf.

Export Development Board of Sri Lanka. (2018, May 21). Food Safety and Standards Authority India to recognise Sri Lankan Food Labs. *Sri Lanka Business*. Retrieved from https://www.srilankabusiness.com/news/food-safety-and-standard-authority-india-to-recognise-sri-lankan-food-labs.html.

Food Safety and Standards Authority of India. (2018, July 13). *Three Sri Lankan Labs Obtain FSSAI Authorisation for F&B Certification*. Retrieved from https://fssai.gov.in/upload/media/5b4dc1d54957dFSSAI_News_Srilanka_Labs_Hospitality_14_07_2018.pdf.

Food Safety and Standards Authority of India. (n.d.). *Policy for Recognition/Accreditation of Food Testing Laboratories located abroad*. Retrieved from https://fssai.gov.in/upload/uploadfiles/files/Policy-ForeignLabs.pdf.

Institute of Policy Studies. (2017). *Handbook on India Sri Lanka Free Trade Agreement*. Colombo, Sri Lanka: Institute of Policy Studies and High Commission India. Retrieved from https://www.ips.lk/wp-content/uploads/2017/01/HB-India-SL-FTA-final.pdf

Verité Research. (2015). *Improving Trade with India: Mutual Recognition in Conformity Assessment*. Position Paper.Retrieved from https://www.veriteresearch.org/wp-content/uploads/2018/05/Improving-trade-with-India-1.pdf

World Trade Organisation. (1995). *Agreement on Technical Barriers to Trade.* Retrieved from https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm#articleVI

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08

Promoting Maritime Security in the Bay of Bengal and Andaman Sea

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Abstract

The Bay of Bengal has become a hotbed of irregular human migration in recent years, with Rohingya refugee boats making their way south to safer sanctuaries in Southeast Asia. The illicit drug trade has flourished especially during the COVID-19 pandemic, with supplies originating from the Golden Triangle region using Southeast Asia as the transit point on the way to other regions. These developments highlight the need for greater maritime security cooperation between South Asian and Southeast Asian governments. Both these sub-regions within the broader Indo-Pacific region, have their own maritime security capacity shortfalls. While piracy and armed robbery targeting ships in the Malacca Strait, a key waterway astride the Bay of Bengal, is no longer as serious a threat as in the early 2000s, there is nevertheless a need for maritime security cooperation between South and Southeast Asia in the Bay of Bengal in areas of irregular human migration and illicit drug trade. Promoting better maritime domain awareness and information-sharing between these two regions would be a good start.

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Maritime security threat

When discussing maritime security in the Bay of Bengal, one should not forget about the contiguous Andaman Sea. The interconnectedness between these two water bodies is more salient, from a policy perspective, than an artificial division via the Andaman and Nicobar Islands. Such interconnectedness makes it essential to treat the Bay of Bengal and the Andaman Sea as a single maritime geostrategic construct. Myriad security threats straddle this vast maritime domain, even though some of these challenges are confined mainly to the distinct water bodies. For example, the incidence of piracy and armed robbery in the Bay of Bengal and Andaman Sea is mainly in the immediate coastal waters of the littorals, such as the cases recorded close to Bangladeshi shores, mainly in the anchorages and, in particular, around Chittagong Port. However, as Table 1 shows, piracy and armed robbery against ships do not constitute a major issue in the Bay of Bengal and Andaman Sea. The author is, of course, mindful that available statistics indicate reported incidents, and that there could be cases that went unreported.

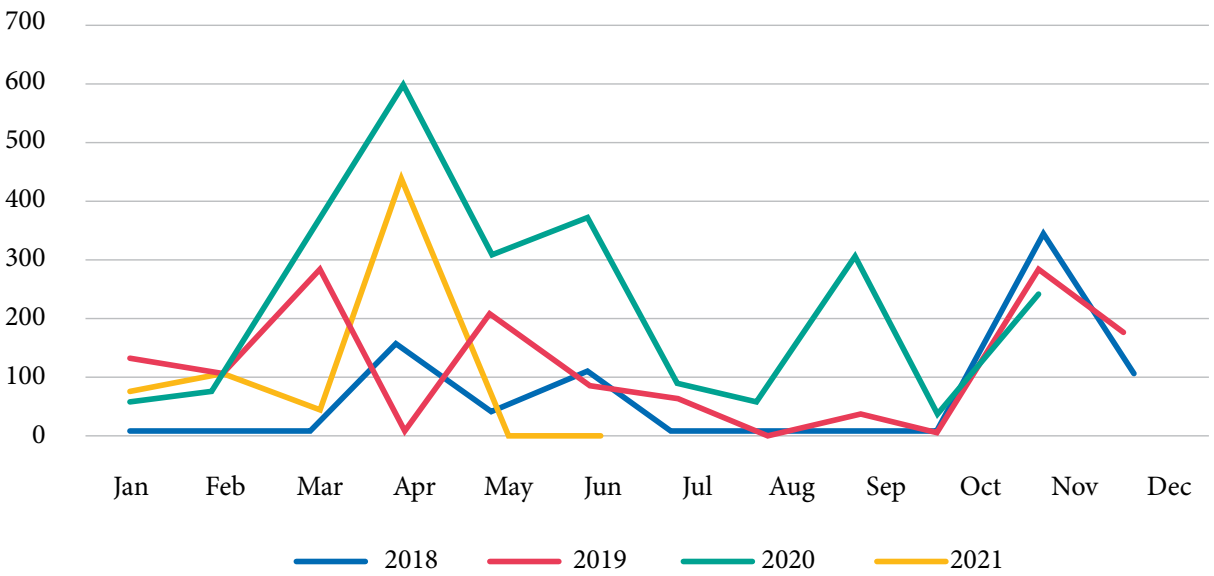
Table 1: Piracy and armed robbery against ships in the Bay and Bengal and Andaman Sea

Country	2018	2019	2020	2021
Bangladesh	11(2)	0	5	0
Bay of Bengal	0	0	0	0
Andaman Sea	0	0	0	0

Source: Piracy and armed robbery against ships in Asia: Annual report – January to December 2021, ReCAAP Information Sharing Centre, p. 11. Figure for Bangladesh in 2018 denotes 11 reported incidences, of which two were attempts and the remaining nine were actual attacks.

However, some other maritime security challenges do pose a more serious problem to the Bay of Bengal and Andaman Sea littorals. The Rohingya refugee problem was a severe one in 2015, leading to the 'boat crisis' that afflicted countries along the Andaman Sea coast, such as Indonesia and Malaysia. The Rohingya sea movements are one of the best examples to highlight the interconnectedness of the Bay of Bengal and Andaman Sea, and demonstrates how a security challenge emanating in a distinct maritime area can affect countries in a contiguous area. Amidst economic hardships during the height of the COVID-19 pandemic in 2020, there was a spike in the number of Rohingya who undertook the perilous southbound voyage compared to the previous years (see Figure 1).

Figure 1: Confirmed Rohingya sea movements by month: January 2018 – June 2021



Source: Left adrift at sea: Dangerous journeys of refugees across the Bay of Bengal and Andaman Sea, United Nations High Commissioner for Refugees, January 2020 – June 2021, p. 11.

To worsen the problem, these voyages also became fatal. As Table 2 shows, while the number of Rohingya making the risky seaborne dash saw an almost 100% increase from 2019 to 2020, there was a disproportionate explosion in the number of people killed or missing, from 4 to 209, over the same period. The situation was serious enough for the United Nations High Commissioner for Refugees (UNHCR), International Organization for Migration (IOM), and United Nations Office on Drugs and Crime (UNODC) to release a joint statement in May 2020 expressing deep concern that the "boat crisis" of 2015 might return. The statement calls on regional states to uphold the commitments of the 2016 Bali Declaration (Joint statement by UNHCR, IOM and UNODC on protection at sea in the Bay of Bengal and Andaman Sea, 2020). This declaration promulgated in the following year the Bali Process on People Smuggling, Trafficking in Persons and Related Transnational Crime, which sought to promote multilateral dialogue, awareness, information sharing, and cooperation on human trafficking, smuggling, and related crimes (Regional Treaties, Declarations and Related, 2016).

