COOPERATIVE PARTNERSHIP AND SUSTAINABLE DEVELOPMENT

A STRATEGY THROUGH **BLUE ECONOMY** AMONG BIMSTEC COUNTRIES

COAST

Cooperative Partnership and Sustainable Development
A Strategy through Blue Economy among BIMSTEC Countries

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Editors' Note

The editors would like to register their deep appreciation of the efforts of all the authors who have enriched this volume by contributing papers on a range of important aspects like Blue Economy.

At present, the Blue Economy issue is an emerging development strategy because of its envisaged integration model of ocean- based economy development & business model with the principles of social inclusion, environmental sustainability for any country. That's why the issues get the center of global development discourse along with bi-lateral and multilateral cooperation. In terms of the Bay of Bengal region, the issue is also very critically important driver of socio-economic and sustainable development in future.

The authors, all of them Fulbright scholars, deserve sincere thanks for their scholarly inputs which blend their knowledge, expertise and rich experience on these issues in their respective country context. This volume and the exercise that preceded it would not have been possible without the full support of The American Center in Dhaka. In this connection, we are extremely grateful to Mr. George Mesthos, Cultural Affairs Officer, The American Center, US Embassy Dhaka for his excellent support to COAST Trust and his interest in this volume. On behalf of the authors and the editorial board, a special word of profound gratitude to all editors who have put in enormous efforts in getting this manuscripts ready for publication.

Forwarding

The American Center Dhaka and the Coastal Association for Social Transformation (COAST) Trust signed a cooperative agreement in September 2015 to implement a project entitled "The Bay of Bengal Working Group." The main objective of this project is to establish a people-to-people constituency among U.S. Exchange Program Alumni who are members of civil society (academia, non-governmental organizations, and the media) from the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) member states through video conference conduct and joint publication. The American Center and US Embassies in other Bay of Bengal region and selected 23 exchange alumni in three thematic areas; education, climate change and blue economy.

The Blue Economy is one of the thematic issues, on which the alumni's have submitted their paper from different BIMSTEC member countries. The papers have comprehensively addressed the present and future prospects of ocean centric development and economic activities for BIMSTEC member countries. They have also addressed the possible strategies in respect of their own country context and future economic opportunities those included the fishing, structural development for ocean-based trading, shipping and tourism for country growth and development. Papers also have tried to find out the opportunities of sector cooperation in necessary areas to enhance the regional cooperation and facilities towards sustainable development in this region.

"These papers are the beginning of a conversation about climate change in the Bay of Bengal meant to encourage more in-depth research with the appropriate methodology on blue economy issues. We express our heartiest congratulations to the authors for their write ups and giving their intellectual and empirical inputs. The American Center also deserves gratitude for their immense patience to continue supporting this project with COAST after huge disruptions in 2015 and 2016 that underscore the need for greater people-to-people cooperation in the emerging Bay of Bengal region."

Rezaul Karim Chowdhury
Executive Director
COAST Trust

Acronyms

ADB - Asian Development Bank
ASEAN - ssociation of South East Asian Nations
APTA - Asia-Pacific Trade Agreement
ARC - Alliance of Religions and Conservation
BBIN - Bangladesh Bhutan India Nepal
BCIM - Bangladesh, China, India and Myanmar
BIMSTEC - Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIWTA - Bangladesh Inland Water Transport Authority
BoB - Bay of Bengal
BRICs - Brazil, Russia, India and China
CCPIT - China Council for the Promotion of International Trade
CSR - Corporate Social Responsibility
CUTS - Calcutta Resource Centre, International
DFQF - Duty Free and Quota Free
EEZ - Exclusive Economic Zone
ESCAP - Economic and Social Commission for Asia and the Pacific
FTA - Free Trade Agreement
GATT - General Agreement on Tariffs & Trade
GDP - Gross Domestic Products
GMS - Greater Mekong Sub-region
GNI - Gross National Income
GNP - Gross National Products
ICM - Integrated Coastal Management
ICT - Information and Communications Technology
IMF - International Monetary Fund
IWT - Inland Water Transport
ITLOS - International Tribunal for the Law of the Sea
JICA - Japan International Cooperation Agency
LDCs - Least Developed Countries

MPA	-	Myanmar Port Authority
MoU	-	Memorandum of Understanding
MVA	-	Motor Vehicle Agreement
NTBs	-	Non-Tariff Barriers
NTMs	-	Non-Tariff Measures
RTAs	-	Regional trade arrangements
RoO	-	Rules of Origin
SAARC	-	South Asian Association for Regional Cooperation
SAFTA	-	South Asian Free Trade Agreement
SASEC	-	South Asia Sub-regional Economic Cooperation
SARSO	-	South Asia Regional Standards Organization
SIDS	-	Small Island Developing States
TEU	-	Twenty feet Equivalent Unit
TCF	-	Trillion Cubic Feet
TNC	-	Trade Negotiating Committee
UNCLOS	-	UN Convention on the Law of the Sea
UNDP	-	United Nations Development Program
UN	-	United Nations
UNCTAD	-	United Nations Conference on Trade and Development
USD	-	United States Dollars
WTO	-	World Trade Organization
WWF	-	World Wildlife Fund
ZERI	-	Zero Emissions Research and Initiatives

Preface

Economic cooperation and integration is based upon complementarities, and helps maximize the mutual benefits of all those involved. By working together, countries enjoy social and economic benefits that may not occur through individual efforts alone. The BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral, Technical, and Economic Cooperation) is formed in 2004 following such regional cooperative approach and strategies to address for accelerating economic growth, reducing poverty and economic disparity within and across the countries. Currently, the region is accounts for US$ 2.7 trillion GDP, 22 percent of global population (1.6 billion population) and 07 percent of intra-regional trade.

Yet, the region remains among the least integrated in the world. In recent years, the member countries have demonstrated greater commitment to moving forward the regional cooperation agenda, but will have to go more for effectiveness. The recent example is set between Bangladesh India MoU (Memorandum of Understanding) of 2010, which not only envisages greater cooperation between these two countries, but also provides a framework for the landlocked Bhutan and Nepal. This initiative will also benefit Bhutan-Bangladesh and Nepal-Bangladesh from their mutual understanding to strengthen the cooperation in different sectors like transport and power sector development. This has boosted the prospects for accelerating regional cooperation among these countries to address the region's massive development challenges.

The major focusing aspect of the blue economy is to utilization of ocean resources towards economic development of any country. In case of Bay of Bengal, there was a tripartite dispute and unsettled issue on maritime boundary delimitation with Bangladesh, India and Myanmar during last decades. Now this issue is settled and Bangladesh got verdict her maritime boundary delimitation dispute with Myanmar and India. The declaration of verdict by the International Tribunal for the Law of the Sea (ITLOS) in Germany on 14 March 2012 with Myanmar and the same settlement is done with India on 7 July 2014. This verdict also allowed Bangladesh's sovereign rights on all the living and mineral resources of the Continental Shelf extending up to 354 nautical miles. Bangladesh's economy is sea borne to a good extent and with $ 130 billion GDP. The country's economy stands the 44th in the world.

Inspiring the achievement, the issue of blue economy get spotlight in BIMSTEC regional discourse and emphasized the possible cooperation strategies in addressing the development and growth among the member countries.

The blue economy is a concept of sustainable development framework which looks at the oceans as a 'Development Spaces' for a country. This concept addresses to the frame of spatial planning that integrates conservation, sustainable use of living resources, oil and mineral resources extraction, bio-prospecting, sustainable energy production and to develop the marine transport sector. The Blue Economy approach is established upon the assessment and incorporation of the real value of the natural (especially ocean resource) capital into all aspects of economic activity like conceptualization, planning, infrastructure development, trade, travel & transport, renewable resource exploitation, energy production and consumption.

The papers and the articles are outcome on the above concerned development issues written by some full bright US (United State) alumni of BIMSTEC member countries. Papers have expressed some views in case of ensuring food and nutrition security, eradicating poverty, combating climate change impacts and delivering shared prosperity among the member countries in BIMSTEC, where blue economy could play a greater role comparing the other development window and approaches.

The papers have indentified some major areas. These areas are to development of ocean resources like oil, gas and fisheries, transport sector especially shipping and develop of sea port infrastructure, tourism. The writers have tried to say that the regional member countries have responsibilities and must come together to explore action-oriented partnerships, governance arrangements, investment frameworks and new financing vehicles to turn the tide for economic emancipation along with a future sustainable ocean. The papers and articles have also recommended demonstrating some measurable steps towards the internationally agreed targets for fisheries, aquaculture management and habitat protection and pollution reduction in the ocean along side with infrastructure development. Regarding the issues, attributed recommendations also highlights the need to address the next frontiers of successful integrated approaches that include public-private partners, secure financing and catalyze good ocean governance while reconciling tensions and balancing the priorities between (i) growth and conservation, (ii) private sector interests and equitable benefits for communities and (iii) Areas beyond national jurisdiction and Exclusive Economic Zones (EEZ) within the coastline of respective member countries of BIMSTEC.

Bangladesh

Lailufar Yasmin

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Thalatta! Thalatta! Bangladesh Finds the Sea

Lailufar Yasmin, ***Bangladesh***

Abstract

The Bay of Bengal has drawn much attention both from regional and global observing as "the next theater of strategic power play in Asia". The resolution of maritime boundary dispute with India and Myanmar has opened unhindered access to the Bay of Bengal that will help Bangladesh not only to materialize its strategic value but also to reorient its economic development based on the Bay of Bengal, often recognized as Bangladesh's 'third neighbor.' It is in this context that this article begins with a discussion on the relevance of the concept of the blue economy for Bangladesh, a relatively new discourse. This article particularly deals with two aspects of blue economy for Bangladesh; one is the development of marine resources and the other is expanding port facilities with new establishments, among other things. This article seeks to contribute to developing the discourse on blue ocean economy both at academic and policy levels and fill the existing lacuna in this area.

"Blue Economy is a concept that can significantly contribute to the socio-economic development of Bangladesh. Blue economy concept has ushered in a new horizon for economic development of the coastal countries through utilizing the sea and marine resources at national and international level."

–Prime Minister Sheikh Hasina.

"In a broader perspective, the US values Bangladesh's geographical location. It sees an important role for Bangladesh in the overall security context of the Middle East, and Indian-Pacific-Oceans region. This is why the US wants Bangladesh by its side in its strategic pursuits."

– US Principal Deputy Assistant Secretary Tom Kelly (Imam, 2014).

"[O]pportunity is provided by the strategic location of Bangladesh, a country between the Indian Ocean and the Asian continent and a country between Southeast Asia and South Asia…Bangladesh, in other words, is the linchpin of the Indo-Pacific region."

Akihiko Tanaka, President of Japan International Cooperation Agency (JICA) (Tanaka, 2014).

Introduction

Xenophon, the Athenian historian, depicts the cry of the Greeks seeing the Black Sea for the first time after a five-day march—Thalatta! Thalatta!—The Sea! The Sea! For Bangladeshis, a small South Asian nation, seldom positively depicted in international media, the turn to the Bay of Bengal has created a similar cry of euphoria. Bangladesh's changing foreign policy priorities to the Bay of Bengal and consequently the development priority toward blue economy and the way Bangladesh can provide functional benefits to other countries of the region through the Bay of Bengal have created new opportunities for the country. As Boucher and Crumplin pointed out the Indian Ocean as a region 'neglected no longer', the Bay of Bengal has drawn similar kind of attention to global players. Bangladesh, situated at the mouth of the Bay, therefore, acts as the key player in this regional calculation due to its geographic proximity to landlocked countries e.g., Nepal and Bhutan, than other littoral states of the Bay of Bengal.

In this article, I emphasize on the key areas pertaining to the blue economy policy of Bangladesh. It is the development of port facilities and Bangladesh's increasing opportunities to present itself as the key player among the Bay of Bengal littorals. The article starts with the discussion on the concept of blue economy. Then it proceeds to discuss how Bangladesh's turn to blue economy became untroubled since the resolution of maritime disputes with India and Myanmar. The next section of the article moves on to discuss the development of port facilities and how it has regional as well as global significance.

The Concept of Blue Economy

Traditional model of development has gradually put an enormous pressure on the finite resources of the earth. With the evidence of the pitfalls of industrialization and urbanization and their impacts on environment led to the growing search for alternative models of development. As the United Nations (UN) came forward with the concept of sustainable development, the other concepts such as green economy and blue economy has emerged alongside. While economist Gunter Pauli introduced a new idea of sustainable development involving ocean resources and termed it blue economy in 1994 (Twomey and Haydn, 2016: 130), the idea did not gain currency until it was picked up at the UN Conference on

Sustainable Development held at Rio de Janeiro, popularly known as Rio+20 Summit in 2012. Pauli founded Zero Emissions Research and Initiatives (ZERI) and developed a set of ideas with the aim to establish linkages to natural systems—land and ocean areas. It was later developed in broader details by the UN preparatory team working for Rio+20 upon request of the coastal countries for whom development plans surrounding the most resources available to them, i.e., the ocean resources, would be more relevant. The background of such efforts of the UN team was substantiated by a synthesis report titled Green Economy in a Blue World (UNEP 2012) prepared by a number of international institutions, "With an aim to breaking the circle of brown economy (fossil fuel-based economy)," the Rio team identified the congruence of ideas such as low carbon, resource efficiency and social inclusion emerged from the concept of green economy and also added a vital element: the context of those developing countries into the development paradigm whose resources are mainly marine based. It identified several issues relating to the concept of blue economy that need to be focused by relevant countries-sustainable use of biodiversity, food security, unsustainable fisheries, climate change and managing carbon budgets, marine and coastal tourism, pollution and marine debris, and governance and international cooperation. With identifying the issues come the challenges and opportunities in areas such as shipping and port facilities, fisheries, tourism, aquaculture, energy, biotechnology and submarine mining.

While the Rio concept paper identified the issues and opportunities offered under the blue economy paradigm, it is difficult to come to a precise definition of the concept. The Rio concept paper itself provided an expansive idea arguing that it espoused for "an improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" through initiatives undertaken applying the concept. The Economist in its report on "The Blue Economy: Growth, Opportunity and a Sustainable Ocean Economy", prepared by its Intelligence Unit points out this incertitude surrounding the term which makes it a fluid concept. In its application, The Economist particularly points out the wide and loose interpretation of the term that makes it open to differing interpretations. Terming the turn to blue economy as a 'new wave of industrialization' of oceans, The Economist reaches to a definition of the concept saying: "A sustainable ocean economy

emerges when economic activity is in balance with the long-term capacity of ocean ecosystems to support this activity and remain resilient and healthy".

It is the dubiety and turn to alternative paradigm of development for which attention to blue economy has not been steady. However, while the concept entails a sustainable growth involving the ocean economy, its one sector has drawn considerable strategic interest worldwide-the development of port facility-related issues. The global turn to the rise of China and its attempts to secure its sea lanes of communications has brought the Pacific and the Indian oceans at the forefront of strategic policymaking.

The Bay of Bengal and Bangladesh

Once at the center of world politics at the height of British imperialism, the Bay of Bengal gradually lost its international attention with the retreat of the British from the area (Crossing the Bengal). But for Bangladesh, the Bay of Bengal, the largest bay in the world, is Bangladesh's southward opening and is often termed as its 'third neighbor'. Being almost entirely landlocked by India, with a small opening to Myanmar, Bangladesh needs open access to the sea. The Bay of Bengal, therefore, is rightfully pointed out as Bangladesh's 'third neighbor'. Located at the northeast part of the Indian Ocean, the Bay of Bengal holds reserve to colossal living and non-living resources which includes mineral resources like oil and gas and huge biological resources like fish. The Bay of Bengal is also home to the world's largest fluvio-deltaic slope complex, commonly known as Bengal Fan, where there might be a possible large reserve of fossil fuel trapped in the sediment. While Bangladesh pioneered explorations of mineral resources in the Bay of Bengal as there was considerable interest of the foreign oil companies in the newly independent country in 1973-74, due to the changing interest of the oil companies Bangladesh's explorations came to a temporary halt. India and Myanmar took up the exploration of mineral resources in the Bay of Bengal afterwards. India discovered 14 trillion cubic feet (TCF) of natural gas in 2002 and 20 TCF in 2005, and Myanmar discovered 7 TCF gas in 2004. Many of the gas discovered by India and Myanmar fell within the domestic jurisdiction of Bangladesh that was not recognized as such by the two countries. Therefore, it was not until the resolution of maritime dispute that Bangladesh was able to pronounce and follow an avowed blue economy policy.

It is in this context that I discuss the issues relating to maritime delimitation in details.

Maritime Delimitation Issue

Bangladesh's unique geographic position, sandwiched between India and Myanmar, created a geographic disadvantage for it too. As Bangladesh attempted to demarcate its sea boundary, its claim to 12 nautical miles of territorial sea and 200 nautical miles of Exclusive Economic Zone (EEZ) in the Bay of Bengal was challenged by the concurrent claims of its eastern neighbor Myanmar and western neighbor India. As the sea route and harnessing the ocean resources are of vital importance for a resource-scare Bangladesh, ensuring unhindered access to the Bay of Bengal was a necessity for Bangladesh. While Bangladesh put forward the policy of equity, both India and Myanmar followed a policy of equidistance which would severely hamper Bangladesh's access to the Bay of Bengal. While Bangladesh started negotiations with both the countries separately, India and Myanmar resolved their bilateral maritime boundary in 1986 (Agarwal, 1986: 29) ignoring Bangladesh's claims in the same area. Given the geographic position, any maritime boundary settlement between India and Myanmar would certainly require Bangladesh's consent in determining a junction point, which was not taken into consideration in the Indo-Myanmar settlement of maritime boundary. This became apparent when India and Myanmar protested Bangladesh's attempt to explore natural resources within its exclusive economic zone (EEZ) and continental shelf areas in its proposed territorial waters under the Territorial Waters and Maritime Zones Act, 1974. Bangladesh, therefore, had no other options but to seek an international solution in the forms of legal settlement. As all the three parties involved in the issue are members of the UN Convention on the Law of the Sea (UNCLOS), Bangladesh decided to take it to the UN. Bangladesh started arbitral proceeding against India and judicial proceedings against Myanmar with an aim to a comprehensive demarcation the land boundary and territorial sea along with the demarcation of EEZ and continental shelf within and beyond 200 nautical miles. Bangladesh has been successful in establishing its claim with both Myanmar and India as the final verdicts of both the cases went in favor of Bangladesh. The International Tribunal for the Law of the Sea (ITLOS), in its verdict delivered on March 14, 2012, helped

establish a single maritime boundary between Bangladesh and Myanmar, which was left unresolved and conflicting between the two countries for 38 years (Pandey, 2012). On the basis of the principle of equidistance, Bangladesh received 110,000 square kilometers of EEZ and 12 miles of territorial sea around St. Martin's Island (its southeast border). The ILTOS verdict was the very first of its kind that determined the boundary of continental shelf beyond the standard 200 nautical miles (Anderson, 2012: 817).

In the other case against India, the Permanent Court of Arbitration in The Hague also delivered verdict in favor of Bangladesh. As 11 rounds of negotiations between the two countries from 1974-2009 failed to resolve the bilateral maritime issues, Bangladesh was left with no other options but to seek international arbitration under the Court in 2009. The judgment delivered on July 7, 2014, resolved the overlapping claims of the two countries by setting up a land terminus to delimit the boundaries of territorial sea, EEZ and continental shelf within and beyond 200 nautical miles. The verdict was unprecedented in the manner that it was the second verdict in a maritime boundary delimitation case where Bangladesh once again received an extended continental shelf beyond the standard 200 nautical miles. Bangladesh was awarded 19,467 square kilometers of the 25,602 square kilometers of the disputed sea area.

Bangladesh's Blue Ocean Policy

Bangladesh's blue economy policy started to take shape since it received the landmark decision on the maritime border delimitation issue. Bangladesh arranged its first international conference on blue economy where representatives from 20 countries participated. In the conference, the prime minister reaffirmed Bangladesh's firm commitment toward the coastal and marine development of the Bay of Bengal, and the potential of the Bay in poverty alleviation, ensuring food and nutrition security and combating climate change impacts in the region. Moreover, the prime minister emphasized that the peaceful settlement of the maritime disputes with India and Myanmar was the key for Bangladesh to fully utilize the potential of the Bay of Bengal ("Address by HE Sheikh Hasina, Prime Minister, Government of the People's Republic of Bangladesh, on Blue Economy", 2014). As one of the principles of post-2015 development goals, Bangladesh has actively promoted the Bay of Bengal as a 'geo-strategic link' in the Indian Ocean region ('Bangladesh eyes 'blue economy' for sustainable growth', 2014).