Table 2: Rohingya sea movement trends: 2018–June 2021

Country	2018	2019	2020	2021 (until June)
Number of persons	762	1337	2413	633
Dead and missing	11	4	209	9

Source: Left adrift at sea: Dangerous journeys of refugees across the Bay of Bengal and Andaman Sea, United Nations High Commissioner for Refugees, January 2020 – June 2021, p. 10.

The other serious maritime security challenge in the Bay of Bengal and the Andaman Sea is the illegal drug trade. Available data on seizures and major trafficking cases reported in 2020 from countries in East and Southeast Asia point to "continuous large-scale manufacturing of methamphetamine in Shan state, Myanmar, situated in the three-country border area known as the Golden Triangle" (Global SMART Programme, 2021). Notwithstanding COVID-19, seaborne drug trafficking along the Andaman Sea and Malacca Strait to transport crystalline methamphetamine to Southeast Asian countries such as Indonesia and Malaysia, and further afield to countries such as Australia and Japan, gained importance in the same year. Kuala Lumpur reported that, since the beginning of the pandemic, stringent land border controls had resulted in increased use of sea routes, including from southern Thailand (SMART Programme, 2021). Besides traditional seaborne routes from Myanmar via the Andaman Sea, the UNODC also identified emerging routes from West Asia through the Bay of Bengal (see Figure 2). Transnational drug traffickers continue to use Indonesia's Aceh province as their main entry point into the country to import drugs such as crystalline methamphetamine. According to Indonesia's National Narcotics Agency Commissioner General Heru Winarko, "the drugs are smuggled into Aceh province from such countries as Thailand and Malaysia through the seas and alternative paths to be then distributed to various areas in Indonesia" (Harris & Nasution, 2020). Aceh was in a "state of emergency" over the drug scourge (Nasution, 2021).

Figure 2: Crystalline methamphetamine trafficking flows in East and Southeast Asia 2020

Source: United Nations Office on Drugs and Crime, Synthetic drugs in East and Southeast Asia: Latest developments and challenges 2021, p. 13.

Limits to Existing Measures

The Bay of Bengal and Andaman Sea littorals together, at least on paper, muster a sizeable pool of maritime forces that could have dealt with the extant maritime security threats. However, the development of capabilities has been "beset by funding constraints, competing strategic and domestic priorities, lack of interagency coordination, and insufficient assets and resources" (Benson, 2020, p. 74). The addition of assets in the last two years (see Table 3) to these countries' maritime forces that are suitable for tackling such transnational security challenges as irregular human migration and drug trafficking chiefly came about from programmes that pre-dated the pandemic. And the count here does not take into account the geographical distribution of these maritime forces. For example, the entire holdings of Indonesia's maritime assets have been represented here, and by no means does the country deploy all of them to the Andaman Sea coasts given other equally, if not more pressing, concerns elsewhere throughout the vast archipelago. Even though India musters the largest pool of assets in the region, it still has to address security concerns on its western seaboard.

Table 3: Maritime forces in the Bay of Bengal and Andaman Sea

Country	2018		2019		2020		2021	
	Vessels	Aircraft	Vessels	Aircraft	Vessels	Aircraft	Vessels	Aircraft
Bangladesh	69	2	67	2	75	2	75	2
India	248	49	321	49	329	49	332	52
Indonesia	167	33	168	34	175	36	190	36
Malaysia	177	5	174	5	175	5	193	5
Myanmar	82	0	82	0	84	0	85	2
Sri Lanka	145	0	147	0	149	0	149	0
Thailand	188	27	190	27	195	27	200	27

Source: International Institute for Strategic Studies, Military Balance 2019, 2020, 2021, 2022 editions. Figures represented here are surface combat and patrol vessels that belong to both navies and civilian maritime law enforcement agencies, whereas only maritime surveillance/patrol aircraft from both military and civilian agencies are counted.

Compounding the capacity limitations in the foreseeable future is the present economic hardship faced by several countries. Even though regional countries have embarked on a gradual road to economic recovery starting from early 2021, current challenges—the Russia-Ukraine War and global supply chain disruptions—cast a pall of uncertainty over post-pandemic recovery and growth prospects. At the same time, external debts have continued to spike over the COVID-19 period (see Table 4) as regional governments took loans amidst reduced revenues to fund pandemic-related programmes. Sri Lanka, at the time of writing this paper, was arguably the hardest hit by the economic turmoil, especially its maturing debts and dwindling foreign exchange reserves. While not suffering the same fate as Colombo, the neighbouring countries in the Bay of Bengal and Andaman Sea are seen to be tightening their belts for fiscal prudence, devoting significant attention to public healthcare (given the emergence of new mutated strains, and social security.

To augment their national capacities, the Bay of Bengal littorals actively participate in both multilateral and bilateral forms of military cooperation, which has "helped to generate mutual trust, enhance operational interoperability, and facilitate information-sharing across the region" (Benson, 2020, p. 72).

Table 4: External debt-to-gross national income of Bay of Bengal and Andaman Sea littorals 2018–2020 (%)

Country	2018	2019	2020
Bangladesh	18	18	20
India	19	20	22
Indonesia	38	37	41
Malaysia	24	23	25
Myanmar	16	14	18
Sri Lanka	62	69	72
Thailand	36	34	42

Source: Data compiled from International Debt Statistics 2022 (Washington D.C.: World Bank Group, 2021), augmented by national government statistics.

India plays an outsized role in providing crucial maritime security public goods to the region, for instance training, intelligence-sharing, and other forms of maritime capacity-building support (Benson, 2020). The Bali Process, which arose from the Rohingya "boat crisis" in 2015, would have been an ideal arrangement to cope with the extant maritime security challenges in the Bay of Bengal and Andaman Sea, considering that all the resident littorals and some world powers such as the United States and China are signatories. However, the UNODC has determined that such mechanisms as the Bali Process—of which all Bay of Bengal littorals are members—"have failed to live up to their promise" (UNHCR, 2021, p. 1).

Broad multilateral mechanisms such as the Bali Process are hamstrung by familiar problems among regional countries, such as inequitable burden-sharing and lack of implementation. Notably, in the case of the regional response to the Rohingya boat-people phenomenon, as per the UNHCR (2021, p. 15), "there are to date no regional mechanisms to ensure equitable and predictable disembarkation of refugees and migrants in distress at sea, despite the maritime obligations of all states in the region" and the political commitments made by all signatories of the Bali Declaration. Bangladesh has borne the brunt of this challenge, with Foreign Minister Dr A.K. Abdul Momen lamenting that while Bangladesh was requested to provide shelter to the Rohingya on humanitarian grounds, other countries in the region were not asked to do the same (United News of Bangladesh, 2020). Malaysia did back Bangladesh by calling for proportionate responsibility-sharing, particularly among the signatories of the 1951 Refugee Convention, to receive more Rohingya refugees (Bernama, 2021). However, neither the Bay of Bengal states nor primary destination countries such as Malaysia and Indonesia are signatories to the 1951 Refugee Convention.

The way forward

The Bay of Bengal and the Andaman Sea constitute a singular maritime geostrategic construct, considering how the natural connectivity between these water bodies also brought about extant common security challenges at sea. Irregular human migration and illicit drug trade are among the most common security challenges faced by littorals sitting astride the Bay of Bengal and Andaman Sea. Faced with capacity shortfalls of maritime forces amidst economic challenges, regional governments envisage confronting practical challenges in "going alone" with tackling security threats. In any case, transnational threats mean national self-help alone has clear limitations. As discussed in this brief, while regional mechanisms such as the 2016 Bali Process exist, they are constrained by persistent problems among the participating nations, especially where it comes to burden-sharing and commitment to those initiatives.

If broad multilateral mechanisms such as the Bali Process have fallen short, it might be useful to consider smaller-scale, sub-regional initiatives. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a noteworthy example. Comprising seven littorals including Myanmar and Thailand as the Southeast Asian member states, BIMSTEC has in recent times engaged in maritime security-related cooperation. Notably, the inaugural meeting of BIMSTEC national security chiefs held in 2017 focused not only on counter-terrorism cooperation but also "emphasized the importance of maritime security in view of the significance of the Bay of Bengal for the well-being, prosperity, security and socio-economic development in the BIMSTEC Member States and decided to examine ways to further strengthen maritime security cooperation" (Ministry of External Affairs, 2017). However, BIMSTEC initiatives are yet to gain the support of all members; Thailand for example withdrew from the joint training exercises due to budgetary restrictions (Benson, 2020). Moreover, considering that maritime security challenges in the Bay of Bengal are not necessarily confined to the bay itself and can extend to the contiguous Andaman Sea, the absence of Indonesia and Malaysia from BIMSTEC appears odd. There is also a lack of institutionalised cooperation between BIMSTEC and these two Southeast Asian countries.

This policy brief proposes the following measures aimed at rectifying problems in the short and longer terms. In the short term, considering the ongoing economic challenges of post-pandemic recovery and inflationary pressures, regional governments are not likely to drastically increase maritime security capacities. However, while maritime forces capacity-building could be stymied by the overarching need for fiscal prudence, the Bay of Bengal and Andaman Sea countries can promote better coordination among national

agencies, especially those dealing with not just maritime but land-based issues, given the obvious land-sea nexus of such security threats as drug trafficking.

Currently, regional maritime security agencies rely heavily on bilateral relationships to strengthen enforcement capabilities and maritime domain awareness (Benson, 2020). In the long term, the solution is not to create new mechanisms but to improve upon existing ones such as the Bali Process and BIMSTEC. Within the Bali Process, signatories should work towards a regional mechanism for predictable and equitable disembarkation of the Rohingya refugees (or other migrants) so that some governments do not have to bear the entire burden (UNHCR, 2021). In the long term, one should envision the future possibility of Indonesia and Malaysia getting BIMSTEC membership or observer status. Having more comprehensive coverage across the Bay of Bengal and the Andaman Sea littorals as an institutionalised mechanism may be helpful in ensuring more information and burden-sharing. Initiatives such as India's Information Fusion Centre – Indian Ocean Region (IFC-IOR), which is modelled on the Singapore-based Information Fusion Centre and with which it maintains close institutional links, is a step towards this direction.

References

Benson, J. (2020). *Stable Seas: Bay of Bengal*. One Earth Future. Retrieved from https://www.stableseas.org/post/stable-seas-bay-of-bengal.

Bernama. (2021, October 27). Malaysia called refugee convention signatories to receive more Rohingya refugees. *New Strait Times*. Retrieved from https://www.nst.com.my/news/nation/2021/10/740292/malaysia-calls-refugee-convention-signatories-receive-more-rohingya.

Global SMART Programme. (2021). *Synthetic drugs in East and Southeast Asia: Latest developments and challenges*. Vienna: United Nations Office on Drugs and Crime (UNODC). Retrieved from https://www.unodc.org/roseap/uploads/documents/Publications/2021/Synthetic_Drugs_in_East_and_Southeast_Asia_2021.pdf

Harris SA, M. & Nasution, R. (2020, March 25). Aceh still main gateway for drug smuggling: police. *Antara News*. Retrieved from https://en.antaranews.com/news/144630/aceh-still-main-gateway-for-drug-smuggling-police.

Joint Statement by UNHCR, IOM and UNODC on Protection at Sea in the Bay of Bengal and Andaman Sea [Press Release]. (2020, May 5). UNHCR. Retrieved from https://www.unhcr.org/news/press/2020/5/5eb15b804/joint-statement-unhcr-iom-unodc-protection-sea-bay-bengal-andaman-sea.html.

Ministry of External Affairs. (2017, March 21). First meeting of the BIMSTEC national security chiefs [Press Release]. Retrieved from https://mea.gov.in/press-releases.htm?dtl/28193/First_meeting_of_the_BIMSTEC_National_Security_Chiefs_March_21_2017.

Nasution, R. (2021, April 8). Aceh in the grip of growing drug problem. *Antara News*. Retrieved from https://en.antaranews.com/news/172034/aceh-in-the-grip-of-growing-drug-problem.

Regional Treaties, Declarations and Related. (2016, March 23). *Bali Declaration on People Smuggling, Trafficking in Persons, and Related Transnational Crime*. Retrieved from https://www.refworld.org/docid/5799ef3c4.html

United Nations High Commissioner for Refugees (UNHCR). (2021). *Left adrift at sea*: *Dangerous journeys of refugees across the Bay of Bengal and Andaman Sea January 2020 – June 2021*. UNHCR Asia Pacific. Retrieved from https://www.unhcr.org/asia/publications/operations/611e15284/left-adrift-at-sea-dangerous-journeys-of-refugees-across-the-bay-of-bengal.html.

United News of Bangladesh. (2020, April 28). Other nations also have responsibility to shelter Rohingyas floating at Bay: FM. *United News of Bangladesh*. Retrieved from https://unb.com.bd/m/category/Bangladesh/other-nations-also-have-responsibility-to-shelter-rohingyas-floating-at-bay-fm/50701.

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09

Complex Emergency in the Bay of Bengal Region and the Regional Governance Deficits

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Abstract

This policy brief discusses the complex emergency in the Bay of Bengal region and the deficits in regional governance. The complex emergency is a major humanitarian challenge posed by social, economic, and political turbulence, conflicts, violence, and atrocities. This challenge in the Bay of Bengal region emerges mainly from the crises in Myanmar related to the mass atrocities on the Rohingya people, and the violence against the opposition to the 2021 coup, producing mass displacement. States in the region neither perceived nor treated the complex emergency with great urgency. They prioritised their political and security agenda over human lives. The region also lacks comprehensive instruments and a regional governance framework to address the challenge. The situation demands greater 'political connectivity' among the countries in the region. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) can serve in the driver's seat in searching for short- and long-term solutions to the ongoing complex emergency. Relevant actors also need to rethink regional approaches and collective responses by adopting 'flexible engagement' and a 'whole-of-government, whole-of-society' approach.

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Introduction: What is at stake?

The Bay of Bengal region is currently facing multiple crises, one of which has stemmed from a *complex emergency,* a multifaceted challenge caused by social, economic, and political turbulence, conflicts, violence, and atrocities. The situation is primarily tied to the ongoing crises in Myanmar, a country that has seen political violence and mass atrocities in recent years. These events have led to mass displacement of the population internally and their migration to other countries in the region. The two major groups in focus are the Rohingya from Myanmar's southwestern coastal Rakhine state bordering Bangladesh, and those fleeing persecution by the State Administration Council (SAC), the country's ruling junta, in the events following the 2021 coup. According to the United Nations High Commissioner for Refugees (UNHCR) estimates, as of June 2022, 1.1 million people from Myanmar have sought refuge in its neighbouring countries, mainly in Bangladesh, and more than half a million are internally displaced. These people have experienced human rights violations and atrocities in their country of origin, while in transit, and at the destination.