Development of Port Facilities

In the Goldman Sachs Investment Report, Bangladesh is one of the fastest growing economies that need to be watched out by the rest of the world. Economist Jim O'Neill has predicted Bangladesh to be one of the Next 11, that is the next eleven countries that would soon catch up the developed countries economy with having a huge population and low per capita GNP. These countries, along with the four BRICs members Brazil, Russia, India and China constitute over 4 billion population, which is over 70 percent of the total population of the world. Bangladesh with a steady and rising growth rate of 7.1 percent, whose economic performance has attracted global attention. Moreover, Bangladesh's geographic lynchpin position at the mouth of Bay of Bengal connecting the ASEAN with the SAARC, and with China's growing interest in the country with an aim to use it as an economic corridor to reach to the Indian Ocean and the connection of Bhutan and Nepal with the rest of the world using Bangladesh's seaports-all have made it strategically important to global powers (Yasmin, 2016). Therefore, the development of port facilities, one of the significant factors of blue economy, is a prioritized area of concern for Bangladesh.

Bangladesh has inherited two of its seaports since its independence-the Chittagong seaport, situated at the southeast part and the country's major port, and the Mongla port, located in the southwest. The Chittagong Port handling the bulk of economic activities, carrying 92 percent of the total trade of the country. However, the Chittagong Port has several outstanding factors that need immediate attention such as low vessel turn-round times and low container dwelling time, low labor productivity, high number of trade-union counterparts, restrictive and corrupt practices and poor onward connection, among other things. Bangladesh is actively working with its development partners like China and the Asian Development Bank (ADB) to enhance the performance of the Chittagong Port, which is vital for the sub-regional economic growth as it is the closest seaport for landlocked northeastern India, Nepal and Bhutan. The port handled around 1.8 million TEUs (twenty-foot equivalent unit) containers in fiscal year 2015-16, up from 1.21 million TEUs containers in 2009-10, and it is on the rise. It is expected to rise nearly threefold to 5.1 million TEUs in the next 15 years.

Bangladesh has been identified as a key littoral country of the Bay of Bengal and a linkage to the Indo-Pacific corridor by the US policy-makers (Imam, 2014). Bangladesh's strategic importance soon caught the eyes of China and Japan too. For China, access to the Indian Ocean through the Bay of Bengal can relieve its overdependence on the Malacca Strait. For Japan, to create its strong footsteps in South Asia and thereby curtailing China's influence is a major imperative for its involvement in Bangladesh. India, being a South Asian hegemony, would naturally counter the presence of China in its doorstep. This strategic game was apparent as Bangladesh started the initiative to build its first ever deep-sea port at Sonadia. Bangladesh's endeavor to do so was strongly supported by China since the inception of the plan. Also, China's active role in modernizing the Chittagong Port is considered as its bid to collect the port as a 'pearl' in its 'pearl of stings' strategy (The Economist, 2013). Therefore, it was assumed that China would be granted the construction work of Sonadia and that the deal was expected to be signed during Bangladeshi Prime Minister's visit to China in June 2015. However, regional power politics changed the equation and consequently instead of developing Sonadia, and ultimately cancelling the project, Bangladesh is developing its first deep-sea port at Matarbari and its construction work has been handed to Japan. Bangladesh has initiated the "Matarbarhi 2x600 Megawatt Ultra Super Critical Coal-Fired Power Project" in August 2015. Consequently, the plan to develop a deep-sea port in Matarbari was accepted. The Japan International Cooperation Agency (JICA) is funding both the coal-fired power project and the deep-sea port, for which Bangladesh has been granted a loan of 600 billion Yen ($4.8 billion) (Pearson, 2015).

Bangladesh is eyeing to build its second deep-sea port at Payra. It was originally thought as a 'consolation prize' for China as the Sonadia project was cancelled. As the new plan started to shape, the usual concern regarding what Chain's strong footage in Bangladesh might mean for South Asia loomed once again. Considering the changing situation, China has offered to cooperate along with other countries in developing other future deep-sea project either in Soandia or Payra alongside other states (bdnews24.com, 2016). Now, instead of China receiving the sole tender to construct the port, 10 countries have expressed their intentions to provide $15.5 billion in developing different areas of the project (Byron and Chowdhury, 2015).

Bangladesh's Appeal as a Functional Zone in the Bay of Bengal Region:

The Bay of Bengal region is undergoing a 'tectonic' change (Pearson, 2015). Bangladesh stands as the key to this change. As one of the principles of post-2015 development goals, Bangladesh has actively promoted the Bay of Bengal as a 'geo-strategic link' in the Indian Ocean region ('Bangladesh eyes 'blue economy' for sustainable growth', 2014). Land-based integration between Southeast and South Asia, figuring the Chittagong Port as the shipping hub of the region has been going on for quite some time and eventually, a number of regional arrangements emerged. The sub-regional and extra-regional plans to connect the landlocked South Asian countries of Nepal and Bhutan along with the landlocked northeast India with the world as well as Southeast Asia and China run through Bangladesh's sea-ports. It involves not only the modernization of the existing ports, especially the Chittagong Port, but also the construction of new two seaports. For Bangladesh, the strategic potential of the Bay of Bengal was first regionalized by the formation of BIMST-EC-a sub-regional grouping of the Bay of Bengal littorals, namely Bangladesh, India, Myanmar, Sri Lanka and Thailand, for economic cooperation. Later, BIMST-EC expanded to include Nepal and Bhutan and renamed itself as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, keeping the same acronym.

Keeping similar calculations in mind, the BCIM-Bangladesh, China, India and Myanmar-a sub-regional economic plan aimed toward the development of the landlocked areas of these countries (Sahoo and Bhunia, 2014) was formed, constructing an 'international gateway to South Asia' (Krishnan, 2013), also known as the BCIM corridor. Keeping in mind of the predicament of China's landlocked Yunnan province, plans were made covering 1.65 million kilometers of area and 440 million people residing in China's Yunnan, Myanmar, Bangladesh and India's West Bengal, Bihar and northeast. This would also help keeping India and China's connectivity intact as an alternative all-weather route as opposed to the Nathu La Pass which is often closed due to extreme weather conditions. Bangladesh can be seen as the connecting bridge between India and China through Myanmar's 'Irrawaddy corridor'. The agreement for the BCIM corridor was signed in

2007, aiming to link Gundhum in Cox's Bazar with Bawlibazar in Myanmar. The third road arrangement for the road link has been finalized by Bangladesh in February 2014, which concentrates on establishing the 'missing link' of the BD-Myanmar connectivity, the Balukhali-Gundham road. Bangladesh has submitted another proposal to the Myanmar authority to consider Teknaf-Maungdaw-Sittwelink road as the alternative route on the plain land across the coast of Bay of Bengal. The World Bank has granted a $107 million credit in June 2014, for the Mizoram State Roads II-Regional Transport Connectivity Project to improve transport connectivity for the landlocked state of Mizoram and other north-eastern states' road links with Bangladesh, as well as with Nepal, Bhutan and Myanmar.

The total population of Bangladesh, China's Yunnan province, India's northeast and Myanmar makes up 440 million. It has been estimated that if barriers to trading with neighbors were removed, annual intra-regional trade in the region can more than double from $16 billion to $38 billion annually, while investments in transport infrastructure could reduce trade costs by more than 20 percent in India and 12.5 percent in Bangladesh. The ultimate objective of the connectivity is to connect the South Asian region with the East Asia and beyond via Myanmar. However, it must be noted here that while both BIMSTEC and BCIM were initiated with much enthusiasm, both the institutions have remained quite stagnant. The Secretariat of BIMSTEC has been established in Dhaka in 2011 and there has been four summit-level meetings thus far. Despite much enthusiasm, this regional initiative has not been able to live up to its potential and can be rather identified as an effort to establish 'a semi-institutional inter-regionalism' (Kundu, 2014), which still has a long way to go.

While much shadow has been cast on efficacy of the BCIM and BIMSTEC, we need to perhaps be patient a look at the subtle but steady change taking place in toady's world. Parag Khanna aptly identifies it and terms it 'connectography' (Khanna, 2016). Khanna argues how political geography of the world is changing where legal borders remain the same, though they are gradually connecting with each other for functional purposes. This is spurred by new regionalism that has become the mantra after the end of the Cold War and will gradually create such an irreversible

process that functional purposes would override any other interests for countries. While Brexit has put a temporary thaw on the enthusiasm, for countries in South Asia and Southeast Asia, integration is the talk of the time.

Conclusion

In this article, I have discussed blue economy and its relevance for Bangladesh. While blue economy has many areas that are aptly relevant for Bangladesh, it is the development of port facilities that have the most economic and functional benefit for the country. With the former Secretary of State Hillary Clinton's proclamation of 'America's Pacific Century' (Clinton, 2011), America's pivot to Asia, and more pertinently for Bangladesh, Secretary of State John Kerry's identification of the strategic significance of the Indo-Pacific corridor for South and Southeast Asia (Waller, 2015), Bangladesh's strategic significance is on the rise. It is by harnessing the benefits from the Bay of Bengal that Bangladesh can maximize its foreign policy goals most. It is this finding of the Bay of Bengal that has caught Bangladesh in the 'clutch of geopolitical importance' (Shepard, 2016). The drive for China and Japan to get access to Indian Ocean ports has made Bangladesh stand amidst 'tectonic changes' where the JICA president has identified Bangladesh as the linchpin. The development of port facilities, therefore, stands as the cornerstone of Bangladesh's blue economy policy.

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Bhutan

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Bhutan's economic overview and BIMSTEC initiative as the link between South Asia and South East Asia

Rinchen Lhazom, ***Bhutan***

A: Overview on Bhutan's economy

Bhutan is a small landlocked country in the Himalayas surrounded by two big emerging economies of Asia, China in the north and India in the south, west and east.

The size of the area is 38, 394 sq.km and the country is divided into 20 dzongkhags with 205 Gewogs. The currency is Ngultrum and it is pegged with Indian Rupee.

Bhutan's population size is less than a million which is estimated as 0.757 million as per 2015 Bhutan statistics. The GDP real growth was 5.5 percent in 2014 and GDP per capita (in Nu) was 159,394.3 in 2014. Percentage share of GDP by major sector in 2014 was dominated by tertiary which accounted for 43 percent; 40 percent secondary and 17 percent primary. Annual average inflation was estimated at 8.3 percent in 2014.

Table 1:The top 10 trading countries with Bhutan excluding electricity (2014):

IMPORTS

COUNTRIES	Value in million Nu
India	47,528.60
Japan	1,388.24
China	949.90
Sweden	939.70
Singapore	719.61
Thailand	719.50
Austria	695.52
Germany	476.16
Italy	314.11
Switzerland	237.28

Source: Bhutan Trade Statistics 2015

EXPORTS

COUNTRIES	Value in million Nu
India	21,167.81
Bangladesh	1,661.89
Germany	597.10
Italy	477.66
Hong Kong	252.91
Netherlands	227.67
Nepal	178.49
Turkey	83.33
Singapore	61.69
Belgium	39.50

Source: Bhutan Trade Statistics 2015, Department of Revenue and Customs, Ministry of Finance - complied by Trade Negotiating Division, Department of Trade, MoEA.

It is evident that Bhutan's major trading partner is India. India is also one of the major development partners of Bhutan. This is primarily due to the Free Trade Agreement and geographical proximity as well as the close ties between the two countries.

While the historical friendship and geographical proximity played a key role in deepening the trade between the two countries, there is no doubt that the FTA has immensely contributed to the significant increase in volume of trade between the two countries over the decades. This is one good example of an FTA where two countries have mutually agreed to progress together and benefit from the comparative advantages of their respective economies. This paper will focus on Trade and Investment Sector in particular and explain how Bhutan could benefit from regional economic integration.

B: Bhutan and Regional Cooperation, BIMSTEC

Background to BIMSTEC

In 1994, Thailand took the initiative to explore economic cooperation on a sub-regional basis involving the countries of Southeast Asia and South Asia around the Bay of Bengal.

A new sub-regional grouping was formed in June 1997 in Bangkok and was given the name BIST-EC (Bangladesh, India, Sri Lanka, Thailand - Economic Cooperation). Myanmar attended the inaugural meeting as an observer and joined the organization as a full member at a Special Ministerial Meeting held in Bangkok on 22 December 1997, after which the name of the grouping was changed to BIMST-EC. Bhutan and Nepal became members of the BIMSTEC on 8 January 2004.

According to the Bangkok Declaration on the Establishment of BIMSTEC, the aims and purposes of BIMSTEC are to "create an enabling environment for rapid economic development, accelerate social progress in the sub-region, promote active collaboration and mutual assistance on matters of common interest, provide assistance to each other in the form of training and research facilities, cooperate more effectively in joint efforts that are supportive of and complementary to national development plans of member countries, maintain close and beneficial cooperation with existing international and regional organizations, and cooperate in projects that can be dealt with most productively on a sub-regional basis and which make best use of available synergies".

Members agreed to focus on 14 areas of cooperation and lead countries have been assigned the task of coordinating the projects and activities in the designated sectors. For instance, Bhutan has been assigned the job of coordinating the projects and activities under Cultural Cooperation Sector.

Similarly, lead countries have been identified for projects under each sector to realize the objectives of the initiative.

While economic cooperation within the region is not only essential for poverty alleviation and socio-economic development, it is also imperative to understand the challenges faced by different countries due to various factors including, geographical limitations, lack of human resources, inadequate infrastructure, technology limitations, lack of financial resources and many other barriers.

There is no doubt about the huge potential for growth and development in this region and it is through economic cooperation that the people and countries of this region will attain the larger goal of peace, stability and prosperity.

Through trade and investment, a mutual trust could be built and focusing on the comparative advantages of respective countries, the region can grow together and develop as not only the agricultural product exporters but grow and develop as a tourism, educational, medical and clean energy hubs for exports to the rest of the world.

Bhutan can utilize its comparative advantages in exporting green products and services produced by cheap and clean hydro power. People to people contacts and sustainable development of harnessing water/sea resources and coming into some agreement to provide access though respective countries for movement of goods, services and people would enhance the economic growth and prosperity of people and agreements based on sustainable development.

It is imperative to state that Bhutan's neighboring countries India and Bangladesh are very important trading partners and Bhutan is given the access to sea and ports of these two friendly countries to trade with third countries which has immensely benefited our people and enhanced economic activities both in trade and services. There is no doubt that India and Bangladesh are two giant countries whose sheer size and huge potential for growth offer immense opportunities and potential for a small landlocked country like Bhutan. Bhutan always believes in benefiting from the prosperity of neighboring countries. While the neighbors have been generous to extend all support for trade, services and development through bilateral and regional agreements will certainly enhance growth and development, and through such cooperation, much larger goal could be attained.

While the region has witnessed positive growth and succeeded in alleviating poverty to a large extent, much remains to be achieved given the huge potentials and opportunities within the region. The concept of Blue Economy is resonating amongst many countries across the world and also being discussed at UN forums.

Optimization of natural marine resources within ecological limits and sustainable harness of sea resources is important and imperative to further the goal of sustainable development and for an inclusive growth. The interdependence on all natural resources whether land or water bodies is non-debatable. Even for landlocked countries within the region like Bhutan and Nepal, the water bodies of our neighboring countries provide tremendous opportunities in export and import of goods and services. Hence, the blue economy activities and initiatives to improve sustainable harvesting and management would positively impact lives of people in the region through economic development. Any economic activities carried out by air, land and water provides opportunities and help economies grow and prosper.

Importance and potentials of regional cooperation for trade and development

Everyone in this universe is interdependent and each country is depended on others for its growth and development in this age. Eight countries in South Asia have come together under the South Asian Association of Regional Cooperation (SAARC) and SAARC Free Trade Agreement, and they agreed to further the objective of strengthening regional cooperation to promote economic growth and quality of life; strengthen economic self-reliance and increasing people to people contacts to achieve peace and prosperity in the region.

Though trade among these countries over the years remains much low, there is a huge potential to be achieved. However, there is evidence that FTAs between countries have stimulated growth and development in the region, and regional cooperation has proven to be an effective tool to improve the lives of people in the region through trade and investment.

For example, BIMSTEC establishes links between South Asia and Southeast Asia. Historically, the Bay of Bengal has played a crucial role of connector where trade, commerce and cultures were intertwined for centuries. The seven countries namely Bangladesh,

Bhutan, India, Myanmar, Sri Lanka, Thailand and Nepal have agreed to take forward the economic cooperation to further the common objectives of economic development and social progress, and uplift the lives of the people.

The intra-trade between the BIMSTEC countries has reached 74.63 billion US dollars in 2013 without an FTA; the trade potential with an FTA is certainly going to be substantial. Therefore, there is an urgency to sign the Agreement and Protocol to the Agreement for regional growth and development.

In the case of Bhutan, there has been a significant trade growth over the last decade. As evident from Table 1, India, Bangladesh, Thailand and Nepal feature amongst the top 10 trading countries for Bhutan. There is a huge potential for trade not only in goods but also in the service sector.

Yet, member countries have not been able to sign the agreement as envisioned despite the tremendous mutual benefits it offers. Though Bhutan is small and its trade volume is also small compared to the rest of the member countries, it is imperative to have a regional agreement not only for a predictable and reliable trade procedures but also for tapping the opportunities and potential of neighboring countries by engaging in the supply value chain and focusing on the comparative advantages of the respective countries.

The service sector has a huge growth potential for Bhutan. Bhutan can be an education hub for the region where we can offer safe, clean air and clean environment and where English is the medium of instruction. Bhutan can also be a data center for IT sectors.

Further, Bhutan could offer to tourist a place to relax and to enjoy natural, intact environment where more than 70 percent of Bhutanese land is covered with forest. Regional cooperation in tourism sector could be one area where all countries could cooperate and grow together. Over the last decade, tourism sector has seen a growth and tourist from BIMSTEC countries have increased annually.

Specific details on the flow of tourists, education policy and other related polices as a complimentary to regional cooperation initiative are discussed in the following section.

SAARC countries

	2011	2012	2013	2014	2015
Afghanistan	0	2	0	0	0
Bangladesh					5,851
India					91,733
Nepal	145	157	170	203	192
Pakistan	2	12	6	10	9
Sri Lanka	6	17	15	27	18
Maldives					0
Total	**153**	**288**	**191**	**237**	

Source: TCB

BIMSTEC Countries

	2010	2011	2012	2013	2014	2015
Bangladesh						5,851
India						91,733
Nepal		145	157	170	203	192
Thailand		2,236	3,573	3,494	12,105	3,778
Sri Lanka		6	17	15	27	18
Myanmar		3	12	5	11	6

Source: TCB

BIMSTEC initiative in Tourism sector

BIMSTEC members have agreed to coordinate the region's diverse strengths in tourism sector to derive maximum benefit from its natural, cultural and historical attractions, and recognized the need to enhance inter-regional tourism through such strategies as joint marketing of intra-BIMSTEC tourism packages, exchange of visits and information as well as sub-regional tourism cooperation. Travel will be facilitated within the region for business travel, exchange programs and tourism, including through the introduction of a BIMSTEC Business Travel Card/Visa.

The First BIMSTEC Tourism Ministers Round Table & Workshop (Kolkata, February 2005) decided to establish a BIMSTEC Tourism Information Centre in India and the BIMSTEC Tourism Fund with a contribution of $10,000 by each member state under the proposed Plan of Action (PoA) for Tourism development and promotion for the BIMSTEC region.

The Second BIMSTEC Tourism Ministers Round Table & Workshop was hosted by Nepal in April 2007 (Kathmandu). The meeting, among other things, decided to set up the BIMSTEC Tourism Working Group consisting of representatives of the National Tourism Organization and private stakeholders in tourism industry.

The BIMSTEC Tourism Information Centre has been set up in India. The Centre would play an important role in funding common tourist projects, providing vital information and even using media as a tool for disseminating important information on tourism in the region. The Information Centre will operate the BIMSTEC Tourism Fund.

The 13th Session of the BIMSTEC Senior Officials' Meeting (New Delhi, 11 November 2008) had recommended the establishment of a BIMSTEC Tourism Centre as proposed by Nepal. The SOM had also recommended that the Centre be established in Nepal. This was further endorsed by the 11th Session of the BIMSTEC Ministerial Meeting (New Delhi, 12 November 2008). However, since then there have been no further developments on the matter.

India hosted the First BIMSTEC Tourism Working Group meeting on 23September 2013. The meeting highlighted the need for building on the opportunities under BIMSTEC and promoting tourism as one medium of the initiative [still unclear]. Bangladesh offered to host the Second BIMSTEC Tourism Working Group Meeting along with the Third BIMSTEC Tourism Ministers' Round Table & Workshop, whose dates have not yet been announced.

Although the Plan of Action for Tourism Development and Promotion for the BIMSTEC Region has been agreed to by member countries, the progress in tourism sector has been insignificant due to a lack of further initiatives.

Though it is recognized that tourism sector of BIMSTEC has significant potential, substantial effort has not yet been made by BIMSTEC to develop the sector. There is potential for developing an integrated tourism program for a Buddhist circuit within the BIMSTEC region which, alongside recreational activities such as boating, shipping and seaside entertainment, also could create jobs.

Bhutan can benefit from of the potential in tourism and health sectors in the BIMSTEC region. Bhutan, being a carbon negative country, could offer tremendous opportunities for wellness centers. Patients across the region as well as across the sub-region who get their treatment in Thailand or India can come by sea, air or land routes to

Bhutan to breathe clean air and oxygen and away from congestions which is an alternative treatment for a quick recovery.

Students from across the region could also study in Bhutan as part of exchange programs or come to study Buddhist philosophy. Business tourism is another prospect where Bhutan can offer beautiful clean environment and clean air for holding business discussions.

Conclusion

Regional cooperation initiative is a way forward for economic development and social growth. While bilateral arrangement is also beneficial, regional cooperation is cost-effective and can bring greater impact and efficiency in economic development. However, it is imperative to have an arrangement where countries can actually trade with less or no barriers. The key to success would be putting in place mechanisms or instruments such as effective trade facilitation; mutual recognition of certification and developing common standards; reduced Technical Barriers to Trade and effective FTAs implementation and promotion of tourism through such concepts as Blue Economy, including consideration of access by landlocked countries to trade and economic activities.

An agreement in maritime with an aim to sustainable harvest of maritime resources and enhance trade flows will certainly boost economic growth and reduce cost of freight and improve port logistics and infrastructure in addition to putting a common standard of procedure of movement of goods and services, though maritime would not only benefit countries connected with seas and oceans but also landlocked countries like Bhutan.

It is hoped that a mutually beneficial agreement that provides and facilitates access to sea-ports by landlocked countries within the BIMSTEC region is drawn soon since it is the key to harness the region's full trade potential.

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Myanmar

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May OoKhaing was born on 6th Feb 1972 at Min Hla Township, Bago Division, Father U Tin Oo, Mother Daw MyaSein. Have one younger sister. Married to Dr. Khaing PhyoAung on 24th Jan 2015.Have own Custom Broker Service Agency.

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(2) Managing Director,Ocean Crown Co. Ltd.,Int'l Freight Forwarding & Transport Logistics

(3) BOD& Trainer, Myanmar International Freight Forwarder Association(MIFFA, NGO)

(4) Director, Asian Myanmar Beauty Travels & Tours Co Ltd

(5) Managing Director, Ocean Crown Trading Co Ltd.

(6) Director, King Century Co., Ltd.

(7) Secretary General, Yangon Cargo Truck Supervision Committee, Yangon Region

Myanmar and its Trasport Network for Regional Trade and Commerce

May Khaing, *Myanmar*

Introduction

Background

Myanmar with an area of 676,577 sq km and having a total population of 58 million is one of the poorest countries in the ASEAN region. Myanmar exports natural gas, beans, pulses, forest products, garments, fishery products, etc. to Thailand, India, China, Hong Kong and Singapore. It imports machinery, refined mineral oil, edible vegetable oil, base metal, [electronic equipment?], etc. from China, Singapore, Thailand, Indonesia and South Korea. During (2009-2010) Myanmar's export value was $7,587 million and import value was $4,181 million. In 2010, the total foreign direct investment stood at $31.9 billion, of which $9,568 million was from Thailand.

Myanmar shares its border with five countries: Bangladesh (194 kilometres), India (1,463 kilometres), China (2,185 kilometres), Laos (235 kilometres) and Thailand (1,800 kilometres). The total length of the border is about 5,900 kilometres.

Myanmar is a member of the Association of Southeast Asian Nations (ASEAN), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Greater Mekong Sub-region (GMS) that includes Cambodia, Yunnan Province and Guangxi Zhuang Autonomous Region in China, Lao [Laos?] PDR, Myanmar, Thailand and Vietnam. The selected key socio-economic indicators of the five GMS countries vary in terms of population, GDP, GNI per capita and area. Of them, Myanmar has the largest land area (World Bank; JICA-IDCJ studies).

Socio-Economic Features and International Trade of Myanmar

Overview of Socio-Economic Features Of Myanmar

The key economic indicators and long-term trends of Myanmar reveal that its economy has maintained a steady growth over the last decades and annual growth is approximately 10 to 21 percent.

Predominantly, agriculture has been paying the vital role in Myanmar's economy. However, its relative importance has declined over time because of expansion of other sectors such as services and trade. Foreign trade separated into normal trade and border trade. Border trade takes place mainly with China and Thailand. In recent years, trade imbalance with China has increased due to high logistics costs and huge Chinese demand for agriculture, livestock and fishery products. About 60 percent of export cargos go through China while an estimated 65 percent of inbound cargo to Myanmar by normal trade.

The table shows sector-wise volume of Foreign Investment in Myanmar.

(US $ in million)

Sl. No.	Sactor	Foreign Capital be brought in	Yearly Approved Amount of Foreign Investment (By Sector)														2016-17 (end of 30/6/16)	
			1988-89 to	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16			
1	Agriclture	249.855	34.351							138.750		9.650	20.359	39.666	7.180			
2.	Livestock & Fisheries	461.085	312.358				12.000					5.6	96.016	26.861	8.250			
3.	Mining	1,897.605	528.190	6.000	0.700		5.000	855.996	2.500	1,396.077	19.897	15.334	32.730	6.259	28.923			
4.	Manufacturing	6,387.241	1,608.084	3.520			18.720	(-)0.232	33.230	66.321	32.254	400.716	1,836.980	1,502.013	1,064.998	2	1.536	
5.	Power	19,684.642	0.000		6,030.000	281.222				8,218.520	4,343.978	354.201	45.511	40.110	360.100			
6.	Oil & Gas	23,410.368	2,457.473	142.550	34.975	438.480	170.000	114.000	278.600	10,179.297	247.697	309.200		3,220.305	4,817.790			
7.	Construction	37.767	37.767															
8.	Transport& Communication	5,085.337	313.272								0.634		1,190.232	1,679.304	1,930.996			
9.	Hotel & Tourism	2,445.365	1,031.740	3.713				15.000	15.250			300.000	435.210	357.949	288.395			
10.	Real Estate	3,005.451	1,053.740	2.713									440.573	780.745	728.680			
11.	Industrial Estate	203.113	193.113												10.000			
12.	Other Services	651.859	23.686									14.766	18.534	357.320	235.963	2		
	Total	63,731.710	7,593.095	158.283	6,065.675	719.702	205.720	984.764	329.580	19,998.965	4,644.460	1,419.467	4,107.055	8,010.533	9,481.275	4	3.136	

Table 1. Yearly approved amount of foreign investment by sector.

The total investent from foreign investors reached about $3,136 million as of June 2016. The foreign direct investment is highly dependent on investment policies and policital climate of the country. The new government announced a new 12-point economic policy in July 2016.

Policies and Institutional issues for Trade and Transport Sectors in Myanmar

New Economic Policy by New Government

The Myanmar government revealed a 12-point policy on July 29, 2016, highlighting the importance of developing a market-oriented system "in all sectors" and establishing an economic framework in support of national reconciliation.

A. Foreign Investment Law in Myanmar

Myanmar Foreign Investment Law was promulgated in 1988, with its leading sectors being oil, gas , hotel and tourism, real estate and mining . Foreign investors can setup their businesses either in the form of fully owned company or joint venture with a minimum share of 35 percent of the total equity capital. The minimum capital for fully owned foreign company in manufacturing sector is $500,000 while it is $300,000 for service sector companies.

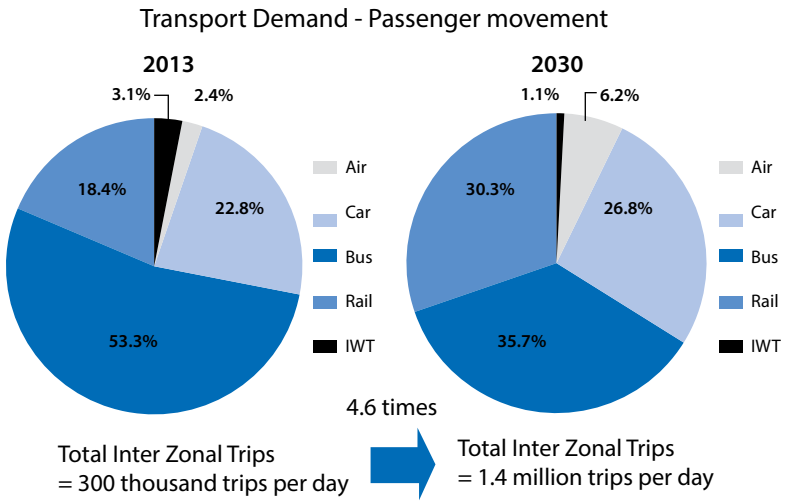


Figure 1.Transport Demand – Passenger Movement

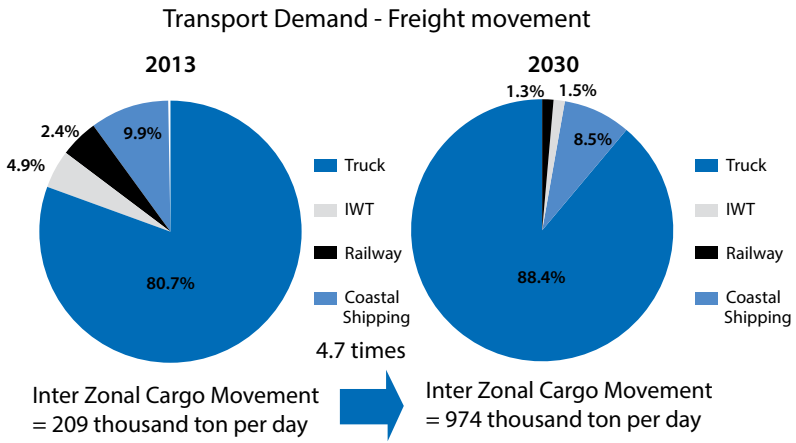
The Myanmar government realised that geopolitical situation and development initiatives favour the country to be a land-bridge connecting regional and international. The new government announced a new transport sector policy note for Myanmar as better transport is essential for Myanmar's development. After decades of underinvestment, Myanmar's transport infrastructure lags behind that of the other countries in the region. Sixty percent of

trunk highways and most of the railways need urgent maintenance or rehabilitation. River infrastructure does not exist, while 20 million people lack basic access to road. *(Illustrated from Myanmar Transport Sector Policy Note.)*

[While the fleet of vehicles doubled, the highway network has increased by only 35 percent. In Yangon, travel has become two to three times slower. Thanks to poor safety measures, as many as 4,300 people were killed in road accidents in 2014, twice as many in 2009.] *(Illustrated from Myanmar Transport Sector Policy Note.)*

Besides, the forecast potential growth by 2030, 13 percent of gross domestic products increase–a 40 billion USD opportunity annually, basis road access for 10 million more people enabling them to reach development opportunities. *(See the fact sheet below illustrated from the new transport sector policy.)*

Figure 2. Transport Demand – Freight Movement



B. Facts on the Myanmar Transport Sector Policy Note

Myanmar's transport sector has suffered with transport needs exceeding resources and few investments made. Sixty percent of highways and most rail lines are in poor condition. Spending on road and rail maintenance has been two to three times below what is needed. Despite its large potential, river transport has not received any investment.

Transport sector investments were 1.0%-1.5% of GDP between 2005 and 2015. At a similar level of development, other countries typically

invest 3%–5% of their GDPs in their transport infrastructure. Transport infrastructure has declined between 1990 and 2015 to well below international standards. A total of $60 billion in transport infrastructure investments is required during 2016–2030.

Myanmar Railways operated a 3,330 km network in 1990 and reached 6,107 km in 2015. Sixty percent of the rail network serves fewer than 1,000 passengers a day, a level too low to justify even maintaining rail services. Railway fares pay only half of operational costs. Because of poor track conditions, Myanmar Railways is forced to operate at 50% of its potential speed.

It is estimated that 20 million people in the country-half the rural population-do not have basic road access. Road user fees cover just one-third of infrastructure costs.

Between 2004 and 2014, the Department of Highways (previously Public Works) added more than 10,000 kilometres (km) of new trunk roads. It is estimated that Myanmar needs to increase its road network from 157,000 km to about 260,000 km to connect all the villages.

Road transport now dominates long-distance travel, carrying 90% of freight transport and 86% of passenger transport.

The market reforms of 2011-2015 have transformed the transport sector. Car and truck ownership doubled from 2012 to 2015. With newly imported trucks are of better quality, freight transport costs are estimated to have dropped by 20% since 2012.

In the last four years, vehicle fleet has doubled. Pave highway network has increased by 35%. Travel in Yangon has become two to three times slower. Public transport operators have lost 35%–65% of the market.

Fatalities from road crashes have risen from 2,173 in 2009 to 4,314 in 2014. Road fatalities may double by 2020, and reach 15,000 annually in 2025.

A focused and affordable program of transport infrastructure investments and operational changes launched in the next five years could, by 2030 reduce transport costs by close to 30% which is expected to result in an ultimate increase in Myanmar's annual GDP by $40 billion, provide basic road access to close to 10 million people, and save 40,000 lives on the roads.

A transport strategy that fully taps into all modes would maximize economic impacts. The road sector dominates, and should thus receive a larger share of investments. However, in the long run, Myanmar cannot depend narrowly on just one mode. Because river

and railway transport have been operating below potential, reforms and improvements of these systems could have a significant beneficial impact.

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C. Myanmar Border Trade Policy & Border Gates

The policy of the government is to further develop and strengthen the bilateral trade relations with the five neighbouring countries such as Bangladesh, China, Laos, India and Thailand, using border trade as a mechanism for trade expansion. Border trade can contribute to the country's economic growth as well as the GDP. Geographically, Myanmar is a gateway to the east, north and west and can be central hub for exchange of goods, services and technology. Myanmar has urged the public and private entrepreneurs to import commodities that will contribute to infrastructural development and production sectors along border trade?.

Border Gates in Myanmar

Muse-Ruli, China Border Trade Zone
Chin Shwehaw-China,Wantain (kyukote-pansai) border Trade
Kanpite-China Border Trade
Lwejel- Lying,China Border Trade
Tamu- India Border Trade
Maw Daw-Bangladesh Border Trade
Myawaddy- Maesot, Thailand Border Trade Zone, East West Economic Corridor (EWEC)
Htee Khee-Thailand Border Trade since May 11 in 2013 (Southern Economic corridor and AH123 in connect with Dawei Special Economic Zone)
Three Pagoda Pont-Maehongsong Myeik-Bangkokby Prachup Khiri Khan- Sinkon-Mawdaung – Myeik Route Kawthaung-Ranoung, Thailand Border Trade

D. Special Economic Zone Law

The Special Economic Zone Law was introduced in January 2011 in three zones namely Sittwe, Kyaukhyu and Dawei and also in Yangon's Thilawa. It includes high tech industrial zones for? information and telecommunications technologies. It can be used for export processing, port area zones, logistics and transport zones, research and development zones, business service zones and sub-trading zones.

Sez will play important role in near Future

Figure 3. Special Economic Zones in Myanmar (Dawei, Thilawa, Kyaukphyu, Sittwe)

E. Thilawa SEZ Project

Developed by Myanmar Thilawa SEZ Public Company Limited and Japan Corporations (Mitsubishi, Mitsui, Sumitomo), Zone A is fully reserved for foreign investors from several countries. Planning for the implementation of ZONE B is underway. Expansion of several port terminals near Thilawa is going on in full swing.

Development of Deep-Sea Port and othre Ports in Myanmar

The Myanmar Port Authority (MPA) is taking initiatives to improve the Yangon River access channel. All ports in Myanmar, including Yangon port, are river ports. According to market oriented economy our country requires more deep-sea ports to accommodate larger vessels. Therefore, the MPA is planning to develop Kyaukpyu and Dawei deep-sea ports, and also develop the Oil and Gas Terminal at Kyaukpyu deep-sea commercial port. It is also planning to develop an industrial estate as well as road and rail link to Thailand.

The Dawei deep-sea port project in Myanmar has road & rail & toll highways and the rail road construction plan to connect project sites to Thailand is a crucial economic corridor for Myanmar, Thailand and for the region as well. The distance between Dawei and Myanmar-Thai border is about 170 km and Dawei and Bangkok is only about 360 km. This proposed road will have up to eight lanes of international standard highway linking Dawei with the Myanmar-Thai border. The road will reach the GMS southern corridor that leads to Vung Tau and Quy Nhon in Vietnam through Sisiphon in Cambodia via Bangkok in Thailand.

Figure 4. Dawei Deep-Sea Port Layout Plan, Southern Part of Myanmar, Tanintharyi Region

In 2010, Myanmar and China signed an MoU on development and cooperation in the China-Myanmar Corridor Project to link Ruili and Kyaukphyu. According to the project document, China would help Myanmar to construct a railway and motorway from Kyaukphyu Township in Rakhine State to Ruili in China. A Memorandum of Understating (MoU) has also been signed between the Ministry of Energy of the Republic of Union of Myanmar and China National Petroleum Corporation of China on the operation and management of the Myanmar Crude Oil Pipe Line Project. Development of the Kyaukpyu Deep-sea Port will facilitate faster transport.

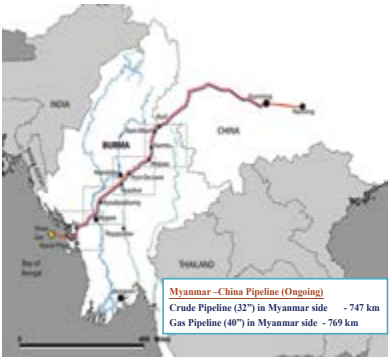

Figure 5. Myanmar–China Pipeline (ongoing)

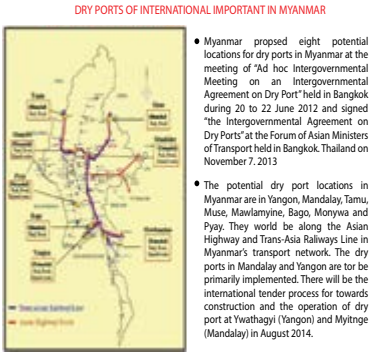

Figure 6. Dry Ports Map in Myanmar

Implementation of Dry Ports

- Myanmar signed the intergovernmental agreement on Dry Port on November 2013.
- Intended to be built at:
- Ywathagyi (Yangon) and
- Myitnge (Mandalay)

National Transit and Cross-Border Transport

To improve intermodal linkages between connecting modes of transport among ASEAN member states, the following national and trans-boundary links and corridors offer significant benefits:

1. Trans-Asian railways in the ASEAN Indo-China
2. Cross border railways connections
3. India-Myanmar rail link (Kalay-Tamu)
4. Thailand-Myanmar rail link (Thanbyuzayat-Three Pagoda Pass)
5. China-Myanmar railway corridor
6. ASEAN highways projects (AH 1/AH 2/AH 3/ AH 4/AH111/ AH 112/AH 123)
7. The East West Economic Corridor Project (Vietnam-Laos, PDR-Thailand-Myanmar)
8. South Economic Corridor
9. Dawei Deep-sea Port Project as a new commercial gateway to India, China, the Middle East, Europe and Africa.
10. A multi-modal Transit Transport facility on Kaladan River Project
11. Sittwe Port (Myanmar to India NH-54) 9 Kaletwa to India-Myanmar Border) project
12. Mingalardon Air Cargo Services project at Yangon International Airport.

Figure 7. Major Economic Corridors linking Myanmar

As mentioned earlier, Myanmar shares its border with five countries, namely Bangladesh, India, China, Laos? PDR and Thailand. Among them, the shortest border is with Bangladesh but there was no air link, no road link and no coastal shipping connection with Bangladesh until 2010. A bilateral relationship with Bangladesh has been looking to enhance the potential of both countries including Multi-modal transport connectivity. As Myanmar is also a member BIMSTEC, in future road transport linkages with Bangladesh will be available.

Figure 8. Jan. 14-16, 2015, Hangzhou Strengthening Connectivity for Win-Win Cooperation Business Forum, China Council for the Promotion of International Trade (CCPIT).