The persecution and violence against the Rohingya in Rakhine have taken place over several decades and in many forms, from arson and rape to mass killing. The more contemporary atrocities started during the time of General Ne Win's administration between 1962 and 1988 when the Burmese state made the Rohingya stateless. The findings from the Independent International Fact-Finding Mission on Myanmar indicated that the Myanmar Armed Forces were the main perpetrators of the violence (Office of the United Nations High Commissioner for Human Rights, 2019). The United States Department of State (2022) recently declared mass atrocities on the Rohingya in 2016–17, which forced more than 750,000 of them to flee to escape 'genocide,' a crime punishable under international laws. The International Organization for Migration has reported that as of March 2022, more than 900,000 Rohingya had sought refuge in Cox's Bazar, Bangladesh, with an urgent need for humanitarian support (IOM, 2022). Most displaced persons are dependent on aid as livelihood opportunities are drastically limited.

Many Rohingya took boats on the sea to seek a better future in other Southeast Asian nations, including Indonesia, Malaysia, and Thailand. Most of them were lured by people smugglers, and may have paid up to US$ 4,900 for the journey (UNHCR, 2021), with no guarantee that they would arrive at their intended destination. Many fell victim to human traffickers who sold them into forced labour and sexual exploitation. Some reached their destination but later experienced precarity and unemployment, and may have been arrested for illegal entry (Nungsari, Flanders, & Chuah, 2020). The Rohingya, therefore, were vulnerable to violence and destitution at all stages of their journey. UN Secretary-General, Antonio Guterres, referred to the Rohingya in a 2018 tweet as "one of the most discriminated against and vulnerable communities on Earth", and called the Rohingya refugee crisis "a humanitarian and human rights nightmare" (Guterres, 2018).

The February 2021 coup in Myanmar unleashed another wave of violence and conflicts across the country. A broad swath of the population opposed the coup. They participated in the Civil Disobedience Movement (CDM) and/ or joined the People's Defense Forces (PDFs). The Ethnic Armed Organisations (EAOs) reactivated their military capabilities and engaged in fights against the Myanmar Armed Forces. The events that followed the coup eventually triggered another mass movement of the forcibly displaced. Nearly 700,000 people were displaced internally, with more than 60,000 crossing international borders to seek refuge in Myanmar's neighbouring countries, especially Thailand and India (UNHCR, 2022).

People on the move experienced similar asylum challenges regardless of their direction. At the border, Thai officials, for example,

pushed some groups back into Myanmar or persuaded them to return after allowing them to seek refuge for a few days. Many who got into border towns such as Mae Sot in Thailand, had to pay bribes for 'police cards' to secure themselves from the threat of deportation (*Tak Cops*, 2022). Some spent considerable sums to obtain a valid official document, hoping to stay on legally in Thailand. However, several displaced persons were arrested and detained in the immigration detention centre pending deportation. The resettlement opportunity was extremely limited, with only exceptional cases getting expedited for movement into a third country (Jittiang, Sirijintana, & Wangpuchakane, 2022).

However, migration challenges faced by the forcibly displaced in the Bay of Bengal region are not a stand-alone crisis. They are connected and contribute to larger societal issues ranging from political instability to food insecurity. The number of forcibly displaced people inside and from Myanmar keeps growing in part because the situation is spiralling downward into what the Myanmar Study Group (2022) of the United States Institute of Peace (USIP) describes as 'civil war.' The military airstrikes in many parts of the country adversely affected agricultural production and crop yields, driving up food prices and making access to food more challenging. Many people eventually decided to leave in order to survive. In May 2022, the World Food Programme (2022) projected that by the end of the year, nearly four million people might need assistance, twice the number it is currently helping. As many displaced persons are on the move, they are also on the verge of poverty and marginalisation.

What are the challenges?

The complex emergency in the Bay of Bengal, especially the one that emerged from multiple crises in Myanmar, is currently neither perceived nor treated with a sense of urgency. Many states are in denial over its wide-ranging impact, and continue to prioritise their political and security agenda over human lives. Besides, the Bay of Bengal region lacks comprehensive instruments and political connectivity to address the challenge effectively.

National security vs. Human security and development

The outlook of states in the Bay of Bengal towards the complex emergency is currently problematic. The arrival of the forcibly displaced is often seen as a threat to national security; these people are perceived as being a financial and social burden on the host population (Moretti, 2022). The assistance by states is also seen as a pull factor for new arrivals. This view emerged during the Cold War when the region was plagued by mistrust, and the movement of the forcibly displaced could attract cross-border attacks and military operations, and has continued to exist even after the end of the Cold War.

This complex emergency in the region requires a different worldview. In fact, the ongoing situation is not simply a migration challenge but is connected to multiple complex issues, especially since the profiles and movements of displaced persons are heterogeneous. In Thailand, for example, Jittiang et al (2022) found that the new arrivals can be classified into three groups based on their movement patterns and intentions: temporarily displaced, economic migrants, and activists, intellectuals, and high-profile cases (HPCs). Each group poses challenges to the host government and demands a different management approach.

Therefore, implementing a one-size-fits-all national security solution for forcibly displaced groups may not be the appropriate response. Finding a remedy beyond the migration challenge is essential to addressing the intertwining problems, so as to incorporate the human security approach and development issues to balance the national security perspective. The new paradigm will offer a solution to the protection question, and find ways for the state to utilise the human capital of the forcibly displaced while safeguarding their national security interests. Some groups

can be employed and be allowed to live with dignity, lessening the burden on the host government. The host state can also take this opportunity to foster closer people-to-people connectivity, which can be strategically significant for long-term international relations and cooperation, especially after the forcibly displaced are able to return to their country of origin.

Lack of comprehensive and effective regional instruments and governance

Another major challenge in addressing the complex emergency in the Bay of Bengal is the lack of comprehensive and effective regional instruments and governance, which emerge in part from the absence of new regional political initiatives and leadership. In the present decade, the geopolitical priority and agenda in the region are dominated and driven mainly by the major power rivalry, especially between China and the US, with the Belt and Road Initiative (BRI) and the Indo–Pacific Strategy. These larger conversations do not necessarily take into account issues specific to the region, because the interests of the major powers do not always align with those of regional governments.

In addition, the governments in the region steadfastly observe certain international principles, especially non-interference, and get involved in the polarisation caused by the major power rivalries. Hence, they are less flexible and unwilling to engage, not to mention cooperate, in issues of shared regional interest. As a result, the complex emergency has created a disproportionate burden for some governments who can only respond to the tip of the iceberg but cannot address the larger issues. This scenario is evident, for instance, in the desperation of the Government of Bangladesh, whose prime minister and other high-ranking officials have consistently called for more international attention, support, and assistance for more than one million Rohingya refugees.

Therefore, the Bay of Bengal region needs leadership from actors who can spearhead regional governments and other relevant stakeholders to address issues of common regional interest, such as the complex emergency. States in the region, in particular, need to recognise that taking a systematic and regional approach can mitigate short-term humanitarian challenges and help establish regional stability. Successful management of the complex emergency will allow member states in the Bay of Bengal to refocus on regional prosperity and socio-economic progress.

What needs to be done?

This policy brief proposes two major recommendations for the relevant stakeholders in the Bay of Bengal region. First, BIMSTEC, as the prevailing regional architecture, needs to serve as a bridge, a platform, and a key actor in the driver's seat to resolve the complex emergency. The possibility of realising this goal depends on member states' political will and connectivity. Second, countries in the Bay of Bengal region need to rethink the regional approach and collective responses by adopting 'flexible engagement' and a 'whole-of-government, whole-of-society approach.'