With India, Myanmar has had regular border transport and trade for many years. The Asian Highway route AH1, proposed Trans?-Asia Rail Network and GMS northwestern corridor routes pass through Tamu, the border city of Myanmar, with India. Also, there are many bilateral projects between India and Myanmar. Some of the transport projects are being upgraded, including the 160km long Tamu-Kalewa-Kalemyo road; the Rhi-Tiddim road in Myanmar and the Kaladan river Multimodal Transport Project. After completion of these projects, trade and transport between Myanmar and India will be smoother and more secure than before.

Multimodal Transport Law

The Ministry of Transport announced multimodal transport law in 2015 with a purpose of strengthening transport logistics sector in the country. Although institutional and technical infrastructure are weak, all the stakeholders such as freight forwarders, customer brokers, logistics service providers and truckers in the transport logistics industry are marching to achieve improvements in performance.

The Department of Road Administration and the Ministry of Transport issued the international operating licences to truck operators to operate international haulage service within the GMS region. Bilateral and multilateral trade and transport agreements have been singed among the GMS & ASEAN countries.

Myanmar National Transport Master Plan 2030

MYT set a vision statement that-"To develop an efficient, modern, safe, and environmentally-friendly transportation system in a coordinated and sustainable manner that embraces all transport modes for the benefit of the country and people of Myanmar."

With the vision of freight and passengers movement in 2030, the Myanmar transport master plan sets the following goals:

1. To establish a long-term development vision and corresponding strategies of the transport sector in line with the National Comprehensive Development Plan (NCDP).
2. To draw up an integrated national transport network plan, which enables multi-modal transport services all over the country.
3. To provide an effective coordination mechanism in transport planning and investment.
4. To minimise environmental impacts caused by the transport infrastructure development through better planning and enhanced coordination between the ministries concerned.
5. To improve safety and security to international standards.
6. To encourage private sector's involvement in the transport infrastructure development, operation, maintenance and management.
7. To support other industrial sectors by providing safe, secure, reasonable and all season transport services.

One Belt one Road-OBOR (The maritime silk road initiatives by China)

The first version of Silk Road was based on developing inland routes connecting the west with the east. The transport network that passed through India & Indo-China enabled China to become a leader in international trade as it was at both the beginning and end point of key transport nodes. These nodes were efficient and linked key trade markets in Asia and Europe. This was assisted by the poor conditions of hazardous maritime transport of the time. As shipping conditions improved and navigation became more trustworthy, the straits of Malacca became more navigable, trade routes shifted from inland regions to the southeast coastal parts of the region.

The 21st century Silk Road is China's strategy of "OBOR" is not only road connectivity, but also maritime navigation link through pearl route can become new strategic transport route to develop around the regions. At this moment, there is uncertainty around the One Belt One Road initiative as no country fully understands the purpose of this initiative. Conceptually, it is about the connectivity and cooperation through the ring (road & maritime link) countries with economically development inclusiveness of people to people connection. Planned routes for implementation are:

(1) The New Eurasia Land Bridge Economic Corridor
(2) The China-Mongolia-Russia Economic Corridor
(3) China-Central Asia-West Asia Economic Corridor
(4) China-Indochina Peninsula Economic Corridor
(5) China-Pakistan Economic Corridor
(6) Bangladesh-China-India-Myanmar Economic Corridor

Tourism Sector in Mayanmar

Building upon the success of nature, culture and MICE tourism, Myanmar has the opportunity to leverage its heritage assets and introduce new products that cater to a wider demographic of travellers. These products include adventure, cruise, yachting, eco and leisure and wellness underdeveloped in Myanmar. Early experience of the visitors has been positive.

Myanmar will benefit in a number of ways from these new products. First and foremost, the sector will be able to increase growth by attracting new visitors who are interested in a greater variety of experiences. Moreover, the diversification of the sector, with regards to both products and target markets, will increase stability and reduce the risk that is currently associated with such a heavy reliance on culture tourism.

Private Sector Developoment in Myanmar

Myanmar's current economic and social transitions are unprecedented in dimension, complexity and speed—calling for bold and progressive actions to make up for the lost decades of development and the legacies of isolation.

With the assistance of the ADB and the Australian government with support from Mekong Business Institutes and working together with the Ministry of Commerce and Myanmar Investment Commissions and private sector key players, a "snapshot" of the government's policy directions and reforms relating to the development of an overall PSD framework based on five priority pillars:

- Pillar One: Improving the Legal and Regulatory Environment
- Pillar Two: Ensuring Access to Finance
- Pillar Three: Promoting Trade and Investment
- Pillar Four: Restructuring the State's Role in Business Enterprise and Service Delivery
- Pillar Five: Building Myanmar's Human Capital Base

The main purpose of PSD should be to stimulate economic growth and social development for all men and women. Effective PSD increases

livelihood opportunities and enables people to follow their dreams and improve their lives. Collectively, economic growth and social development will reduce poverty and inequality and also enhance national productivity, competitiveness and economic security.

Socially- and culturally-sensitive PSD is critical in this time of accelerating globalisation and regional competition. An expanding, efficient and fairly regulated private sector adhering to international standards is the foundation for both the economic strength and social well-being necessary to support national security and peace.

Peace Building for Developments

On Maritime boundary, Dhaka demands for "equity" method, which, it insists, will ensure win-win conditions for Bangladesh, Myanmar and India. On the other hand, India and Myanmar press for "equi-distance" principle, which, Dhaka says, will deprive Bangladesh of 17 out of the 28 sea blocks. India makes claim on 10 and Myanmar demands seven sea blocks. India and Myanmar claim the Bay of Bengal in a way that would block Bangladesh's access to sea routes.

In November 2008, Bangladesh and Myanmar were on the verge of getting into an armed conflict over oil and gas exploration in the disputed sea blocks. Tension also rose high in December 2008 as an Indian survey vessel intruded into the disputed waters. The problems, with both countries, were resolved through international court orders. Bangladesh won in both cases. (*Recently, Bangladesh and Myanmar achieved progress in bilateral talks and decided to stay away from ITLOS).*

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India

Vinod

Vinod Solomon is a firm believer in regional integration especially, with Chennai as one of the hubs, in the Bay of Bengal region and through the new Silk Road. An engineer with an MBA from the Leicester University, he has worked across India and the UK for over 18 years. He is presently based in Chennai and works as the Regional Director, ASSOCHAM TN.

Ports-Led Initiative for Integration in the Bay of Bengal Region

Vinod Solomon, ***India***

Abstract

Obsolete civilian maritime infrastructure, inadequate capacity or policy frameworks, the size of investments needed and the shortage of skilled manpower are all dampeners that could derail the Indian government's regional initiative of integrating the countries of Bay of Bengal region. It is time for the port authorities across this region from Colombo to Chennai, from Chittagong to Chiang Kong and beyond, to spearhead a new initiative to integrate this region. The first step would be for the heads of the port authorities in the region to come together to form a Bay of Bengal Ports Group as part of a Maritime Logistics Corridor. The initial task of this group would be to share best practices for greater uniformity and efficiencies in the operations of the ports in the region. When these ports work together, the strengths get amplified and higher value is delivered.

Other stakeholders, such as shipping associations, can contribute to people-to-people connections and help in implementing the strategies devised. The universities that provide maritime education would also play a crucial role in developing the skills and knowledge required, in collaboration with their partners across the region. The chambers of commerce across the Bay of Bengal region would need to act as a catalyst in sustaining the momentum and act as an interface between all the stakeholders. Think-tanks and research bodies in the region could promote innovation projects in the blue economy in areas such as producing flavor ingredients and food packaging from seaweed, fish farms at sea, tapping tidal energy, deep-sea mining, etc. Once a strong Maritime Logistics Corridor is created in the Bay of Bengal region then we could look at enhanced trade with landlocked Central Asian countries and along the new Silk Road to take integration to a whole new level.

Ports-Led Initiative for Integration in the Bay of Bengal Region

It is believed that humanity will change more in the next 20 years than it did in the previous 300 years with the maritime industry set for a sea change in the way ports and logistics are viewed and operated. Local Motors, a technology start-up in the US, has recently unveiled Olli, a 3D printed, Self-Driven, 12-seater mini bus. Users will be able to print this driver-less vehicle in about 10 hours and assemble it in another hour. Since Amazon unveiled its 9th delivery drone prototype in 2014, other tech giants have stepped in with Google project wing, DHL Parcelopter, UPS Horsefly Drones, among others, to usher in an era of unmanned logistics. Rio Tinto has rolled out fully automated driverless truck fleets at two of its iron ore mines in the Pilbara in Western Australia, in what it says is a world's first. The mine is also trialling driverless trains and deploying autonomous drills in the region as it embraces new technologies to cut costs and boost safety.

Therefore, every system and process is becoming connected, intelligent, observed and optimized. Even most of the logistics infrastructure is turning from 'dumb' into smart as evidenced from the examples seen above. We all know and mostly agree that the digital transformation of the ports and logistics industry is imminent. Pretty much everything that can be digitised or automated will be. We are not far away from the era of sentient ports and cognizant marine infrastructure. In this context, where are we in this process of change and innovation? What can we do to keep pace and, in due course, lead the transition?

The global trade scenario

Recent World Bank statistics estimate that growth in the volume of world trade is expected to remain sluggish in 2016 at 2.8 percent, unchanged from the 2.8 percent increase registered in 2015 (Anon, 2016a). Experts unanimously agree that such a long, uninterrupted spell of slow but positive trade growth is unprecedented. Even the IMF Managing Director, Dr. Christine Lagarde, succinctly stated that our state was one of alert, not alarm (Anon, 2016 b). However, on the positive side, IMF data confirm that the container throughput at major ports had recovered much of the ground lost to the trade slowdown last year causing observers to predict that trade growth may remain volatile in 2016.

Why BIMSTEC

With this background, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) assumes strategic importance to drive economic growth and promote broader regional integration. While BIMSTEC has not achieved its stated goals in terms of policy and trade measures, it has to be commended for the ambitious agenda on regionalism that goes beyond just trade in goods, services and investments. This framework has working groups dealing with key issues of trade facilitation, energy cooperation and education, among other things. In 2007, India's total export to BIMSTEC countries was $7.8 billion and in 2014-15 it increased to $22.28 billion (7.2% of the country's overall exports), while during this period its imports from this group increased from $5.7 billion to $9.26 billion. Thus, India's positive trade balance with the BIMSTEC group of countries is growing, with Bangladesh and Sri Lanka among its top 25 export destinations.

Despite the South Asian Association for Regional Cooperation's (SAARC) existence for over three decades, intra-regional trade amounted to only around five percent, while on the other hand intra-regional trade in BIMSTEC has touched six percent within the last decade. This is an indication of the immense potential that the BIMSTEC framework possesses inherently. The South Asia Monitor states that the complete implementation of the FTA between BIMSTEC countries will significantly enhance intra-regional trade potential to the tune of $43-$59 billion annual trade creation. Intra-regional trade in this region is also expected to rise by as much as 60 percent, and the group's trade with the world is also expected to grow by 30 percent if trade facilitation systems could be raised to international standards.

Recent developments such as the Bangladesh Bhutan India Nepal (BBIN) Motor Vehicle Agreement (MVA) is a significant milestone in connectivity by enabling seamless movement of vehicles across regional borders, which also serves to infuse fresh hope for the economic integration of this region. Under the uncertain global trade scenario, it would be a logical conclusion to build on the potential for regional integration in the Bay of Bengal region to catalyze the economic growth in the region.

The Challenges

However, there are numerous challenges that hinder the BIMSTEC movement from gaining momentum. The presence of countries in various stages of economic growth could restrict the growth of BIMSTEC. There are least developed countries present in this grouping along with relatively developed economies like Thailand or India. This could manifest in obvious differences of interest, which could potentially become hurdles in the regional integration initiative. Another challenge is that the grouping does not include either China or Japan. The absence of the biggest economies in Asia could make the issue of drawing investments into the region a bigger challenge. The absence of bigger economies could also reduce the influence of this grouping in the world stage. However, the major challenge could be the lack of will from the governments to meaningfully engage with one another and create a Free Trade Area in the BIMSTEC region.

What next for BIMSTEC

At this juncture, while the various approaches, both through the governments and other agencies move forward at their own paces, it would be worthwhile to explore the creation of a maritime logistics corridor in this region to drive trade and commerce. It is the objective of this report to explore the feasibility of the ports in the Bay of Bengal region coming together to form a maritime logistics corridor, which would enhance the regional trade linkages and result in a greater economic integration.

Transport corridors provide a visible and direct opportunity to bring about regional integration. According to the World Bank, a trade and transport corridor is a coordinated bundle of transport and logistics infrastructure and services that facilitates trade and transport flows between major centers of economic activity. When trade development is enhanced, it results in increased investments which in turn results in development of physical infrastructure and leading to transport facilitation and regional integration. This is the flow as seen from the noted examples of ASEAN, NAFTA and EU.

Creation of an Economic Corridor

Srivastava (2011) discusses the stages of development of economic corridors and argues that there are five stages in the transformation of a transport corridor to an economic corridor. At the very basic

level there is the physical connectivity – a highway that connects two or more hubs, which is the starting point for a corridor. Such a transport corridor does not only include the roads that connect two nodes, it also comprises the areas of growth and activity around it which uses the transport facility. This causes the trade corridor to move to its second phase of growth which is the Transport and Trade Facilitation Corridor. The next stage is when the supply chain networks are clearly established with hinterland linkages, resulting in the establishment of a Logistics Corridor which is the third stage. The next stage is the Urban Development Corridor which finally results in the formation of a holistic Economic Corridor.

According to a World Bank report (C. Kunaka and R. Carruthers, 2014), a corridor has three main categories of intertwined dimensions. First, a corridor needs infrastructure; secondly, services; and finally, institutions for coordinating corridor activities. The report states that the most common configuration of a transport corridor has an international gateway at one end and a large metropolitan area or production cluster at the other. An international gateway is a port or an airport which opens the door for the trade to flow. Additional gateways like regional airports, inland water way terminals, coastal shipping hubs, etc. may also be located as a part of the gateway, within the corridor. The report proposes that maritime transport be explicitly modelled in corridor projects. To put it simply, corridor is all about facilitating supply chains. The objective of a corridor is basically to connect the various locations seamlessly using multi-modal transport services to link manufacturing and distribution hubs.

The challenges toward establishing a corridor can be categorized into two broad areas: (i) the hardware issues comprising the creation of physical infrastructure, its management and maintenance to ensure a seamless supply chain network and (ii) the software issues such as policy measures, customs rules, time, resources, governance, dispute resolution and safety mechanisms, etc. that are needed to ensure the working of the hardware mentioned above. Both these issues need the support and buy-in from all the stakeholders from the government agencies to the trade members.

However, if these challenges are surmounted with all the stakeholders working together, the accrued benefits outweigh the efforts. Establishing interconnectivity in transport networks and technologies, through corridors, is essential for regional economic

and trade integration. It has been demonstrated that better overall logistics chain efficiency is usually strongly linked with trade expansion, export diversification, attractiveness for investment in productive capacities, and economic growth and poverty reduction, thereby resulting in regional integration.

Under these circumstances, the nations in the BIMSTEC have good road and rail network while India, Bangladesh, Sri Lanka and Thailand have multiple ports as well. All the BIMSTEC nations have various trade facilitation schemes and arrangements, as they understand the importance of supporting the industry, especially in dismal global economic scenario. Therefore to catalyze the trade within the region to the next level, we would need to work toward the third stage in the establishment of an economic corridor which is the creation of a logistics corridor. Given the challenges in effectively progressing with the BIMSTEC framework at the policy level, suitable momentum could be created if the ports in the region work to create a maritime logistics corridor, by using the resources already available and by striving to make the logistics infrastructure efficient.

World Bank's 'Doing Business' report (2016) highlights the difficulties (Table-1) faced by trading partners while engaging with the countries in the Bay of Bengal region:

Table 1:

Economy	Bangladesh	Bhutan	India	Myanmar	Nepal	Sri Lanka	Thailand
Ease of Doing Business Rank	174	71	130	167	99	107	49
Trading Across Borders Rank	172	21	133	140	60	90	56
Documentary Compliance Export (USD)	225	50	101.7	140	85	58	97
Time to Export - Documentary (Hours)	147	2	41.5	144	19	76	11
Documentary Compliance Import (USD)	370	50	144.7	115	80	283	43
Time to Import - Documentary (Hours)	144	2	63.3	48	48	58	4

This data shows that the nations in the BIMSTEC region have a long way to go before they could climb significantly higher in the ease of doing business ranks. However, there is ample scope for learning from one another within the framework of a maritime logistics corridor. For instance, Bhutan which requires just two hours to clear export and import documentation could share its best practices with India and Bangladesh. From 1 June 2016, the Chennai Port introduced RFID tagging of containers, which ensures that the vehicles moving into the port need not carry sheaves of papers or be manually checked at various security points. The National Association of Container Freight Stations in Chennai has implemented software to track and auction unclaimed cargo so as to free the occupied spaces. These are measures that could be implemented, as part of a maritime logistics corridor, with greater efficiency across the region, thereby contributing to the ease of doing business.

One of the advantages of focusing on this maritime logistics corridor is that all Bay of Bengal countries can allocate limited resources on making this maritime corridor efficient while the returns would be substantial trade improvements, which can be replicated in other routes and regions.

Why Ports

As we have seen, trade is one of the major catalysts for regional integration. About 80 percent of international trade in terms of volume is currently carried by sea. Ports are the nodes through which both regional and international trade passes through. The efficiency of ports can greatly influence the level of trade and hence the development of their hinterlands. Inefficient ports will impose high costs to trade and hence reduce the volume of exports and imports for their hinterlands, thereby hindering all collaboration.

In India, more than 85 percent of the trade by sea is through the ports of Mumbai, Chennai, Kolkata, Cochin and Vishakhapatnam. Out of these cities, Chennai, Mumbai and Kolkata have been the major metropolitan centers and have been administrative hubs for centuries. Railway, roads and other infrastructure have grown out of these ports, and major economic activities in the hinterland are dependent on these ports.

Nations that are leaders in global trade always focus on investments and developments in trade infrastructure. Those

countries that have efficient port management systems and those that have opened up the logistics services market to foreign investors have all been leaders in global trade. A typical example of this model is China, where manufacturing growth was spurred by foreign direct investment and large-scale investments into the transport infrastructure. The leading sector in Singapore is the seaport while ports have helped Japan to build export processing zones that have turned Japan into an exporter of goods. Therefore, ports are economic catalysts with significant multiplier effects on the domestic economy.

When there is adequate focus on port development, it results in various benefits for the entire region. Locally, there is the creation of new employment, added tax revenues for the government, improvement of the quality of life and commercial development, among other things. At the national level, there is contribution to the economy, taxation revenue, lower transportation costs, development of other allied industrial sectors such as logistics, agriculture, retail, and so on. More importantly, there is the feel-good factor, where the entire society is impacted. Therefore, ports always have a strategic influence on the pace and depth of regional integration.

The Bay of Bengal Maritime Corridor

The constituents

The core approach for this would for the Chairmen of the various ports in the Bay of Bengal region to come together to form the Bay of Bengal Ports Group, which would also have key actors from the various shipping associations and senior members from the export-import trade. The possible members could include:

- Chairmen or Deputy Chairmen of various ports
- CEOs of private container terminals
- Presidents of associations such as the Clearing & Forwarding Agents Association, Stevedoring Agents Association, Steamer Agents Association, Chartered Shipbrokers Association, etc.
- Chancellors/Vice-Chancellors of Universities that offer maritime education
- Senior industrialists from the export and import trade

- Heads of think-tanks, research organizations and consulting firms
- Presidents of leading chambers of commerce such as the ASSOCHAM
- Government nominees where possible
- Other key actors in the public and private sector

De Vries and Priemus (2003) advocate for the ownership of such a corridor to be a hierarchy, which can be defined as a "self-organized steering of multiple agencies, institutions, and systems that are operationally autonomous from one another yet structurally coupled as a result of their mutual interdependence." In other words, the ideal ownership would be where each of the constituent has the same level of willingness, commitment, power and influence over initiatives and interventions.

The Nature and Scope of Work

It is proposed that the members of the Bay of Bengal Ports Group meet at least twice a year to identify specific challenges, work out its unique solutions, share best practices and identify areas for working together. They would set the agenda for the year ahead, with clear action points and timelines. This high profile group would also finalize the projects to be worked together while tracking the progress of the various initiatives. This forum would also provide the platform for sharing real time accurate data among the constituents in addition to creating a dynamic networking environment.