Centrality of BIMSTEC

Regional challenges demand regional solutions. BIMSTEC, as the critical regional organisation, needs to serve as the nerve centre—a bridge and a platform—from which conflicting and affected parties can engage in meaningful dialogues. This opportunity will allow BIMSTEC to move beyond its role in technical and economic cooperation to political and security partnership and engagement, which can be more substantive and fundamental to regional stability and prosperity. It will also enhance BIMSTEC's recent emphasis on security cooperation, which has included counterterrorism and intelligence sharing but not the human security dimension. This role will enable BIMSTEC to establish regional order and manage regional dynamics that external powers may not prioritise. In other words, it is an invitation to BIMSTEC members to focus on their regional issues rather than deal with issues that interest external actors.

The commitment of India's Prime Minister Narendra Modi to prioritise regional security within the BIMSTEC framework during the summit in March 2022 is an essential next step for the centrality of BIMSTEC to be crystallised. As one of the countries affected by the complex emergency unleashed by the crises in Myanmar, India can closely collaborate with Bangladesh and also Thailand, which is the chair country for 2022–23, to create a regional mechanism that serves as a focal point to cope with the challenge. The institution can be modelled after the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), established as an intergovernmental organisation to coordinate and facilitate emergency response to disasters. This institutional arrangement will allow BIMSTEC to streamline initiatives and strategic actions now and in the future. With Thailand's membership in both BIMSTEC and ASEAN, its government can help bring about synergy and collaboration between the two regional blocs to address complex emergencies, some of which, like the Rohingya migration, span both regions, thereby establishing cross-bloc connectivity.

Rethinking regional approaches and collective responses

Rethinking regional approaches and collective responses is also significant. The Bay of Bengal states must recognise the limitations of non-interference and their adamant adherence to the national security agenda. The strong emphasis on both doctrines prevents states in the region from having a meaningful conversation on issues of shared interest, including the complex emergency. It also demobilises other actors, especially civil society organisations and business sectors, who can provide essential resources to support and advance regional initiatives. For this reason, new approaches need to be considered and adopted.

Flexible engagement

One possibility is adopting the 'flexible engagement' approach, which Surin Pitsuwan, a former Thai Foreign Minister, proposed in the ASEAN context to engage with Myanmar. It emphasises openness and the possibility for other regional member countries to raise the stakes on issues of regional importance. Adopting this approach will allow states in the Bay of Bengal region to be more vocal on the socio-political issues affecting them, paving the way for their engagement in constructive dialogue and taking proactive actions towards troubled actors and relevant conflict parties. This approach will demand that states reduce their emphasis on the non-interference principle and national security priority, and commit more to collective regional actions and interests along the lines of the African Union and European Union.

A whole-of-government, whole-of-society approach

The complex emergency will also require the engagement of all sectors across governments and societies. The issue is not one-dimensional, and each government will need to pull resources beyond its own agency and coordinate closely with the focal contact at the regional level. In some areas where government and regional mechanisms lack the resources, cooperation with civil society organisations and businesses can make a difference. For example, a chamber of commerce can navigate the local economic terrain to create employment opportunities for the forcibly displaced, and charity organisations can help raise funds to provide financial and in-kind assistance for people on the move as a short-term remedy. The whole-of-government, whole-of-society approach can also be used to engage other existing mechanisms of the United Nations bodies, especially UNHCR, and the European Union, such as the European Civil Protection and Humanitarian Aid Operations (ECHO), to streamline solutions and address complex emergencies.

References

Guterres, A. [@antonioguterres]. (2018, July 2). *The Rohingya are one of the most discriminated against and vulnerable communities on Earth. The Rohingya refugee crisis is a humanitarian and human rights nightmare. I thank Bangladesh for its generosity in hosting the refugees* [Tweet] Twitter. https://twitter.com/antonioguterres/status/1013473938003947520?lang=en

International Organization for Migration. (2022). *IOM Bangladesh appeal 2022: Rohingya humanitarian crisis*. https://bangladesh.iom.int/resources/iom-bangladesh-appeal-2022-0

Jittiang, B., Sirijintana, W., & Wangpuchakane, T. (2022). *Ad hoc and as usual*: *The Thai government's responses to the Myanmar crisis since the 2021 coup*. Brisbane: Asia-Pacific Centre for the Responsibility to Protect. https://r2pasiapacific.org/files/8231/2022_Thai_response_myanmar_crisis.pdf

Moretti, S. (2022). *The protection of refugees in Southeast Asia: A legal fiction*? London: Routledge.

Myanmar Study Group, United States Institute of Peace. (2022). *Anatomy of the military coup and recommendations for U.S. Response*. Washington, D.C.: United States Institute of Peace. https://www.usip.org/publications/2022/02/myanmar-study-group-final-report

Nungsari, M., Flanders, S., & Chuah, H.-Y. (2020). Poverty and precarious employment: The case of Rohingya refugee construction workers in Peninsular Malaysia. *Humanities and Social Sciences Communications* 7(120). Retrieved from https://doi.org/10.1057/s41599-020-00606-8

Office of the United Nations High Commissioner for Human Rights. (2019). *Report of the independent international fact-finding mission on Myanmar*

(A/HRC/42/50). Retrieved from https://www.ohchr.org/sites/default/files/Documents/HRBodies/HRCouncil/FFM-Myanmar/20190916/A_HRC_42_CRP.5.docx

Tak cops hawk stay in country cards. (2022, April 9). *Bangkok Post*. Retrieved from https://www.bangkokpost.com/thailand/general/2292614/tak-cops-hawk-stay-in-country-cards.

The United Nations High Commissioner for Refugees. (2021). *Left adrift at sea*: *Dangerous journeys of refugees across the Bay of Bengal and Andaman Sea.* https://www.unhcr.org/asia/611e15284.pdf

The United Nations High Commissioner for Refugees. (2022). *Myanmar emergency update* (*as of 1 June 2022*). https://reliefweb.int/report/myanmar/myanmar-emergency-update-1-june-2022

United States Department of State. (2022). *Genocide, crimes against humanity and ethnic cleansing of Rohingya in Burma*. https://www.state.gov/Myanmar-genocide/

World Food Programme. (2022). *Situation report* - Myanmar. *https://www.wfp.org/publications/situation-report-myanmar*

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10

Lessons from the Hilsa: An Aquascape Approach to the Sustainable Management of Blue Foods and Threatened Aquatic Species in the Bay of Bengal

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Abstract

The Hilsa shad (Tenualosa ilisha) is among hundreds of other species of aquatic animals and plants collectively referred to as "blue foods" in the Bay of Bengal. They form a crucial source of food, livelihood, and culture for millions of coastal communities in India, Bangladesh, Myanmar, and Sri Lanka. This policy brief highlights the need to take on a regional ecosystem approach when it pertains to the conservation of aquatic biodiversity and the sustainable management of the Bay of Bengals´ productive, albeit stressed fisheries resources (blue foods). The various challenges, including overfishing, pollution, and habitat destruction are major threats to aquatic biodiversity and in turn threaten the livelihoods and lives of millions of people in this region. As the demand for blue foods grows in the Bay of Bengal countries, emerging political powers will come under immense pressure to safeguard their dwindling fish stocks and protect their citizens' interests. Therefore, beyond tackling the scientific questions, there is a need to address the capacity deficit, both at the intra- and inter-governmental levels. This brief argues for a sustained capacity development strategy that will be implemented at multiple levels, viz., the local (community level), mid-management (forest and fisheries), national and regional. An regional approach to managing the Bay of Bengal marine ecosystem that also considers the entire watershed from mountains to ocean – the Aquascape will be crucial.

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Aquatic species and the Blue food system of the Bay of Bengal

The Hilsa shad (*Tenualosa ilisha*) is the national fish and part of the very identity of Bangladesh, almost always served at weddings and religious ceremonies, and exported to Bengali stores the world over. Approximately six million people are engaged in the Hilsa value chain in the countries of the northern Bay of Bengal where 95% of this fish is caught. Bangladesh nets the highest quantities (76%), followed by Myanmar and India (Bay of Bengal Large Marine Ecosystem Project, 2010). It contributes to about 10% of the total fish production in Bangladesh and to approximately 1% of the country´s GDP (Fisheries Resources Survey System, 2014).

The Hilsa is among hundreds of other species of aquatic animals and plants collectively referred to as blue foods. They form a crucial source of food, livelihood, and culture for millions of coastal communities. However, these blue foods, particularly in the Bay of Bengal, are subject to various challenges, including overfishing, pollution, and habitat destruction— problems that transcend local communities and affect their livelihoods (Ghosh & Lobo, 2017). Interestingly, while the Hilsa is known to be a resilient species whose population can recover if appropriate management measures are put in place, the same might not be the case for several other species that may be far more vulnerable but receive much less attention. These include the Gangetic Shark (*Glyphis gangeticus*), the Northern River Terrapin (*Batagur baska*), and the Ganges River Dolphin (*Platanista gangetica gangetica*)—all aquatic animals threatened with extinction.

Beyond its socio-economic and cultural significance, the Hilsa can also be considered a conservation mascot of sorts for the Bay of Bengal region. In its short life of approximately four years, the fish traverses several geographies. From the Bay of Bengal, the adult fish swims upriver to lay its eggs, covering several hundred kilometers from the sea to freshwater. The eggs hatch and the young fish migrate downstream towards the Bay. By the time they reach the estuarine areas of the Sunderbans, they grow to a size called *Jatka*. From here they move into the Bay and are said to reach their productive best between August and November. Most importantly, the Hilsa highlights the fact that nature does not know the political boundaries we draw for ourselves.

The case study of the Hilsa highlights the need to take a 'fish-eye' view when approaching issues pertaining to the management of aquatic natural resources like blue foods and other threatened marine wildlife, particularly in a common sea like the Bay of Bengal. Beyond tackling the scientific questions, there is a need to address the capacity deficit, both at the intra and inter-governmental levels. This will require a sustained capacity development strategy that will be implemented at multiple scales viz., the local (community level), mid-management (forest and fisheries), and national and regional.

Socio-ecological and Economic Challenges

The stronghold of the Hilsa is the Ganges delta, the world´s largest delta covering an area of approximately 100,000 sq.km, formed by 3 major rivers—the Ganges, the Brahmaputra, and the Meghna which flow into the northern Bay of Bengal. Approximately two-thirds of the delta lie in Bangladesh, while the rest is in the Indian state of West Bengal. Large volumes of silt deposited by these rivers and their distributaries, along with the mixing of fresh water with the salt, create the perfect conditions for mangroves, the coastal forests that straddle these transitional zones, to thrive in. It is not surprising then that the world´s largest delta also happens to host the largest contiguous patch of mangrove forests, the Sunderbans, which covers a total area of 9,630 sq.km shared by India (38%) and Bangladesh (62%). However, despite its vastness and socio-ecological and economic significance, this region is faced with a whole host of challenges.

First, overfishing, pollution, and habitat destruction along various sections of the

hilsa´s aquascape threaten a large number of aquatic species. Additionally, dams built on these rivers affect the migration of the Hilsa and a host of other aquatic species. This has been one of the most significant causes of decline of the Hilsa catch. Among the most notable is the 2.3 km long Farraka barrage that was constructed on the Ganga, close to the India-Bangladesh border and was attributed to bringing about precipitous declines of Hilsa catches in both India and Bangladesh. Before the construction of the barrage there are records of Hilsa migrating up the Ganga right till the towns of Agra, Kanpur, and Delhi, covering maximum distances of approximately 1,400 km from the Bay of Bengal.

The decline in catches of the Hilsa shad is easily felt by communities and generally reflected by marked increases in prices, prompting governments in both countries to put in place several moratoria to reverse this decline. In Bangladesh this has included fish sanctuaries, seasonal fishing bans, bans on fishing for *Jatka* as well as 'fish ladders' being tested out in the Farraka barrage to enable fish to scale the dam and reach their spawning grounds on the other side.

Second, the Bay of Bengal, particularly the continental shelf areas, are subject to heavy fishing pressure from both industrial and artisanal fleets. The industrialisation of fisheries in the Bay of Bengal began with the introduction of mechanised trawlers in the 1960s. Since the trawlers were introduced, the area covered by fishing fleets expanded four times till 2000 (Bhathal & Pauly, 2008)which are usually managed on a single species basis, has led to calls for 'ecosystem management', along with the development of various ecosystem indicators. Trawling is a highly efficient, albeit destructive, fishing method responsible for over half of the total seafood landings in India and is responsible for the destruction of the sea floor ecosystem. The nets with extremely small mesh size capture a large number of species, beyond the target (commercially important) species, and often in far greater proportions than the target catch. ´Trash fish,´ the degrading term for this non-target fish biomass, was traditionally discarded. Trash fish constitutes hundreds of species, each playing a different role in the marine food web and are vital to food and nutrition security to coastal communities. ´Trash fish´ is now landed, dried, and ground before being sold at low rates as fishmeal to the fast-growing poultry and aquaculture industries in the country (Lobo, Balmford, Arthur, & Manica, 2010).

The resultant effect is not just seen in the Hilsa population, but among other species as well. For instance, India´s eastern coastal state of Odisha, also located along the Bay of Bengal, hosts the largest rookery (nesting beach) for sea turtles in the world. In 2015, at one of the mass nesting beaches in Rushikulya, Odisha, an estimated number of 170,939 Olive Ridley sea turtles (*Lepidochelys olivacea*) came ashore to nest over a span of six nights (Chandarana, Manoharakrishnan, & Shanker, 2017). Interestingly, sea turtles nesting on the beaches of Odisha are known to travel south to feeding grounds off the coast of Sri Lanka (Behera, Tripathy, Choudhury, & Sivakumar, 2018). Although it is illegal to hunt or kill of sea turtles in all the countries of the Bay of Bengal, they are accidentally caught as bycatch in fishing nets and die of drowning. Thousands of dead sea turtles that suffer bycatch related mortality drift to the shore along the East coast of India, a fate shared by a large number of other marine mammal species which include Dolphins, Dugongs and even large Baleen whales (Dudhat, Pande, Nair, Mondal, & Sivakumar, 2022) population health and status of marine ecosystems. Opportunistic reporting of strandings also serve as a powerful low-cost tool for monitoring these elusive mammals. We collated data over ~ 270 years available through various open access databases, reports and publications. Annual strandings along the Indian coast (mean = 11.25 ± SE 9.1).

Third, large scale (industrial) aquaculture, to meet the global demand, just like industrial fisheries which is a big producer of the country´s protein, comes with its own set

of environment and social challenges. It is predicted that the global demand for blue foods will roughly double by 2050 and most of this will be met by aquaculture production. In 2020, of the total of 214 million tonnes of blue foods (aquatic animals and seaweed) produced globally 58% came from the farmed sector, while wild harvests including capture fisheries accounted for the remaining 42% (FAO, 2022). Asia has dominated the farm sector for the production of blue foods for decades now and in 2020 accounted for 91.6% of the total production with India, being the second biggest producer after China.