The Bay of Bengal Ports Group would work towards set objectives proposed around six different strands

i. Sharing of Best Practices

While every port and its hinterland are unique, there are specific practices that could be successfully applied from one port to another to increase the efficiencies of the gateway. As every half-yearly meeting would be scheduled in various cities, there would be ample scope for site visits and learn firsthand what makes that specific port unique. It is envisaged that the best practices of every port be compiled together and released as a manual for increased efficiency.

ii. Developing Maritime Clusters

As ports are primarily gateways, they need to be supported by a strong industrial backbone. While ports like Chennai port is used extensively by the automobile cluster that is located in close

proximity, the ports in the Bay of Bengal region that do not have an efficient cluster to service, need to be supported to create or organize the industries into a cluster. The presence of industries that are organized as a cluster helps in efficient supply chain management and in maximising profits. If industries are already organized as clusters as in the case of Chennai (Automotive Cluster, Electronics Cluster, Leather Cluster), then the existing clusters need to be seamlessly integrated.

iii. Promoting Coastal Shipping and Inland Waterways

Despite a long coastline and large stretches of navigable inland waterways, coastal shipping is yet to take off in a big way in the region. The modal mix for transport within India is skewed towards railways and roads, which account for around 87 percent of the total freight. India's coastal shipping industry, though under-performing to its potential, is beginning to turn around as the government has taken the much-needed measures to incentivize shippers for using coastal shipping-with the aim of shifting cargo from road and rail. This high potential focus area would offer excellent rewards for the entire region, if promoted holistically.

iv. Multi-modal Transport and Integrated Logistics

At the recently concluded Maritime India Summit (MIS) in Mumbai, the shipping ministry had strategized aggressively for developing the country's port sector along with firm investment commitments worth $12 billion and another $60 billion in the pipeline for projects in the sector. However for the port-led industrial growth to be a reality in India, the approach necessarily has to be holistic and needs to be taken up in close coordination with the National Highways Authority of India (NHAI) and the Ministry of Railways and the other implementation partners. This is the same across the Bay of Bengal region as the various stakeholders need to begin to work together to create an integrated logistics experience.

v. Modernization and Technology Up-gradation

Keeping pace with the developments in technology and innovation is always a challenge. Despite the presence of three major ports and about 22 non-major ports in the state of Tamil Nadu, there is under-utilization of capacities and gaps because of obsolete infrastructure and for not embracing the technological changes. With advanced

robotics, automation of vehicles, the internet and other things, big data analytics, 3D printing, nano-technology and other disruptive technology frameworks, we are now in an era where being nimble and innovative are essential ingredients. This group could also decide to promote innovation projects in the blue economy in areas such as producing flavour ingredients and food packaging from seaweed, fish farms at sea, tidal energy, deep-sea mining, etc.

vi. Cooperation in Skill Development

There is universal policy consensus on the need to build workforce skills to support economic development and cope with evolving labor market needs, especially in the maritime industry, in a period of profound and sustained restructuring. In this context it is essential to work together to equip students with the skills and attributes that individuals need in the workplace and that employers require, and to ensure that people have the opportunities to maintain or renew those skills and attributes throughout their working lives.

As part of this group, a web portal could be created to share real time data and statistics, including port statistics and other performance indicators such as container statistics, cargo statistics, ship statistics, updating of information, tariff structures, and so on. Thus, the overall aim and vision of this Bay of Bengal Ports Group would be to develop efficient and sustainable maritime transport solutions connecting the industry from the nations in the Bay of Bengal region to its intended markets, with utmost efficiency.

The Next Course of Action

ASSOCHAM, which is one of the founding members of the BIMSTEC secretariat, is planning on inviting and hosting the constituents of the Bay of Bengal Ports Group in Chennai. This group would come together for brainstorming and deliberate on the focus areas identified and the outcomes would be presented in an international conference, for the benefit of the members of the shipping and logistics industry. This initiative would have the full participation of the Ministry of Shipping, Government of India. A coffee table book is also being planned to be released on this occasion, by a leading media house, to showcase the maritime potential of the Bay of Bengal region.

This beginning is expected to initiate a movement by the ports in the region to work together, bring more logistics partners and ultimately, lead to the creation of a maritime logistics corridor.

The Expected Returns

The immediate benefit of this proposed grouping would be the increased efficiencies in the ports across the region. Benchmarking the best practices in port management and administration, would help boost the trade and aid in the ease of doing business in the countries of the Bay of Bengal region. Another facet of this would be the harnessing of technology that would be possible with such a grouping. For example, a leading big data analytics firm in Chennai, is leading the analysis function of self-driven vehicles of a major European automotive manufacturer. So the Chittagong Port can most assuredly learn and benefit from this technology, if it chooses to be a part of this grouping. Therefore, the minimum deliverable of this initiative would be the increased efficiencies and harnessing of technology sharing and advancements, across the ports in the region.

A potential and an essential area for working together would be to build skills. Maritime education and skill-building institutions are in short supply. As the industry grows, there needs to be skilled manpower to help the sector expand. Therefore, when maritime education providers from across the region come together the scope for working together is phenomenal through student and faculty exchange programs, twinning programs, joint research, semester abroad, etc.

As the members of this group would be influential leaders, representing all the sectors in the logistics industry, it is expected that such a motivated coalition would be able to build consensus and nudge their respective governments to action in areas like coastal shipping and inland waterways. While overnight changes cannot be expected, incremental developments are possible as a result of consistent interventions. This would be the case with developing maritime clusters and port modernization as well. While some initiatives are possible with the support of the industry members, most of the other investments and support require the government's nod.

There is also the possibility of the group to address the issue of increasing the services by the shipping lines that call on them. The main factor that influences the cost, frequency and quality of shipping service between two ports is the level of demand. The nature of the operations could be transhipping, feeder or pendulum services, but as long as the demand for the services is there, there could always be creative solutions to overcome the challenges. Handling capacity and port fees, location of major shipping routes, presence of a deep harbour and entrance channel to accommodate large vessels, high productivity in the transhipment port etc. are some of the considerations that influence where shipping lines decide to tranship ocean-bound cargos. Feeder services are considered to have higher unit cost and longer transit times, but yet are much needed. Pendulum services between Asia and Europe could have on average 8–10 ships and involve 8–12 port calls. A pendulum service is flexible in terms of the selection of port calls, particularly where the ports have nearby and complementary ports. When the stakeholders of all the ports in a region come together, there is clarity in purpose in choosing the winning strategy for all the ports and its constituents. For instance, the ports in Florida, work together to make the pendulum services work by sharing a marketing budget and making the calls successful for the shipping line and the industry. Whatever be the type of service, collective decision-making in this regard will surely help the industry at large. The ultimate goal would be for the Maritime Logistics Corridor to grow into an Urban Development Corridor and thereby into an Economic Corridor.

One reason why maritime corridor has not got its due importance is that market forces could easily supersede the policy or investment options and end up crippling the whole supply chain. So an important consideration is, therefore, how ports and its constituents adapt to changes in the maritime industry. For example, the widening of the Panama Canal, the increase in vessel sizes, the fluctuation in fuel prices, the threat of piracy, the amalgamation of container shipping lines etc. are some of the factors that could drastically influence the operation of a maritime corridor.

Conclusion

Therefore, a corridor is not just a physical concept; it also represents the strategic decisions and choices developed and made by firms, municipalities, and governments to attract increased flows of commodities to particular regions generated by deepening economic integration (Van Pelt, 2003).

The future of the Cargo and Logistics industry in this region remains bright. Backed by resilient and democratic economies, increased focus on the sector and growing demand, the logistics industry can expect to grow at CAGR of 16 percent in the coming years. Also, the emergence of e-commerce opens up new avenues of opportunities. So this is the time to join together to collaborate and co-create a future-proof, seamless and resilient logistics industry in this region. Gary Hamel famously stated, "The single biggest reason companies fail is that they overinvest in what is, as opposed to what might be." Is the maritime industry in the Bay of Bengal region prepared for the incoming changes? Or will the disruptive innovations of the future wipe away entrenched competitors in the shipping industry like the case of Blockbuster, Eastman Polaroid or Yahoo?

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India

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Bay-to-River: Integrating inland waterways and maritime connectivity for regional growth

Prithviraj Nath, ***India***

Abstract

There have been some positive initiatives in recent times in respect to the development of inland waterways and maritime connectivity in the Bay of Bengal region of Eastern South Asia, particularly between India and Bangladesh. This includes the recent thrust on the development of National Waterways by the Indian government to enhance internal connectivity through multi-modal transport, Bangladesh-India coastal shipping agreement which has resulted in direct shipping operations between the countries and the re-establishment of railway link between India and Sri Lanka. Coupled with the implementation of a motor vehicles agreement, which has been agreed upon by Bangladesh, Bhutan, India and Nepal, these developments will not only help the countries of the Bay of Bengal region to enhance trade by bringing down connectivity costs but will also help landlocked countries such as Bhutan and Nepal as well as India's landlocked Northeast region, to explore new development opportunities. These landlocked countries/regions will be primarily benefited via access to Bangladesh sea-ports, which will be in addition to their access to Indian ports. As a result of these initiatives and their inter-connectedness, overall transport connectivity and trade prospects in the Bay of Bengal region are expected to grow manifold. These initiatives coupled with the recent coming together of Bangladesh-Bhutan-India-Nepal (BBIN) as a sub-regional bloc toward greater connectivity and integration is expected to be a 'game changer' initiative for the Bay of Bengal region. This paper aims to discuss the objectives and relevance of recent initiatives on multi-modal connectivity in the Bay of Bengal region and create a discourse on possible gains, hurdles to realisation of such gains, and the possible way out.

Introduction and Background

Countries in the Bay of Bengal region have shared historical, cultural and commercial ties for centuries. Trade, connectivity and cultural exchanges used to be quite thriving during historical days, including the much-discussed silk route that spanned both land and maritime routes across this region and beyond. While integration dwindled in later periods with South Asia becoming one of the least connected regions in the world, of late there have been many interesting and encouraging developments in the region in terms of connectivity and trade. Recent and emerging geopolitical changes in the Bay of Bengal region are increasingly establishing its huge economic potential as well as political importance for sustained economic and peace dividends in this region and beyond. The region with a population more than 20 percent of the world population and a combined GDP of around USD 2.84 trillion is increasingly emerging as a crucial region for global economic and political and strategic interplays.

India's importance in the Bay of Bengal region is immense both in terms of economic and strategic angles. India engages with this region mainly through two sub-regional groupings, viz., the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Bangladesh, China, India and Myanmar (BCIM) that were formed in 1997 and 1999 respectively. It is also a part South Asia Sub-regional Economic Cooperation (SASEC). A more recent addition to these groups is the emerging notion of Bangladesh-Bhutan-India-Nepal (BBIN) sub-group that is looking to consolidate the integration aspirations of these four countries in the wake of a slow-moving regional group, South Asian Association for Regional Cooperation (SAARC). These groupings have assumed particular importance given the emergence of mega-regional economic cooperation agreements. Other than these three, India also has an ongoing dialogue with Myanmar and Thailand (India-Myanmar-Thailand or IMT) on integration and connectivity, in addition to initiatives like Mekong-Ganga which aims to integrate India with countries in the Mekong Basin, viz., Myanmar, Thailand, Cambodia, Laos and Vietnam. India has been looking to restore and strengthen its historical and traditional ties with its immediate and extended neighbors through these to enhance trade, investment and people-to-people connectivity.

India's serious pushing on these regional and sub-regional groupings is palpable in its positive political will toward regional and sub-

regional integration in recent times. This is also complimented by its push for infrastructure development both within and across borders and, though to a lesser extent, efforts toward domestic reforms. It is indeed imperative that connectivity is looked at from a context where there is dovetailing between national and regional connectivity. For regional connectivity, border areas and gateways need hard and soft infrastructure. Hard aspects cover physical infrastructure, including improvement of roads and trade and transit facilities. The soft aspects of connectivity include measures that facilitate smooth movement of goods and people such as free trade agreements (FTAs) and transport agreements. In terms of the soft connectivity, there needs to be greater institutional connectivity with respect to law enforcement; accessible inter-country borders and inter-state boundaries; acceptable permits for trade and transit, acceptance of driving licenses and identity proofs on both sides of the borders and transparent and comprehensible customs rules.

In the wake of the fast-changing and evolving geopolitics of the region and its neighboring regions, including the mega regional trade agreements, One Belt One Road initiative from China integrating with the notion of Overland Silk Route and Maritime Silk Route, India has been trying to strengthen its neighborhood policy as well as focus on integration and infrastructure. The emergence of BBIN, negotiations on IMT, India's shift from "Look East' to 'Act East', substantial improvements in India-Bangladesh bilateral ties, etc. are positive developments that have immense potential to create economic benefits in the Bay of Bengal region.

Inland waterways and Maritime Connectivity in the Bay of Bengal Region-Recent and Ongoing Developments

India has an extensive network of inland waterways in the form of rivers, canals, backwaters and creeks. India has nearly 14,500 km of navigable inland waterways which includes 5,200 km of the river and 4,000 km of canals that can be used by mechanized crafts. Bangladesh has roughly 24,000 km of inland waterways, out of which approximately 5,923 km are navigable during the monsoon (wet) period, and about 3,865 km in the dry periods (October to May). While 35 percent of all transport (cargos and people) in Bangladesh is done using its inland waterways, India's use of its inland waterways hovers around a meager 6-7 percent. This is much lower when compared to the 47 percent in China, 40

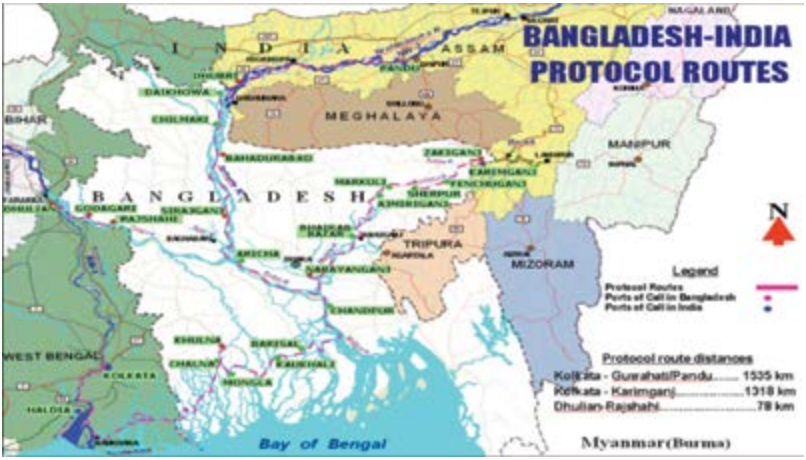
percent in Europe and around 44 percent in both Japan and Korea. While such low usage is due to various factors, including seasonal variations of water flow, lack of fairways, lack of infrastructure and investment etc., there is much potential in terms of using these networks in tandem with the maritime routes. As per estimates from the Indian Ministry of Shipping, it costs only 30 paise to move cargos through waterways in comparison to Rs 1.5 through roads and 1 Rupee through rails. As per the estimates of the Ministry of Road Transport and Highways, the Government of India, logistics costs in India stands at around 18 percent in comparison to China's 8 percent . Logistics cost in the United States is around 8.5 percent. Facilitating transportation through waterways can bring it down to around 12 percent.

In recent times, there have been a lot of positive developments in terms of inland waterways and maritime connectivity in the region, particularly in Eastern South Asia. India has been taking many positive and proactive steps toward strengthening its inland waterways connectivity. The Indian Parliament recently approved a bill to convert 106 rivers across the country into National Waterways, in addition to the five National Waterways that now exist. This would include conversion of 15 rivers in West Bengal, 14 each in Assam and Maharashtra, 11 in Karnataka, 12 in Uttar Pradesh, nine in Tamil Nadu, six each in Bihar and Goa and five each in Gujarat, Meghalaya, Odisha and Telangana. The existing National Waterways include Allahabad-Haldia on Ganga (1,620 km), Brahmaputra's Dhubri-Sadiya (891 km), West Coast Canal Kottapuram-Kollam (205 km), Kakinada-Puducherry canals (1,078 km) and East Coast Canal integrated with Brahmani river and Mahanadi delta rivers (588 km). The Indian government is spending around INR 4,000 crore to develop just the National Waterway 1, viz., Ganges. This includes developing a multi-modal hub in Sahibganj in Bihar. This is one out of the three being developed now and will help in transporting cargos from Indian states of Maharashtra, Madhyapradesh and Uttar Pradesh to the eastern states and further to Bangladesh. This is particularly relevant in light of the heavy congestion in the major India-Bangladesh trade route at Petrapole-Benapole. Presently roughly 70 percent of India's trade with Bangladesh happens through this port which suffers from many non-trade barriers, road infrastructure being one of the most important ones. Many of India's inland waterways projects are aimed at the North Eastern Region (NER) to help this region become a bridge to further east, an essential pillar

of India's "Act East" policy. In total there are 16 waterway projects being planned for the NER, out of which a significant portion of works under three projects in Assam, Mizoram and Manipur has already been completed. Construction of 17-meter-long floating terminals at 20 places on the Brahmaputra river has been completed and similar floating terminal pontoons are coming up at 15 places. These projects are expected to greatly help in connecting India's Northeast with Bangladesh and also Myanmar, and through them, further east.

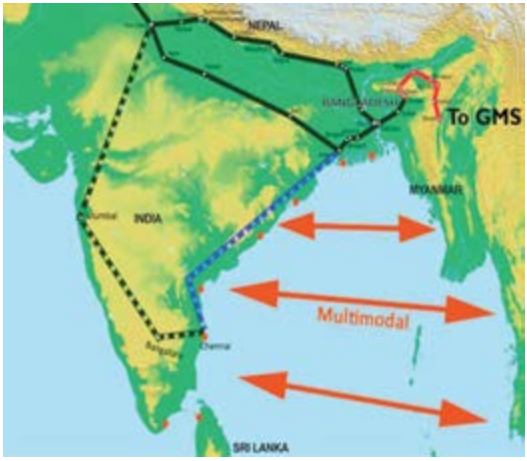
There have been positive developments within Bangladesh as well. The Bangladesh Regional Inland Water Transport Project has been initiated for comprehensive development of Inland Water Transport (IWT) sector and related infrastructure between Dhaka-Chittagong and Dhaka-Ashuganj river corridors. The project will improve the navigability of 900 km of inland waterways along these corridors and connecting routes, and help reduce travel time and cost for cargo and passenger transport and boost national and regional trade. It includes dredging and maintenance of the river corridors and ferry routes in the Project area; construction and maintenance of six vessel storm shelters; construction and upgrading of six inland river ports (terminals) and rehabilitation/upgrading of 14 landing stations (launch ghats) along these river corridors. This will include building one new general cargo terminal at Pangaon and improving the existing cargo terminal at Ashuganj. The project will also build new and rehabilitate existing passenger terminals at Sadarghat, Narayanganj, Chandpur and Barisal. The project is part of a Regional Connectivity and Integration Program supported by a World Bank loan of USD 350 million to help Bangladesh improve the navigability and year-round safe transport for passengers and cargo along Bangladesh's busiest waterways. The project will also help build the capacity of the Bangladesh Inland Water Transport Authority and achieve long-term operational and financial sustainability.

India and Bangladesh recently amended and renewed the Bilateral Protocol on Inland Water Transit and Trade (PIWTT) for operation of inland vessels on the river protocol routes between river ports of Haldia, Kolkata, Pandu, Karimganj and Silghat in India and Narayanganj, Khulna, Mongla, Sirajganj and Ashuganj in Bangladesh. The National Waterways 2 of India is part of these protocol routes as shown in the figures below (source: Bangladesh Inland Water Transport Authority). According to the amendment,



the protocol will have the provision of automatic renewal every five years. Earlier, this protocol used to be renewed for shorter periods of two-three years, causing lack of private interest and investment, leading to sub-optimal use of the routes. With the new revision in place, private interest in the routes is expected to pick up. This protocol is of particular importance to the Northeastern states of India, since movement of essential items like food grains, cement, etc. to this region can be done at much lower costs using the protocol routes rather than the land route which passes through the "chicken-neck" in Siliguri, West Bengal. If transported through Bangladesh, the effective distance is much less (roughly 500 Km) compared to road routes through Indian territory (roughly 1,500 Km). While presently a major part of the cargo comprise of fly ash that is transported from Kolkata to various ports of Bangladesh, the Food Corporation of India has been transporting food grains to Tripura, India, using these routes at much lower costs and time. Pilot movement of fertilizers on the National Waterway-1 by Indian Farmers Fertilizer Cooperative Limited and TATA Chemicals have also proved to be successful. India also used these routes to move heavy machinery for construction of Palatana Power Plant in Tripura that resulted in reductions to the tune of 40 percent of the transport costs. The most recent case was when essential items like food grains and fuel were transported to Tripura using waterways in Bangladesh through Ashuganj port when the Assam-Tripura road was blocked for several days during June-July 2016 due to damage from heavy rains and waterlogging. The natural and geographical advantage of the India-Bangladesh inland waterways

presents an opportunity that needs to be explored further to generate gains for people of both the countries as well as the region. Further, the waterways connectivity coupled with coastal/maritime connectivity can change how transport and transit happens in this part of the world.