However, the dominant form of coastal aquaculture practiced in the wider Bay of Bengal region is intensive shrimp aquaculture. In India, the coastal state of Andhra Pradesh along the country´s east coast is the stronghold of the shrimp aquaculture industry. The Pacific white-legged shrimp (*Litopenaeus vannamei*), a species originally native to the Pacific coast of Central America dominates the production—a monoculture of sorts–in the country. Between 2019 and 2021, the state of Andhra Pradesh alone accounted for 69% of the shrimp produced in the country, wherein 73% of this was attributed to the non-native white-legged shrimp (Koshy, 2021). While this intensive shrimp aquaculture is capable of generating huge profits, if not properly regulated, can come at a high cost to coastal ecologies and livelihoods. These farms received a lot of criticism for releasing untreated water into the adjoining waterways. This often leads to the spread of diseases to surrounding ponds and pollutes estuaries and nearshore coastal ecosystems. Coastal aquaculture has also driven the conversion of several important coastal ecosystems such as tidal mudflats, mangroves, salt pans, and agricultural ecosystems into aquaculture ponds.

An aquascape approach to managing the Bay of Bengal's large marine ecosystem

Any management plan to sustainably manage blue foods and conserve other highly mobile aquatic species in the Bay of Bengal will require an approach that spans multiple aquatic ecosystems (from freshwater to estuarine and marine) and international borders—the aquascape. This will require a serious effort by individual states in the Bay of Bengal region to imaginatively look beyond protected areas and international boundaries. This will not only help better manage fisheries but will help strengthen conservation efforts of other flora, fauna, and habitats, while helping reduce pressure on species such as the Hilsa that depend on a continuum of aquatic habitats from marine to freshwater. Beyond inter-agency coordination within each country, this will require better transboundary cooperation to implement such plans.

As the demand for blue foods grows in the Bay of Bengal countries, emerging political powers will come under immense pressure to safeguard their dwindling fish stocks and protect their citizens' interests with regard to growing protein and livelihoods needs. The mismanagement of these ecosystems could spark conflict as desperate fishers, in their struggle to stay profitable, violate international laws and agreements and cross-border transgressions increase, a pattern that is being observed in several parts of the world (Higgins-Bloom, 2018). Fishing transgressions and consequently arrests seem to have become a regular occurrence in the India-Bangladesh maritime space (Bose, 2021). Transgressions by Indian trawlers in Sri Lankan waters of the Palk Bay have long been the cause for diplomatic tensions. This is particularly significant as Sri Lanka is currently reeling under the effects of the worst economic crisis in its history, and fuel shortages have impacted patrolling efforts and have led to a consequent decline in the enforcement by their navy (Ramachandran, 2022).

Any recommendation or solution for a situation as complex as this will likely come with trade-offs. However, it is often the poorest and most marginalised communities that bear the brunt of such interventions, whether it is due to the setting up of a new Marine Protected Area (MPA) or fisheries

management measures to enforce regulations against the capture and trade of contraband marine species such as sharks, sea horses, coral, sea cucumbers, etc. It is crucial that ocean equity and justice be made central to any plan and underrepresented communities, including small-scale fishers and indigenous groups, have a say in the planning process.

Managing a Bay without borders

An initiative that deserves a special mention when it comes to transboundary ecosystem management in this region is the Bay of Bengal Large Marine Ecosystem (BOBLME) project, a FAO/GEF-funded project that started in 2009 and is currently in its second phase of implementation. This project is a coordinated effort involving eight countries in the Bay of Bengal region viz., Maldives, India, Sri Lanka, Thailand, Indonesia, and Malaysia.

To its credit, the BOBLME project adopted a macro approach to manage the Bay. It employed an Ecosystem Approach to Fisheries Management (EAFM), an integrated approach that promotes the conservation and sustainable use of the ecosystem as a whole. This is of particular relevance in the context of tropical marine ecosystems that are characterised by a high diversity of species caught using a wide range of fishing craft and gear. One of the significant achievements of the project was the production of "a Transboundary Diagnostic Analysis (TDA) that identifies the major shared issues affecting the Bay of Bengal ecosystem" and it also "developed a Strategic Action Programme (SAP) that set out the actions needed to address these issues and their causes" (BOBLME, 2010).

There is also the Bay of Bengal Programme-Inter Governmental Organization (BOBP-IGO). This is a Regional Fisheries Advisory Body (RFAB) of the countries bordering the Bay of Bengal. It serves as "the think tank on transboundary and contemporary national issues of the member countries concerning fisheries management" (BOBP-IGO, n.d.).

30 by 30: Marine Protected Areas and other effective area-based conservation measures

The 30 by 30 target is a global initiative for governments to designate 30% of the world's land and oceans under some form of protection by 2030. It is one of the 21 action-oriented targets (specifically Target 3) of the Post-2020 Global Biodiversity Framework of the Convention on Biological Diversity (CBD). Most countries of the Bay of Bengal are now part of this initiative. In fact, this target to protect at least 30% of the oceans is based on scientific evidence as the minimum area required to safeguard biodiversity, reverse adverse ecological impacts while continuing to deliver ecosystem services including fisheries, climate regulation, and sustaining long-term ocean health (Woodley, Locke, Laffoley, MacKinnon, Sandwidth, & Smart, 2019).

Many countries in the Bay have taken proactive steps towards meeting this target. For example, the Government of Bangladesh has greatly augmented its MPA network, covering a total area of 7,367 km^2, approximately 8.8% of the EEZ of Bangladesh. In 2019, Bangladesh had also declared Nijhum Dwip as a MPA, covering an area of 3188 km^2. Interestingly, unlike most MPAs in South Asia that focus on conserving species and ecosystems with no-take areas prohibiting extractive activities, this MPA was created with the Hilsa as the focal species and was done to boost sustainable fisheries and livelihoods while protecting the marine biodiversity of Bangladesh. The inception and creation of this MPA was based on the research recommendations of three organisations viz., the World Fish Centre, the International Union for the Conservation of Nature (IUCN), and the Wildlife Conservation Society in Bangladesh, as well as extensive and sustained consultations with the local community.

However, simply increasing the area under MPA coverage will not necessarily guarantee effective marine conservation. To be effective this target requires a more nuanced view that

recognise several other elements including ecological effectiveness, biodiversity, representation, connectivity, and ecosystem services (Spalding, Meliane, Bennett, Dearden, Patil, & Brumbaugh, 2016).

In the populous countries of the Bay of Bengal, declaring protected areas often comes at a massive social cost (Jalais, 2007). While the significance of MPAs is well understood, securing the access rights of poor coastal communities, particularly small-scale fisheries, to these marine spaces should be well embedded in the planning process.

The WTO agreement on ending harmful fisheries subsidies

The basis of the agreement was to do away with harmful fisheries subsidies, which were responsible for contributing to overfishing globally. Subsidies, particularly fuel subsidies, often allow fisheries that have become unprofitable due to overfishing, to continue because they subsidise operational costs (in this case fuel). This exacerbates the crisis and can lead to a collapse of fish stocks, threatens the integrity of the marine ecosystem, and poses a threat to the livelihood sustainability of the region. The three focal areas/ pillars for prohibition include: (1) subsidies that support IUU fisheries; (2) subsidies in areas where stocks have been overfished; (3) subsidies that contribute to overcapacity and overfishing. Doing away with subsidies that promote unsustainable fisheries practice could be a step in the direction of a more sustainable transition. However, the withdrawal of these subsidies would require a nuanced approach, especially because livelihoods in the artisanal and small-scale fishing sector could be heavily impacted as a result.

Bolstering community adaptation to global change

Considering the impact on local communities, including displacement, any management/ conservation intervention in an MPA to draw up new fisheries regulations including the withdrawal of harmful fisheries subsidies can have a huge social cost that is often felt the most by the poorest and most marginalised sections.

Any new plan, whether it involves large-scale coastal/ ocean development, ports, or the implementation of new management/ conservation regulations, should also include strategies that are just and equitable and will enable local communities to adapt in a nature-positive way. However, context is key when it comes to implementing any such development intervention. Identifying and building on the capacity assets and innovations that exist in the region, rather than introducing models that are alien, are the most likely to yield the best results and be sustainable.