India has also been looking to ramp up its maritime connectivity. It launched the Sagarmala project in July 2015 which is an amalgamation of 150 projects categorised into port modernisation, connectivity, port-led industrialisation and coastal community development, with the government planning to invest Rs 12 lakh crore under various programmes. This will include eight new ports, including one each? at Sagar in West Bengal, Paradip Outer Harbour in Odisha, Dugarajapatnam in Andhra Pradesh, Enayam in Tamil Nadu and Vadhavan in Maharashtra and 14 coastal economic zones in Gujarat, Maharashtra, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha and West Bengal. According to estimates by the Indian Ministry of Shipping, the project is expected to boost merchandise exports by $110 million and increase coastal shipping volumes to about 330-420 million tonnes per annum, five times the present volume, and also will lead to annual logistics cost savings to the tune of INR 35,000 crore.

The Ministry of Shipping of India has also prepared a vision for coastal shipping, tourism and regional development to increase the share of coastal/IWT mode from 6-7 percent to 10 percent by 2019-20. The key elements of the initiative include development of coastal shipping as an end-to-end supply chain, integration of IWT and coastal route, development of regional centers to generate cargo for coastal traffic, development of domestic cruise industry and promotion of lighthouse tourism. India is also developing the East Coast Economic Corridor (ECEC), in partnership with ADB

to facilitate the movement of the bulk of India's major natural resources like coal and iron ore. The present Road Transport and Highways and Shipping Minister of India have recently shared that a host of projects are being taken up to develop multi-modal connectivity, including road-rail, inland waterways and ports with an investment of around INR 25 lakh crore.

Multi-Modal and other connectivity initiatives in the BBIN and BIMSTEC regions

The emergence of Bangladesh-Bhutan-India-Nepal (BBIN) region was mainly propelled by a vision of achieving incremental progress in terms of connectivity in South Asia, given the slow movement of SAARC. It represents efforts to link the northeastern quadrant of South Asia through transport, energy grids, services and seamless commerce, all of which would lead toward economic growth and social justice. The recent tactical shift of India's 'Look East' policy to 'Act East' aptly indicates its seriousness in terms of developing its northeastern region and using it as a bridge to Myanmar and further to the South East Asian nations. Guided by this connectivity mandate, several projects have been undertaken by India in partnership with other countries and multilateral agencies to enhance road-rail, maritime and inland waterways connectivity.

One of the most important developments in terms of maritime connectivity in the region is the recent settlement of maritime boundaries between India and Bangladesh. The settlement which ended a four decade-long dispute was welcomed by both the nations and has led to a lot of goodwill and bettering of political relationship between the nations. On its heels came the India Bangladesh Coastal Shipping Agreement which was signed in June 2015 during the Indian Prime Minister's visit to Dhaka. Later on, the countries signed the Standard Operating Procedure (SOP) in November 2015 and the first ship set sail from Chittagong port of

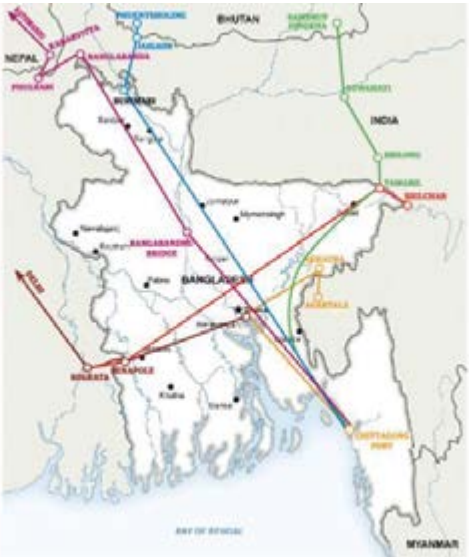
Bangladesh for Krishnapatnam port of India in March 2016. Under this SOP India and Bangladesh shall render the same treatment to vessels of the other country as it would to its own national vessels used in international sea transportation. The new coastal routes (Figure below: Source rmgbd.net) are expected to generate substantial savings in logistics cost for exim cargo and will enhance bilateral trade.

Before this agreement, maritime trade between India and Bangladesh used to happen through Colombo or Singapore, which meant substantially high transit time and costs. While importers earlier needed to pay anything between USD 1,700 and USD 2,400 in freight charge per container of 4,000-5,000 tonnes capacity with transit time of around 30 to 40 days, under the present agreement and SOP, the freight charges will be around USD 400 for the same amount of goods, with a transit time of around 8-10 days. As per the SOP, 14 ports (seven in each country) have been named as ports of call. This includes Chittagong, Narayanganj, Khulna, Mongla, Sirajganj, Ashuganj and Pangaon in Bangladesh and Kolkata, Haldia, Paradip, Kakinada, Visakhapatnam, Krishnapatnam and Chennai in India.

Other important projects include the Kaladan Multimodal Transit Transport project which includes the construction of the deep-sea port at Sittwe, Myanmar, the Trans Asian Highway and Railway projects, SAARC's agreement on movement of motor vehicles and rail services, initiatives by BIMSTEC and BCIM for connectivity, Bangladesh-India Transit and Transhipment Agreement, and the ASEAN-India Transit Transport Agreement. In the recently-

concluded South Asia Sub-regional Economic Cooperation (SASEC) 2025 [2015??] workshop, India shared that it is planning to develop regional connectivity projects worth almost USD 5 billion in SASEC. India has also initiated Project Mausam, which is a multi-disciplinary project aiming to rekindle the long-lost ties across nations of the Indian Ocean 'world' and forge new avenues of cooperation and exchange among them.

The Kaladan Multi-modal Transit Transport Project is a project being undertaken by India to connect the Sittwe seaport in Myanmar with northeast India via multi-modal connectivity. The project has several sections/legs, viz., 539 km shipping route from seaport of Kolkata in India to Sittwe seaport in Myanmar via Bay of Bengal, 158 km inland waterways route from Sittwe seaport to Paletwa jetty via Kaladan river in Myanmar, 110 km road route from Paletwa jetty to Indo-Myanmar border in Myanmar, 100 km route from Indo-Myanmar border to Lawngtlai in Mizoram in India by road on National Highway 54 (India) (NH-54). This will be further connected to Dabaka in Assam via 850 km long NH-54 which in turn is part of the larger East-West Corridor connecting northeast India with the rest of India. The project is expected to be completed by the end of 2016.



Another critical and possible game changing development has been the signing of the BBIN Motor Vehicle Agreement (MVA). The main objective of the agreement is to provide seamless people-to-people contact and enhance economic interaction by facilitating cross-border movement of people and goods in the BBIN region. This envisages cutting down the wait time, transhipment and other related costs for doing trade via identified land routes (Source: Dhaka Tribune) in the BBIN region substantially. The BBIN MVA was drafted as an immediate follow up to the failed

Connectivity Projects in the Bay of Bengal Region (Graphic Source: "Reconnecting the North East", Livemint. 15 June, 2015)

negotiations for a SAARC MVA. Following the drafting of the framework agreement, the framework agreement was signed by the four countries in June 2015 and by July 2016, India, Nepal and Bangladesh have already ratified the agreement with Bhutan also ratifying the same at the lower house of its parliament. It is expected to be ratified by the upper house of Bhutan parliament soon and the draft protocols are now being finalized through negotiations between the four countries. Trial run of cargo vehicles was already done by DHL Global on Kolkata-Agartala route via Dhaka and further trial runs are planned. The BBIN MVA has the option of adding new members in future. With high political will fuelling it, the BBIN MVA seems ready to roll and can well be the game changer for this region, bringing down trade and transit costs substantially for the region. India has put its weight behind this agreement for several reasons, among them are strengthening its trade relations with immediate neighbours, utilizing better sub-regional connectivity to reach out further east to the ASEAN countries and to develop its northeastern region through cross-border cooperation. The BBIN MVA will help the countries ease cross-border movement of goods, vehicles and people, thereby helping expand people-to-people contact, trade and economic exchanges. It will also reduce the transport cost of the goods and foster multi-modal transport and transit which will further enhance the strength of the economic relations among the four countries. Considering that India's northeastern region is still marred by the lack of infrastructure and unfriendly terrains, free and open

access to other countries of the region, particularly Bangladesh's Chittagong and Mongla ports, would help India to transport goods from mainland India to the northeastern region at a relatively low cost. The agreement is also expected to majorly benefit the landlocked counties of Nepal and Bhutan by addressing their long-standing grievances concerning trade and transit issues with India.

Some of the initiatives that have been undertaken to improve connectivity between India and Nepal include the Raxaul-Birgunj Broad Gauge Rail Link Project which has helped ease trade between India and Nepal, as well Nepal's trade with third countries using Indian transit. Further cross-border rail links are proposed at five other locations along the Indo-Nepal border, viz., Panitanki-Kakarbhitta, Jogbani-Biratnagar, Jaynagar-Bardibas, Nautanwa-Bhairahwa and Nepalgunj Road-Nepalgunj. Similarly on the Bangladesh side, nearly seven decades after Partition, trains are set to run from Kolkata to Agartala through Bangladesh. India is building a 15 km railway line connecting Agartala with Akhaura in Bangladesh. The line of which 5 km will be in India, the rest in Bangladesh is expected to be completed by 2017, and cut the distance between Agartala and Kolkata to 499 km from the existing 1,590 km route via Badarpur, Lumding, Guwahati and New Jalpaiguri railheads. These rail connectivity initiatives, once completed, are expected to substantially reduce congestion on roadways and also enhance trade linkages in the region.

On the Myanmar side, the Myawaddy-Thinggan, Nyenaung-Kawkareik section of the Asian highway linking India, Myanmar and Thailand with the 25.6 km-long section became operational in August, 2015. The section, also part of the East-West economic corridor of the Greater Mekong Sub-region, will not only enhance trade between Myanmar and Thailand, but will also contribute to better people-to-people contact in the region. The trial run of the Imphal-Mandalay bus service took place in December 2016. With further negotiations in place, this service might be a reality soon. The Indian government has placed a lot of priority on the signing of the IMT Motor Vehicle Agreement. With the BBIN MVA in place, the IMT MVA coming in and the Kaladan Multi-modal Transit Transport Project almost completed, the region has a huge potential to grow and prosper given the enabling regulatory and political space.

Challenges and Possible Solutions

While the prospects for the Bay of Bengal region look quite promising, there are certain challenges that may well hold it back from exploring the fruits of integration.

Lack of Institutional and Regulatory Connectivity and Harmonization

Many of the challenges facing this region are to do with soft issues like institutional, regulatory and digital connectivity. Also, capacity gaps compound the issue with inadequate infrastructure. Though there are many projects that are on to develop infrastructures, including ports, roads, waterways, etc. the enabling software is absent in many cases. Regulatory harmonization is a far cry in this region, particularly in South Asia though South East Asia has gone much ahead on this count. Without regulatory (traffic rules, vehicle norms, safety norms, etc.) harmonization and/or mutual recognition of standards and conformity assessment procedures, non-tariff barriers become a major hindrance when trading between countries. South Asia Regional Standards Organization (SARSO) is a welcome development in this direction. SARSO has so far developed common standards on some products of common interest in South Asia. However, its role toward aligning Conformity Assessment Procedures between countries in the region and developing Mutual Recognition Arrangements (MRA) has been limited. The visa processes are also not harmonized and streamlined for a major part of the region impeding people-to-people connectivity and communication.

It will be important to harmonize relevant regulations like traffic, vehicle, pollution norms, etc. Acceding to international conventions like Convention on Road Traffic, 1968, Convention on Road Signals and Signs, 1968, Customs Convention on the International Transport of Goods Under Cover of TIR Carnets (TIR Convention), etc. will facilitate harmonization. Out of the seven conventions promoted by the United Nations, India has signed only two – the Convention on Road Traffic and the Convention on Road Signs and Signals – and Bangladesh has signed only the Convention on Road Traffic. Also crucial will be to align domestic standards with international norms and also build capacity of institutions to be able to face global competition. The ambit of SRASO needs to be enhanced with particular thrust on Mutual Recognition Arrangements (MRAs). Also, stakeholders' awareness on standards, regulations and institutions need to be enhanced.

Socio-Political and Security Issues

Some of the countries in the region experience volatile political and social climates. This includes issues with democratic and political processes, insurgency situations within and across borders and infiltration tussles between nations. Trust and relationship between countries being a vital ingredient for integration and cooperation dialogues, such environment dampen the spirit and pace of negotiations. At times legitimate domestic security concerns impair the cooperation dialogues. Also, larger cooperation gains are not always in tandem with how gains are perceived at the local level, leading to low political buy-in at the local levels. This is in many ways due to the federal structures of governments in the region, wherein state/province interests at times trump larger regional or national gains (e.g. Teesta water sharing issue).

It is important to use diplomatic channels and forums to peacefully negotiate contentious issues with adequate technical capacity-building on how to undertake such trade and transit-related negotiations. Commercial diplomacy is a discipline that needs to be more actively engaged with and imbibed by political and diplomatic negotiators. Also, countries could explore and evolve joint mechanism for greater communication and surveillance at ports and sensitive territories.

Availability of Proper Infrastructure at Ports and Corridors

While infrastructure development is happening, effective and efficient infrastructure is still a far cry at most of the ports in the region, barring a few. Some of the important ports that are used for transit cargo, a point of particular interest for Bhutan, Nepal and Bangladesh, like Banglabandha in Bangladesh (opposite Phulbari) and Panitanki/Naxalbari in India (opposite Kakkarbhita in Nepal) lack infrastructures like parking space, quarantine office/testing facilities, proper customs quarters/offices, basic amenities, proper roads, etc. None of them have vehicle scanners which will be required if containerized cargo is to move through them. In terms of the waterways, 24x7 navigational aids are not available for many channels and routes, making them less efficient and jacking up transit time and cost.

Improving existing infrastructure and exploring common infrastructure wherever possible to lower capital costs can help to this end. A good example is the One-Stop Border Post at

Chirundu Border Post between Zambia and Zimbabwe, where both countries use the same infrastructure thereby lowering capital and operational costs. The region will need major infrastructure enhancements in most ports, land, sea or riverine to be able to effectively exploit the connectivity visions for the region.

Insurance and Guarantee of cargo in transit

One of the major issues is the guarantee of goods in transit and also insurance. Providing guarantee to transit cargo is problematic since regulations are not harmonized across borders and there aren't many third-party logistics services available that could act as aggregators and book cargo from multiple traders, through multiple countries. Very few countries in the region have acceded to international conventions like the TIR Convention, 1975, which can facilitate guarantee of goods and property in transit.

Acceding to conventions like the TIR convention and also encouraging third-party logistics services in the region will help. Also, better security arrangements for goods and property in transit will help boost confidence of traders in the region.

Capacity Gaps and Information Asymmetry

There are substantial gaps in understanding and operationalizing procedures and regulations. In many instances, understanding on regulations and procedures vary across border points with lack of clarity on the implementation aspects, leading to different interpretations of policies and regulations across the borders and also between different border points within the same country. This is creating substantial information asymmetry and further compounding the problems of delays at the borders. The capacity of private players including traders, customs house agents, etc. is also a case of concern. Even access to regulations and procedures is an issue for many (particularly small players/traders) stakeholders.

It will be important to do thorough and wide consultations to understand the capacity and information gaps and accordingly undertake capacity-building exercises. It will also help to undertake a thorough mapping of all relevant policies, rules and regulations as applicable to specific ports to create a repository and make that available to all stakeholders through a single web portal.

Conclusion

The countries of the Bay of Bengal region stand to gain much through the multiple and promising connectivity initiatives which are presently on. However, it is necessary for the countries and for the region as a whole to work around the challenges that impede growth and prosperity. This is beyond just infrastructure and includes regulatory, political and capacity enablers. While there is no dearth of dreams and initiatives, it is the implementation and follow through that will count. With volatile political climates, threats of insurgency and terrorism and overall low capacity of stakeholders and institutions, the region needs to take quite a leap to fulfill the envisaged vision. Given the current geopolitics, it is also imperative for the region to consolidate the possible gains and ensure economic and peace dividends for the region and beyond. With the promising initiatives that are one, it is quite possible for the region to achieve what it set out to and thereby connecting some of the poorest of the population and economies to the global growth story. India's role is particularly relevant in terms of nurturing the positive climate and facilitating initiatives being the largest and more developed partner in this growth story. The stakes are quite high, starting from linking landlocked countries of Nepal and Bhutan to the rest of the world, to developing India's hitherto underdeveloped northeast region as a bridge to further east and also toward positioning the Bay of Bengal region as an important hub for economic activities, facilitator of peace and security for the region and beyond. With the right kind of implementation, negotiations and consolidation the long overdue dream of seamless connectivity between South and South East Asia might just inch closer and the region may finally be able to shed its "least connected" label and graduate toward being a connectivity hub.

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Nepal

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Blue Economy: How Green for Nepal

Rasita Chaudhary, ***Nepal***

Abstract

Being a landlocked country the economic relation of Nepal with the Bay of Bengal (BoB) region has mostly been one dimensional. Nepal imports marine products from the countries of Bay of Bengal region as well as from other nations. It uses the Bay for international trade; however, it is permanently dependent on its neighboring countries, especially India, for transit. Hence the importance of the Bay to Nepal is not only for increasing its regional trade with the countries in the Bay of Bengal region but also for improving the scope of using the sea for better connectivity.

The delineation of the maritime borders of India, Bangladesh and Myanmar has opened up avenues for the countries, especially Bangladesh, to explore the potential offered by their maritime zones. Countries throughout the region can benefit through regional and international partnership in the area through research and investment. Initiatives to operate alternative transit routes with India and Bangladesh and infrastructural development throughout the region of the Bay of Bengal can help improve Nepal's connectivity in the region and also reduce its trade costs. Development of multimodal transportation such as roadways, railways and waterways, and regional cooperation toward pooling of renewable energy resources, development of ICT and maritime security can facilitate regional integration. Certain initiatives and agreements are already in place within Nepal and between countries in the region to improve connectivity. There still lies scope for better alternatives and need for implementation of plans.

Three major river systems from Nepal that are tributaries of the Ganges ultimately flow into the Bay of Bengal. The southwesterly winds from the Bay bring monsoon in Nepal. Certain fish species also migrate between Nepal and the Bay. Therefore, degradation in the water resources in Nepal affects the ocean's biodiversity. Incessant rainfall in Nepal has been a major cause of soil and land degradation. Nepal has adopted certain measures to curb issues of environmental degradation. However, the countries throughout the region need to make joint efforts for oceans and water-bodies' preservation through clean-up campaigns, waste management and other related activities. It is also important to encourage eco-friendly businesses in the region like ecotourism that may reduce the pressure off marine resources.

Blue Economy for Nepal

Antonio Pedro, Director of Economic Commission for Africa in the Eastern Africa, stated: "A holistic approach of the concept known as blue economy, that focuses on sound utilization of resources linked to oceans, rivers, lakes and other water bodies is emerging and vital to development." This is particularly relevant to landlocked countries like Nepal that do not border any sea but have a stake in the blue economy. Snow melts from the Himalayas in the north of Nepal and flows downstream as waterfalls and rivers. As many as 6,000 rivers, including rivulets, run through the country. The rivers are not only vital for maintenance of ecosystem but are also a source of income for the local residents. In Nepal, 5,358 lakes, including 2,323 glacier lakes and nine wetlands, are habitat to a variety of flora and fauna. These water bodies additionally facilitate irrigation, hydro power, fisheries and recreational activities such as rafting, boating and canoeing. Agriculture accounts for 33.1 percent of the GDP and employs two-thirds of the Nepalese population, according to the Nepal Portfolio Performance Review 2015 published by the Ministry of Agricultural Development. Aquaculture in Nepal is totally based on inland waters and accounts for 1.97 percent of the GDP (CBS, 2014). According to the 2004 data of the Directorate of Fisheries Development, an estimated 0.5 million people (136,000 families) are directly involved in this sector. Water recreational activities like white water rafting, boating and canoeing attract a large number of domestic and international tourists. Tourism accounts for nearly 4 percent of the GDP and supports 0.5 million jobs.