Restorative ocean farming for ecosystems and communities

Mentioned below are a few development interventions that hold great promise when it comes to safeguarding natural resources, while providing sustainable livelihoods to local communities. While aquaculture is the fastest-growing food producing sector in the world, the dominant intensive model can do with some significant changes that restore ecosystems, promote biodiversity, and improve the lives and livelihoods of poor coastal communities. New research shows that it is possible to produce high quality nutritious seafood while contributing to the recovery of ecosystems and biodiversity. Farming of species such as shellfish and seaweed with the right practices and places can help restore ocean health. Production of species such as these require near zero inputs in terms of feed, freshwater or land area, and results in minimum GHG emissions.

Seaweed mariculture is already showing promise in the region—in Cox's Bazar in Bangladesh and the Palk Bay and Gulf of Mannar regions of India. The USAID funded ECOFISH II project being currently implemented by WorldFish (an international

non-profit research institution), piloted a community-led seaweed culture project in Bangladesh. This project is showing good results in terms of providing livelihoods to fisher communities (especially women and youth), weaning them off declining fisheries and providing them with an important source of nutrition.

Another example of restorative ocean farming is silvo-aquaculture, a form of aquaculture where controlled mangrove growth is promoted in the pond. Versions of silvo-aquaculture exist in several parts of Asia and can be a great climate adaptation strategy while promoting biodiversity. These methods are often based on traditional technologies, they promote biodiversity, and the mangroves perform additional services in that they stabilise the coast and sequester carbon. However, these traditional technologies are not considered attractive as short-term returns can be low. Traditional coastal communities can be encouraged to take up such initiatives provided they are supported with capital, technology, and know-how. "Trap and Hold" is one such traditional silvo-aquaculture model practised in Myanmar, which was incentivised by the government through a performance-based compensation scheme in which Community Forest Groups were awarded a long-term lease if they restored abandoned aquaculture ponds using this approach. The abandoned ponds were previously intensive shrimp ponds, and in most cases were cleared of mangroves. The restored areas were incentivised to grow a polyculture of native species that included giant tiger prawns, mud crabs, and Asian sea bass. Through government and development aid funds, hatcheries were set up to incentivise farmers who undertook mangrove restorative activities by providing post-larvae of several species including mud crab and tiger shrimp to stock their ponds and avoid overharvesting from the wild.

We now have the necessary tools to identify and scale up good practices within a particular context. This would no doubt require appropriate resources in terms of funding. Identification of such restorative models that are context specific, along with appropriate capacity development interventions that build on the necessary skills of the community as well as government and non-governmental actors, can help develop sustainable pathways going forward.

References

Bay of Bengal Large Marine Ecosystem Project (BOBLME). 2010. *Status of hilsa (Tenualosa ilisha) management in the Bay of Bengal*. BOBLME-2010-Ecology-01. Retrieved from https://aquadocs.org/handle/1834/34003

Behera, S., Tripathy, B., Choudhury, B.C., & Kuppusamy, S. (2018). Movements of Olive Ridley Turtles (Lepidochelys olivacea) in the Bay of Bengal, India, determined via satellite telemetry. *Chelonian Conservation and Biology*, 17(1), 44–53. Retrieved from https://doi.org/10.2744/CCB-1245.1

Bhathal, B. & Pauly, D. (2008). 'Fishing down marine food webs' and spatial expansion of coastal fisheries in India, 1950–2000. *Fisheries Research*, 91(1), 26–34. Retrieved from https://doi.org/10.1016/j.fishres.2007.10.022

Bose, S. (2021). *Finding solutions to fishermen transgressions in the India-Bangladesh maritime space*. Observer Research Foundation. ORF Occasional Paper No. 331. Retrieved from https://www.orfonline.org/research/finding-solutions-to-fishermen-transgressions-in-the-india-bangladesh-maritime-space/

Chandarana, R., Manoharakrishnan, M., & Shanker, K. (2017) *Long-term monitoring and community-based conservation of Olive Ridley turtles in Odisha*. CMPA Technical Series No. 7. Indo-German Biodiversity Programme, GIZ-India, New Delhi. Retrieved from https://www.dakshin.org/wp-content/uploads/2018/11/Chandarana-Manoharakrishnan-Shanker_2017_Long-term-Monitoring-and-Community-based-Conservation-of-Olive-Ridley-Turtles-in-Odisha.pdf

Convention on Biological Diversity. (2021). *First draft of the post-2020 global biodiversity framework*. Retrieved from https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf

Dudhat, S., Pande, A., Nair, A., Mondal, I., Srinivasan, M., & Kuppusamy S. (2022). Spatio-temporal analysis identifies marine mammal stranding hotspots along the Indian coastline. *Scientific Reports*, 12(1), 4128. Retrieved from https://doi.org/10.1038/s41598-022-06156-0

FAO. (2022). *The state of world fisheries and aquaculture 2022: Towards blue transformation*. Retrieved from https://doi.org/10.4060/cc0461en

Fisheries Resources Survey System (FRSS). (2014). *Fisheries Statistical Yearbook of Bangladesh: 2012–2013*. Bangladesh: Department of Fisheries, 30:52. Retrieved from https://document.bdfish.org/2015/08/fisheries-statistical-yearbook-of-bangladesh-2012-2013/

Ghosh, A., & Lobo, A.S. (2017, January 31). Bay of Bengal: Depleted fish stocks and huge deadzone signal tipping point. *The Guardian*. Retrieved from https://www.theguardian.com/environment/2017/jan/31/bay-bengal-depleted-fish-stocks-pollution-climate-change-migration.

Higgins-Bloom, K. (2018). Food fight: Why the next big battle may not be fought over treasure or territory—but for fish. *Foreign Policy*, 230, 26–29. Retrieved from https://foreignpolicy.com/2018/09/12/food-fight-illegal-fishing-conflict/

Jalais, A. (2007). The Sundarbans. Whose World Heritage Site? Conservation and Society, 5(3), 335–342. Retrieved from https://www.jstor.org/stable/26392892#metadata_info_tab_contents

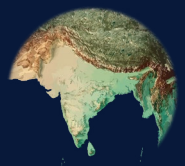
Koshy, N.E. (2021). *A case for a human rights-based approach to Indian aquaculture systems. A literature review*. Chennai, India: International Collective in Support of Fishworkers (ICSF) Trust, p. 74. Retrieved from https://www.icsf.net/wp-content/uploads/2022/05/930.ICSF219.pdf

Lobo, A.S., Balmford, A., Arthur, R., & Manica, A. (2010). Commercializing bycatch can push a fishery beyond economic extinction. *Conservation Letters*, 3(4), 277–285. Retrieved from https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/j.1755-263X.2010.00117.x

Ramachandran, S. (2022). Rising tensions in Palk Bay over fishing rights. *The Diplomat*, 9 March. Retrieved from https://thediplomat.com/2022/03/rising-tensions-in-palk-bay-over-fishing-rights/

Spalding, M.D., Meliane, I., Bennett, N.J., Dearden, P., Patil, P.G., & Brumbaugh, R.D. (2016). Building towards the marine conservation end-game: Consolidating the role of MPAs in a future ocean. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 26(S2), 185–199. Retrieved from https://doi.org/10.1002/aqc.2686

Woodley, S., Locke, H., Laffoley, D., MacKinnon, K. Sandwidth, T., & Smart, J. (2019). A review of evidence for area-based conservation targets for the post-2020 global biodiversity framework. *Parks,* 25.2, 31–46. Retrieved from 10.2305/IUCN.CH.2019.PARKAS-25-2SW2.en



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