Blue Economy does not have a universally accepted definition. This is also referred as Ocean's Economy in UNCTAD's paper titled 'The Oceans' Economy: Opportunities and Challenges for Small Island Development Countries' published in 2014. This paper defined the blue economy as "one that simultaneously promotes economic growth, environmental sustainability, social inclusion and the strengthening of oceans ecosystems." The Economist Intelligence Unit briefing paper for the World Ocean Summit 2015 provided an adaptive working definition for blue economy: "A sustainable ocean economy emerges when economic activity is in balance with the long-term capacity of ocean ecosystems to support this activity and remain resilient and healthy."

The core of the matter in blue economy is about tapping the potential of seas, oceanic and waterfront areas without trading off with the wellbeing and biological system of these assets. In fact, it is

more important to focus on the betterment and reclamation of these resources as opposed to minor minimization of dangers associated with the economic activities in these areas.

Luxembourg, Austria and Ethiopia are examples of landlocked nations contributing effectively in the blue economy, creating job opportunities and working toward their economic development. It is, therefore, essential for Nepal to create relevant competencies and encourage fundamental transformation to harness the potential offered by Blue Economy.

Regional Connectivity through Blue Economy

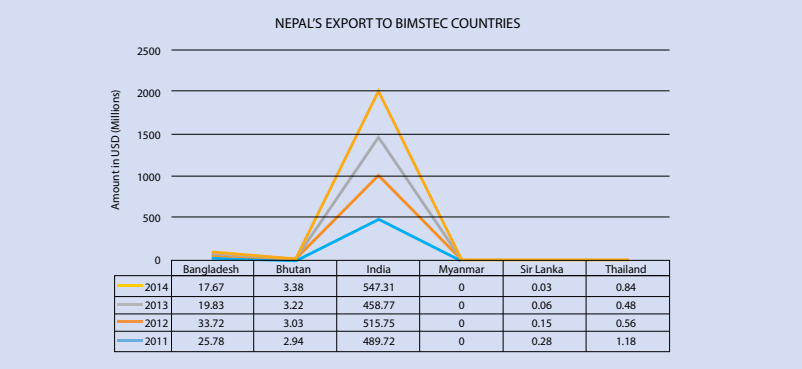
International trade is a worldwide phenomenon. A vast majority of that is carried out via seas and ocean conduits mostly attributable to the cost viability. Nepal does not have direct access to sea. Access of Nepal to ports in China is thwarted by Himalayan barriers, poor transportation conditions and distance from coast to Nepal border. Therefore, India helps Nepal as a vital transit neighbor. Nepal does not share border with Bangladesh. The utilization of Bangladesh ports is therefore India-centric. Article V of the GATT recognizes the basic requirement of freedom of transit of countries via the most convenient sea route. Also, Nepal has travel arrangements through transit treaties with India and Bangladesh and Operational Modalities for Additional Transit Route between Nepal and Bangladesh. The treaties and protocols attached underline the procedures for import and export and define the exit and entry points for access to sea.

Trade and transportation are two broad categories through which Nepal has the opportunity to connect to countries through the region of Bay of Bengal.

i. Connectivity through trade

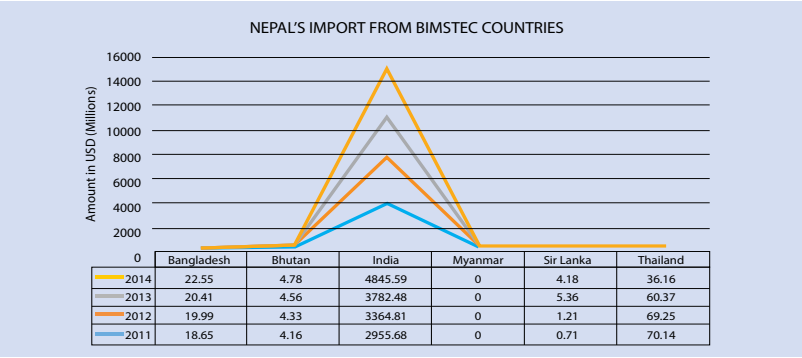
Owing to its geography, Nepal depends greatly on India for its regional and international trade. More importantly, India is Nepal's biggest trading partner. The year 2014 alone accounted for import of 56.96 percent from and export of 61.64 percent to India. However, Nepal's trade with other BIMSTEC member countries such as Bangladesh, Bhutan, Sri Lanka and Thailand has seen a diminishing trend from 2011 to 2014, as seen in Table I & II. Imports from these countries have accounted for a negligible 1.11 percent while export has been noted to be roughly 2.47 percent in 2014.

So far, Nepal has negligible trade with Myanmar. The inland exchange amongst Nepal and the BIMSTEC member countries are carried through India. India has been facilitating Nepal's overland trade with Bangladesh through a transit point in Phulbari (India). Trade with Bhutan is also interceded through India.



	Bangladesh	Bhutan	India	Myanmar	Sir Lanka	Thailand
2014	17.67	3.38	547.31	0	0.03	0.84
2013	19.83	3.22	458.77	0	0.06	0.48
2012	33.72	3.03	515.75	0	0.15	0.56
2011	25.78	2.94	489.72	0	0.28	1.18

Table I: Total Export of Nepal in million USD



	Bangladesh	Bhutan	India	Myanmar	Sir Lanka	Thailand
2014	22.55	4.78	4845.59	0	4.18	36.16
2013	20.41	4.56	3782.48	0	5.36	60.37
2012	19.99	4.33	3364.81	0	1.21	69.25
2011	18.65	4.16	2955.68	0	0.71	70.14

Table II: Total Import of Nepal in million USD

(Data Source: IMF)

Nepal offers a billion dollar market for marine products such as fish, molluscs, crustaceans–fresh/prepared/preserved, marine mammals, seafood, fat, oils, etc. and mineral fuels, oils, distillation products, etc. The total import of marine products in Nepal in 2014 was approximately $9 million and mineral fuels and oil was around $15 billion. Seventy-nine percent of the marine products and 95 percent of the mineral fuels and oil were imported from India.

In the same year, Sri Lanka exported mineral fuel and oil worth

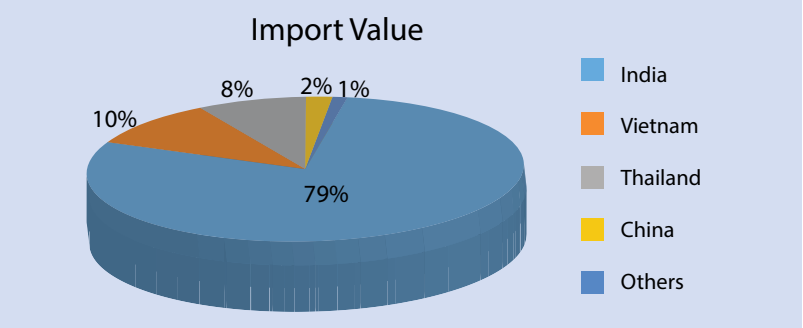


Fig. I: Marine products import in Nepal in 2014

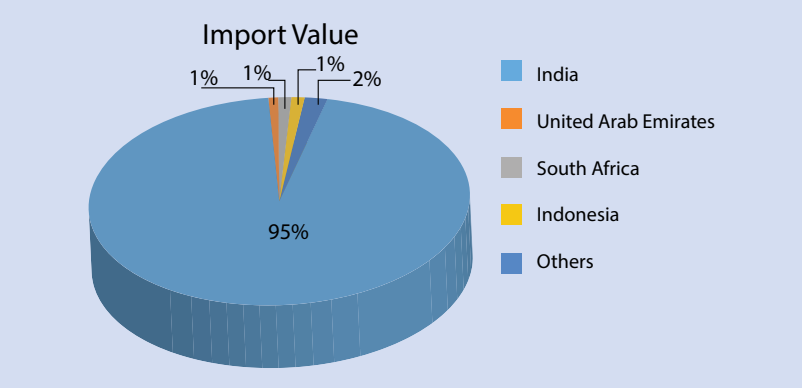


Fig. II: Mineral fuels, oils, distillation products, etc. imported in Nepal in 2014 *(Data Source: ITC Trade Map)*

roughly about $3 million and marine products worth around $2.6 billion. However, the last trade of mineral fuels between Nepal and Sri Lanka took place in 2012 and marine products in 2011. Similarly, in 2014 Thailand's export value of marine products stood at around $64.30 billion and that of mineral fuels and oil at almost $120 billion. Nepal's trade with Thailand in both the sectors is negligible.

The Bay of Bengal provides vital tropical marine ecosystem. Wetlands and marshes facilitate in the fostering of marine life. Sustainable harvesting of marine resources in the Indian EEZ has been estimated at around 3.92 million tons. Half a million tons of fish is produced annually from coastal and marine fisheries in Bangladesh. However, sustainable estimation is yet to be made.

Optimum potential for petroleum, natural gases and hydrocarbons

is yet to be explored. The delineation of the maritime borders of India, Bangladesh and Myanmar has opened up avenues for the countries, especially Bangladesh, to explore the potential offered by their extended maritime zones. Placer deposits of titanium have already been discovered in the northeastern Sri Lanka. Rare earths and mineral sands consisting of garnet, zircon, rutile, manganite, etc. have been found to exist in the northeast and southeast coasts of India. The NGHP Expedition-January, 2006 conducted in India has been successful in confirming high prospects of gas hydrate in the west and Andaman-Nicobar offshore in the BoB. The minimum potential of gas supply has been estimated to cover a period of almost 189 years. Countries throughout the region can benefit from the experience and knowledge of India in the field of research and prospecting of maritime resources. International partnership in the area provides a wider prospect for successful research and investment opportunities. This will not only enable the countries to explore resources within their borders but also lessen Nepal's dependency upon one single country for marine products such as fisheries, gas, petroleum and other ocean resources.

In addition to maritime resources, countries in the BoB region need to identify other common points of interest in trade. Trade connectivity is one of the major focuses of BIMSTEC. Especially for Nepal, diversification of export and import markets would mean more opportunity to trade with other countries and have access to wider variety of options while strengthening strategic relations from the Himalayas to the BoB.

ii. Connectivity through Sea

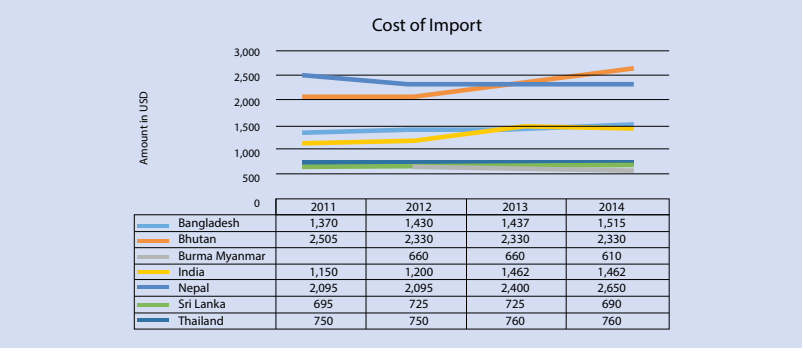
Nepal gets access to the sea for trade via Kolkata and Haldia ports in India. There is also an existing Kakarbhitta (Nepal)-Fulbari (India)-Banglabandh (Bangladesh) route that connects Nepal to the sea bordering Bangladesh. UNCTAD estimated that landlocked nations need to bear, by and large, 50 percent higher global transport costs than their neighboring nations with direct access to sea. Exorbitant transport costs have not only caused a hike in the consumer prices of imported merchandise but have also hindered the equitable positioning of Nepalese market on the global map. For example, Port of Mumbai (India) is at a distance of 2,100 km from Birgunj (Nepal) and 7,000 km from Europe. However,

transportation of goods from the same port takes 30 days to reach Nepal at a cost of $7,000 to $9,000 for every TEU while just 18 days at an expense of $3,500 to Europe. The said course from Mumbai to Birgunj, however, is still an opportunity for Nepal to reduce its transit cost by $400 per TEU.

Parameters used for the determination of the above data by World Bank

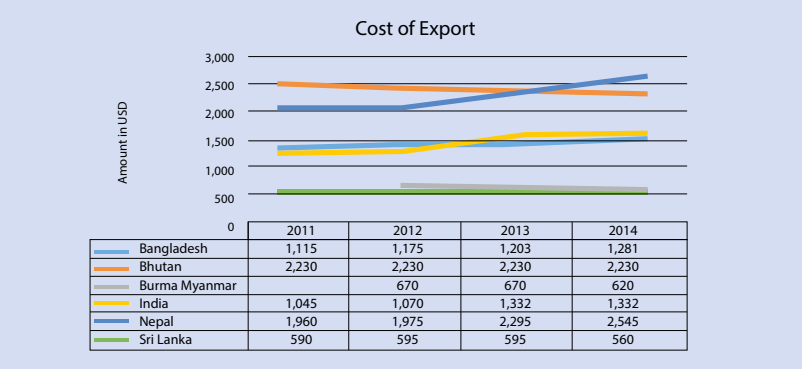
- Cost measures the fees levied on a 20-foot container in U.S. dollars.
- Costs include costs for documents, administrative fees for customs clearance and technical control, customs broker fees, terminal handling charges and inland transport.
- The cost measure does not include tariffs or trade taxes.

Huge transportation costs for Nepal is one of the major bottlenecks for its international trade promotion. The two transit ports



	2011	2012	2013	2014
Bangladesh	1,370	1,430	1,437	1,515
Bhutan	2,505	2,330	2,330	2,330
Burma Myanmar		660	660	610
India	1,150	1,200	1,462	1,462
Nepal	2,095	2,095	2,400	2,650
Sri Lanka	695	725	725	690
Thailand	750	750	760	760

Table III: Cost of Import (USD per container)



	2011	2012	2013	2014
Bangladesh	1,115	1,175	1,203	1,281
Bhutan	2,230	2,230	2,230	2,230
Burma Myanmar		670	670	620
India	1,045	1,070	1,332	1,332
Nepal	1,960	1,975	2,295	2,545
Sri Lanka	590	595	595	560

Table IV: Cost of Export (USD per container)

(Source: World Bank Data)

currently being used by Nepal pose challenges in the form of congestion and inability to accept mother vessels. Nepal has long looked for suitable options in India. Paradip port in the east coast offers one such alternative. Similarly, Haldia port can be used for containerized cargo in addition to the Kolkata ports being solely used for the purpose at present.

The Vishakhapatnam port in Andhra Pradesh for Nepal's trade is to be fully operational soon. . It can likewise be utilized as an optional course to Bangladesh for facilitating the nation's third-country commerce. Operation of Vishakhapatnam port can make Nepal's third-nation exchange quicker and cost-effective. Since the port is well endowed to accept bigger vessels, time and cost for bulk merchandise can fundamentally reduce as cargo trains can come from Vishakhapatnam port to Birgunj land port directly.

India has been further proposed to facilitate Nepal's connectivity to Bangladesh via Sinhabad-Rohanpur route. The connectivity will provide an impetus to the countries' bilateral trade. An ICD has been set up at Dhaka. Development of a new route connecting Birgunj ICD to Dhaka may be worth considering. Nepal and India are additionally set to sign a different arrangement by permitting single trucks to navigate through India instead of the existing condition of at least 25 trucks' passage in the Kakarbhitta-Fulbari-Banglabandh route.

Nepal and China signed an agreement and an MoU in March 2016 for utilization of China's seaport facilities for third-country trade. The benefit of regional cooperation through trade route development facilitating Nepal's access to sea, however, cannot be maximized without infrastructural development in the country.

Infrastructural Development

Poor state or absence of infrastructural development in the BoB region has been a major deterrent for regional connectivity and integration. Since BIMSTEC members are developing and least developed countries, there is a need for infrastructural advancement. For Nepal, it does not just connect with the members in the Bay but also reaches out to the international markets through neighboring countries. Therefore, the geography, infrastructure and policies of the neighboring countries are equally relevant to Nepal. The focus of infrastructural development is the development of transportation, energy and ICT.

i. Transportation

Connectivity through transportation is a prerequisite for economic integration. In Nepal, initiatives for development of transportation are there, but in real term development of the sector has a long way to go.

A budget of NRs 310 million has been laid down for 47 strategically important roads in Terai region for the fiscal year 2016-17. The Bardibas–Simara railway has been allocated a budget of NRs 1.86 billion for the same fiscal year. Preliminary studies have been conducted for a 46.3 km railways connecting New Jalpaiguri (India) with Kakarbhitta via Panitanki. The distance from Panitanki to Kolkata Port is 544.3 km and to Chittagong, Bangladesh, is 745.4 km. Bangalabandha, which is 62 km from Nepal check point, has the potential to be a fully functional inland port between India, Nepal, Bhutan and Bangladesh.

The Kolkata and Haldia ports used by Nepal use two major corridor points, Birgunj in Nepal and Raxaul in India. One of the major constraints is the long distance of 276 km from Kathmandu to Birgunj. The construction of Banepa-Sindhuli-Bardibas road was completed on 29 May 2015 with grant assistance from Japan. It has brought down the distance between Kathmandu and Eastern Terai to 167 km, while also providing a link to neighboring cities in India. This is the only highway that connects Himalayan, Hilly and Terai region of Nepal. The Kathmandu-Terai Fast-track Road's Chalnakhel (Lalitpur) to Nijgadh (Bara) has not been completed since 2009 due to bureaucratic hurdles. The track could reduce the distance between Kathmandu and Birgunj about 120 km.

The development plan of KKHT Highway has been initiated to connect the west, south and east of Nepal through Hetauda. The proposed highway will connect Kathmandu with Hetauda via Kulekhani in an hour instead of the six to eight hours travel time through the current route. It takes nearly 1.25 hours to reach Birgunj from Hetauda.

In India, 180 km stretch in Bihar connecting Nepal to the sea through Raxaul requires immediate attention. Congestion is another underlying issue in the 50 km stretch of the NH 28A from Motihari to Raxaul that passes through Sagauli and Ramgarhwa.

Nepal connects to the Banglabandha port in Bangladesh via Panitanki and Phulbari in India. Physical barriers, especially in Nepal, are causing hindrances for this corridor to facilitate at a major level regionally and multilaterally. Frequent landslides in

some parts of the Kathmandu-Kakarvitta road result in the total shutdown of the road for days at a stretch. A number of bridges along Hetauda-Pathalaiya are in dire need of upgradation from their current single-lane status. This is imperative to solve the traffic congestion in the near future. Radhikapur-Birol transit point for cargo movement by railway between Bangladesh and Nepal has proven to be one of the most practical routes through India till 2005. It will be beneficial to harmonize the gauge of Bangladesh with the broad gauge in India and re–operate the route.

India, Nepal, Bangladesh, Bhutan, Myanmar and Thailand have plans under consideration to establish road connection. Thirteen routes have been identified for connectivity. Five routes between India and Nepal and two corridors to connect Bangladesh with Nepal through India have been approved. Similarly, two other routes would be used for vehicular movement from Bangladesh to Bhutan via India. The BBIN countries have officially signed the agreement. During Prime Minister Oli's visit to India, Nepal is also set to sign a deal to allow India to use Nepali land as a transit facility as part of Trade and Transit Treaty. But the route for the facility has not been finalized yet. Connectivity to China already exists in Nepal through the Araniko Highway and Syaphrabesu-Kerung Highway. Therefore, Nepal can act as a transit for connecting the countries in the BoB region with China.

Inland river ports of Bangladesh-Ashuganj, Baghabari and Noapara -offer high potential as transit and transshipment points for trade with Bhutan, India and Nepal. These river ports already have waterways connectivity with Chittagong and Mongla seaports in Bangladesh and road connectivity with numerous land ports on Bangladesh-India border. Very little effort is required to make them suitable for inter-modal transport services.

Fig III: Road connectivity Plan between India, Nepal, Bhutan, Bangladesh, Myanmar & Thailand

Three major tributaries of Ganges in NepalKarnali, Gandaki and Koshihavehave

the connectivity potential with Mongla in Bangladesh and Kolkata in India. The possibility of inland waterway in the Koshi River has been under consideration for a long time. A feasibility study for connecting Nepal with India via waterways from Chatara in Nepal to Kursella in Bihar has long been agreed upon. Saptakoshi meets the Ganges at this point. The Koshi navigation canal, if linked to the waterway between Allahabad and Haldia, would mean Nepal's connectivity to sea completely through water. Development and utilization of potential waterways in rivers flowing from Nepal to India could boost the trade and transportation of both the countries in terms of cost as well as time. Nepal could gain much from regional expertise in the research and development of inland waterway connectivity.

ii. Energy

Nepal has a practical capacity to generate 45,610 MW of hydropower. In 2014, Indian Prime Minister Narendra Modi signed a Power Trade Agreement with Nepal. This would enable the two countries to trade electricity between them. In India-Nepal Joint Standing Committee meeting held in Nepal in May 2016, Nepal has forwarded a proposal to set up an India-Nepal energy bank that would help both countries address the problem of power shortage by increasing energy security. This energy bank would enable Nepal to export electricity to India during summer and import electricity from India during winter, when generation capacity of its hydropower plants drops sharply, leading to crippling power shortages throughout the country. India is agreeable to the concept, but has to work on several regulatory provisions.

Cooperation throughout the BoB region in similar lines could be sought to harness the extreme potential of Nepal in the area. It could reduce the use of exhaustive resources and prevent the BoB countries from over exploitation of the fossil fuel from the Bay. At the same time, the prospects of wave, thermal and tidal energy from the Bay of Bengal needs to be studied and developed.

iii. Information and Communications Technology

The UNDP states that regardless of the fact that sustainable economic growth facilitates the creation and dissemination of innovations, technology and growth are mutually dependent. Each country should understand innovations in ICTs and adapt them to their unique developmental needs. Nepal has endeavored to execute the Almaty Program of Action in the ICT development

sector. It has adopted the policy of liberalization in the ICT and telecommunication sector. Six telecom operators, one semi-government and five private operators are now functioning in Nepal.

Communication is a basic requirement for cross-border coordination. ICTs would provide a unique opportunity to people from the Bay in exchanging ideas, quickly relaying information, negotiating trades and accessing tools and technologies for creating awareness and knowledge to find solutions and work together. The SASEC Information Highway Project funded by the ADB has been under the process of implementation since 2009. The project intends to create a regional network through Bangladesh, Bhutan, India and Nepal with fiber-optic, community e-centers and Regional Training Networks.

Regional Cooperation

Regional cooperation can be of significance only if it encapsulates capacity development, innovation, investment and regulatory policies that can advance connectivity, infrastructure and sustainability. Close cooperation for improved connectivity can be achieved through trade, transport, energy and ICT.

Intra-regional trade improvement requires nations to harmonize their policies and regulations, and simplify documentation and procedures. Border agency cooperation and common customs procedure ensure improved trade coordination. The Nepali customs currently uses the automation system of ASYCUDA ++. Its harmonization with India's ICEGATE could bring in consistency in data exchange. Furthermore, simplification of visa procedures and mutual recognition of third-party motor vehicles and drivers' licenses can help facilitate the movement of people. Such schemes may encourage people to people connectivity through trade, education, health, employment, field research, workshops, seminars, tourism and so on.

A provision of transit treaty is needed to maintain a balance between transit facilitation and control of deflection of trade or pilferage. In the context of Nepal, traditional long procedures underlined in the treaties do not complement the present need of trade liberalization and development. Recognizing the permanent nature of transit need for landlocked countries, provision of unconditional automatic renewal of the treaty on transit should be put in place. Any other bilateral issues should not affect the part of transit treaty. This requires political stability in the country and diplomatic cooperation throughout the region.

Sharing best practices and knowledge allows cooperating partners to benefit from each other's experience. India has expertise in deep sea bed activities and hydrographic surveys. There are ample areas for research in offshore resources and alternate source of energy in the BoB region. Also, it is important to mould technology as per local relevance. Coordination in the sector of research and development is important to be based upon regional affordability and accessibility. Nepal has often received assistance in the form of grants and technology from various nations for development of its infrastructure.

Maritime security and governance has been an undermined focus for multilateral organizations like BIMSTEC and SAARC. Incidents of piracy, illegal fishing, smuggling, human trafficking, money laundering and illegal movement in sea leading to fatal terrorism activities in nations have been observed. Maritime security cooperation requires development of mutual trust among the countries in the region to develop closer political and security strategies. Setting up of joint task force may be one step toward developing solidarity against sea-involved crimes. Nepal has been an active participant in UN peace operations since 1958. Three main security forces-Nepal Army, Armed Police Force and Nepal Police-have contributed to the UN peacekeeping force as military observers, peacekeeping troops and staff officers in various UN missions in Lebanon, Kuwait, Somalia, Iraq, Syria, etc. The vast experience gained by security forces in these missions may be utilized to strengthen security in the BoB region. Nepal's contribution may include providing security personnel, joint exercise and training and sharing of information.

Delimitation of maritime borders has opened up myriad prospects for exploration and exploitation within the areas of respective jurisdiction of bordering countries. This will provide great opportunities for increased research, development and investment, including through private and public partnerships. One of the greatest bolster will be toward employment generation. The countries in the region can work toward the best possible utilization of work-force in mutually agreed ways. For instance, some 28-30 percent of the population in Nepal makes up the workforce of the country. Four to six percent of the labor force immigrates to foreign countries for employment every year due to underemployment or unemployment. The work force of Nepal includes skilled, semi-skilled and unskilled workers. It can contribute its workforce in the areas of research, development as well as labor intensive jobs.

Sustainability

Monsoon in Nepal is brought by strong southwesterly winds from the Bay of Bengal. On an average 80 percent of the annual rainfall in Nepal occurs in the monsoon. Forty percent of the annual flow into the Ganges comes from Nepal. The contribution goes up to 70 percent during dry seasons. Saptakoshi, Gandaki and Karnali -three major river systems of Nepal-are tributaries to Ganges that ultimately flow into the Bay of Bengal.

Unfortunately, 0.4 percent of watershed in these areas are in very poor conditions while, 1.5 percent and 11.7 percent are in poor and fair conditions respectively. According to the "Integrated Watershed Management Studies and Experience from Asia, AIT Bangkok", 90 percent of the dependent population are affected as a result. The high flow of nitrogenous oxides used in agribusiness and untreated sewage often find their way into the river and streams and ultimately flow into the oceans. This has resulted into coastal pollution often risking eutrophication that harshly affects marine life. Consequences of sewage or chemical discharges have already started showing their negative impact on mangrove habitats, coral reefs and marine life as a whole. Deforestation is causing soil erosion in Nepal at an alarming rate. Some 240 million cubic meters of fresh fertile soil flow annually into the Bay of Bengal. This has resulted accretion of 28 km long island covering an area of 100,000 sq. km off the coast of Bangladesh. Clearly, Nepal and the Bay of Bengal have mutual ecological dependency. Therefore, the assessment of these impacts is very important for an efficient, effective and sustainable planning.

Nepal has adopted certain measures to curb the issue of land degradation and watershed management. The department of Soil Conservation and Watershed Management was established in Nepal in 1974. In an attempt to tackle the issue, The Land and Watershed Conservation Act was formulated in 1982. Adoption of community forestry has been one of the most successful policy initiatives in preventing land degradation. The UN Convention to Combat Desertification was signed by Nepal on October 12, 1995. Since then it is obliged to combat desertification and to prepare a national action plan, including programs for poverty reduction, which is closely related to land degradation. Bagmati Clean-up Campaign is an initiative taken up by the Friends of Bagmati (FoB) group launched by Prince Philip, the Duke of Edinburgh, in November 2000 during the Celebration of Sacred Gifts for a Living

Planet jointly organized by the WWF and the ARC. The efforts of the group to restore the health of Bagmati River in Kathmandu valley has set an example for channelizing similar efforts to preserve water resources throughout the country. Joint expertise maybe replicated throughout the region in clean-up campaigns, waste management and related workshops and training.

The economic dependency of Nepal on the Bay of Bengal for transportation and trading of goods has been one dimensional so far. Nepal, however, offers in exchange the option of utilization of its underutilized natural resources for shared benefits of the region. This is a unique opportunity for the countries throughout the region to pool available resources of each nation for curbing pressure on one single area. Encouraging partnerships and foreign investments for innovative use of these resources can create job opportunities and contribute to overall economic development. For instance, collaboration on the ongoing research on Blue energy systems or investment in hydropower generation or promotion of tourism.

All the countries in the region are bestowed with their own unique natural features and rich cultural heritage. The BoB region can develop an ecotourism model that focuses on promoting tourism in the area along with environmental management and conservation. Development of eco-friendly tourism and CSR in business through government incentives and awareness-raising programs can reduce the pressure on marine and coastal resources being exploited by the locals for subsistence. The Annapurna Conservation Area Project is one such initiative in Nepal. Nepal is endowed with natural wealth such as the Great Himalayas, varied landscapes and rich culture. The initiative has facilitated local residents to live in close coordination with the nature and traditional lifestyle in the Annapurna region. The locals provide home stay services to tourists and the local food there. People visiting the area get a firsthand experience of the nature and culture of the place without compromising the sustainability of the environment.

Conclusion

The countries in the BoB region are endowed with rich natural resources. However, the inability to mobilize them has left the region among the poorest in the world. The stakeholders in the BoB region viz., Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand comprise almost one- fourth of the world population. Rapid increase in population and the need for equitable growth has led to overexploitation of some resources while lack of knowledge,

technology and capital has left others underutilized. The region in the Bay should translate its high population into human resources that can be mobilized well. Blue Economy provides a unique opportunity to countries in the Bay to connect and collaborate through trade and infrastructure development. This includes development of multi-modal transportation, harnessing the unique energy potential of nations and increased communication through technology development. Collaboration in the field of research, investment and security measures can facilitate these countries to harness their maximum possible potential. The land and maritime borders shared by the countries should be taken as an opportunity for economic integration and mutual assistance for development.

Development is an ever going process. However, it should not take place at the cost of environmental degradation and depleting natural resources. The BoB region is pressurized by overexploited fisheries, destruction of marine habitats, untreated waste or chemical disposal, oil spillage, sand mining and so on. Detailed surveys, risk assessments and environment and economic impact analyses can facilitate formulating effective regulations and policies for sustainable harnessing of the potential that seas and oceans offer. It is the collective responsibility of countries throughout the Bay region to act through regional cooperation and innovation to protect, preserve and replenish these valuable resources that have played such an important role in the sustenance of mankind and a dynamic ecosystem. Assessment in time will not only help in the preservation of these natural resources but also mitigate high economic costs that could be required to combat environmental disasters in future.

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Sri Lanka

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Challenges to a BIMSTEC Free Trade Agreement (FTA): A Sri Lankan Perspective

Janaka Wijayasiri, ***Sri Lanka***

Abstract

Sri Lanka has lagged behind in pursuing Regional Trade Agreements (RTAs) in recent years, especially in relation to neighboring countries in South and Southeast Asia. At the moment, Sri Lanka has only four RTAs in force – the India-Sri Lanka Free Trade Agreement (ISFTA), the Pakistan-Sri Lanka Free Trade Agreement (PSFTA), the South Asian Free Trade Agreement (SAFTA), and the Asia-Pacific Trade Agreement (APTA). Sri Lanka is also party to the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) which has been negotiating on an FTA since 2004 but has not been able to reach a consensus over a number of issues. BIMSTEC has been an under-performer, as its members are also engaged under more vibrant groupings such as SAARC and ASEAN. This article examines the main challenges in signing a BIMSTEC FTA and provides some policy recommendations based on Sri Lanka's existing FTA toward concluding a free trade agreement amongst the seven-nation grouping.

Introduction

BIMSTEC comprising Bangladesh (BG), Bhutan (BH), India (IN), Myanmar (MY), Nepal (NP), Sri Lanka (SL) and Thailand (TH) is a unique regional initiative bringing together 1.56 billion people (22% of world's population) and a combined GDP of over USD 2.8 trillion (Rahman & Kim, 2016). The group bridges South Asia and East Asia linking a number of SAARC and ASEAN members to explore economic cooperation on a sub-regional basis involving contiguous countries grouped around the Bay of Bengal.

The membership is a mixed bag of countries, each one at different stages of development – three of the members are non-LDCs (IN, SL, TH) and four are LDCs (BG, BH, MY and NP). India is the largest economy in the region and alone accounts for more than 80 percent of the population and more than 70 percent of the GDP of the BIMSTEC (Wijayasiri & De Mel, 2008). The complementarity among the countries was considered to be substantial given the different levels of economic development and resource endowments of the economies, to provide a basis for regional cooperation. In addition, all the countries in the grouping share a common border with one another providing an important condition for regional economic cooperation. Given that the intra-regional trade in BIMSTEC has been low, the full potential of intra-regional trade was considered un-tapped due to tariff and non-tariff barriers, poor communication and transport links and lack of information, among other things (RIS, 2004). Intra-regional investments too have been small despite the potential for market and efficiency seeking investments in the region. In this context, it was thought that regional cooperation could help exploit these dormant potentials existing in the sub-grouping (Wijayasiri & De Mel, 2008).

Regional trade arrangements (RTAs) have become a significant feature of the world trading system in recent times. The world has seen a spate of regional trade agreements involving both developed and developing countries due to slow progress at the multilateral level. Almost all the countries in the world are now members of at least one or more RTAs. As of February 2016, 585 RTAs had been notified to the WTO, of which 419 were in force (WTO, 2016).

BIMSTEC has been slow in moving toward regional economic integration under an FTA. Currently, there is a number of overlapping sub-regional and bilateral cooperation arrangements already in place within the region. A BIMSTEC FTA proposed in 2004 was expected

to strengthen economic cooperation among the member countries by providing preferential treatment in trade in goods and services while facilitating investment cooperation. Even after more than a decade and several rounds of negotiations, the grouping has not been able to reach a consensus and finalize an agreement.

Background to BIMSTEC

Realizing the importance of economic cooperation between South and South East Asia, TH took the initiative in 1994 to explore the possibility of forming a sub-regional group. With the backing of the Asian Development Bank (ADB) and UN-ESCAP, BG-IN-SL-TH Economic Cooperation (BIST-EC) was created on 6 June 1997, bridging IN's 'Look East policy' with TH's' Look West Policy'. Initially MY was only an observer, but was soon granted full membership on 22 December 1997. Consequently, the name of the organization was changed to BIMSTEC to reflect the members of the grouping. NP and BH soon joined as full members in 2003. During the first BIMSTEC Summit in Bangkok on 31 July 2004, the organization was renamed as Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC).

This sub-regional group not only aims at increasing intra-regional trade among the members but also covers other areas of cooperation. Initially, only six priority sectors were decided upon, namely: Trade and Investment, Technology, Energy, Transport and Communication, Tourism and Fisheries. The list was later expanded to encompass 15 sectors: Agriculture, Climate Change, Cultural Cooperation, Environment and Disaster Management, Public Health, People-to-People Contact, Poverty Alleviation and Counter-Terrorism and Transnational Crimes.

Negotiations on an FTA to date

The idea that the sub-region should aim to develop into a free trade arrangement was first mooted in the late 1990s. Subsequently, it was decided that BIMSTEC would not only cover trade in goods but also services and investment. A framework agreement on the BIMSTEC Free Trade Area (FTA) was signed in February 2004.The agreement envisions liberalization, promotion and facilitation of trade in goods and services, investments, as well as broader economic cooperation.

A Trade Negotiating Committee (TNC) was set up to finalize an agreement by the end of 2005 for implementation by July 2006 after which negotiations on an agreement on services and investments

will commence. But talks have dragged due to a number of issues such as the negative list, and criteria for rules of origin which form the building blocks of an FTA. Even after 20 rounds of negotiations, stretching over 10 years, the TNC has not been able to reach a consensus and an FTA in the region is yet to become a reality. This is most probably because some member countries of BIMSTEC are now questioning the need for another FTA when the tariff levels in the region have come down due to unilateral liberalization as well as through bilateral and regional liberalization (Kelegama, 2016). Despite delays, a BIMSTEC FTA still remains in its agenda. So far, the negotiations has mostly focused on trade in goods, while discussions on services and investments have commenced and show some progress with the six rounds of negotiations to date. At the third BIMSTEC Heads of Government Summit concluded on 14 March 2014 in Nay Pyi Taw, MY, the Heads of Government directed the TNC to move forward toward the finalization of the draft Agreement on Trade in Goods while continuing efforts for early finalization of the Agreement on Services and Investments.

Salient Features of the Agreement

Modalities of tariff reduction and elimination

Under BIMSTEC, liberalization of goods would be done in two approaches: 'fast track' (FT) and 'normal track' (NT). The liberalization schedule agreed upon at the onset for FT specified that tariffs on identified products would be reduced or eliminated by IN, TH and SL (non-LDCs) for LDCs within one year (2007) from the date of implementation (2006) and that LDCs would do the same for NLDCs in five years (2011). Non-LDCs would reduce/eliminate tariffs amongst themselves within three years under FT while LDCs will do the same in three years. Meanwhile, NT liberalization was initially set over a period of 11 years; products identified for tariff elimination would be made duty free and those identified for tariff reduction would be brought down to 0-5 percent range by NLDCs for LDCs in four years (2010) while LDCs would do so for NLDCs in 11 years (2017). While Non-LDCs and LDCs will do the same, and liberalize trade within five and eight years for fellow NLDCs and LDCs respectively. Having failed to finalize negotiations meet and meet this initial target, the liberalization schedule following the 19th TNC meeting in 2011 was revised accordingly (Table 1).

Table 1. Tariff Reduction/Elimination Plan

	Countries	For India, Sri Lanka & Thailand	For Banladesh, Bhutan, Myanmar & Nepal
Fast Track	India, Sri Lanka & Thailand	1 July 2010 to 30 June 2013	1 July 2010 to 30 June 2011
	Banladesh, Bhutan, Myanmar & Nepal	1 July 2010 to 30 June 2015	1 July 2010 to 30 June 2013
Normal Track	India, Sri Lanka & Thailand	1 July 2011 to 30 June 2016	1 July 2011 to 30 June 2014
	Banladesh, Bhutan, Myanmar & Nepal	1 July 2011 to 30 June 2021	1 July 2011 to 30 June 2019

Source: Rahman and Kim (2015)

Size of the negative list

BIMSTEC member countries have agreed to take a Negative List approach to tariff liberalization, which means a certain percentage of products/tariff lines that are considered sensitive by countries would not be subjected to tariff cuts. At the 20th TNC meeting, most countries were in agreement to set its negative list around 26 percent at six-digit level. Subsequently, Sri Lanka has submitted its negative list and is awaiting a response to its offer.

Criteria for rules of origin

For a product to obtain BIMSTEC FTA preferential treatment, the product has to satisfy one of the following conditions:(i) The product has to be wholly produced or obtained in a member country; (ii) The product has to satisfy the criteria of change in tariff sub-heading (at HS 6 digit level), and create a local value addition of 35 percent of FOB value. For LDC member countries, the local value addition criteria is reduced to 30 percent of FOB value; and (iii) Under aggregate regional accumulation, BIMSTEC content of the final goods is not less than the local value addition mentioned in (ii). In such cases, change in tariff sub-heading is only applicable for non-BIMSTEC originating materials. Though the Rules of Origin were previously agreed, they have been re-opened for discussions (by India) with proposed amendments.

Mechanism for dispute settlement, safeguard measures, customs operations, negotiations on the agreements on service and investment

BIMSTEC FTA arrangement also contains Dispute Settlement procedures while member countries are allowed to withdraw tariff concession and apply Safeguard Measures, in case imports cause

significant harm to the domestic industries. BIMSTEC FTA also focuses on cooperation and mutual assistance in customs matters.

The 20th TNC fell short of achieving the expected target of signing the three agreements (trade in goods, services and investment); negotiations on these three agreements, including customs cooperation, are still on-going.

Current status of trade in the BIMSTEC

As shown in Figure 1, intra-regional exports from BIMSTEC increased from USD 1.4bn in 2002 to 33.4bn by 2014; exports with the region grew on average 47 percent during this period. In fact, the growth rate in exports within the region was higher than BIMSTEC's total exports during this period (about 20 percent). Consequently, intra-regional exports have increased from less than 2 percent in 2002 to 6 percent by 2014. Main exporters within the region are IN and

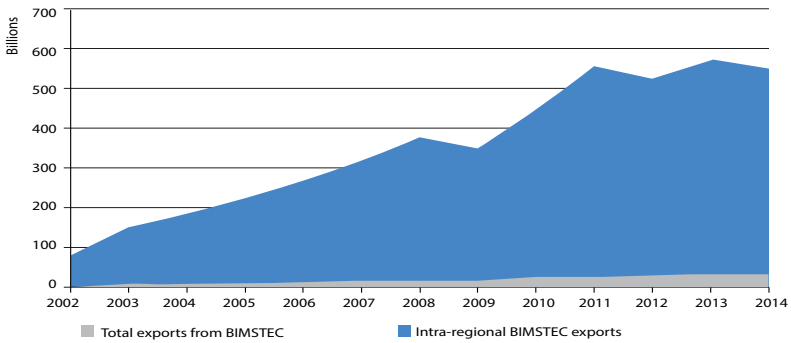


Figure 1. Total exports and intra-regional exports of BIMSTEC
Source: WITS

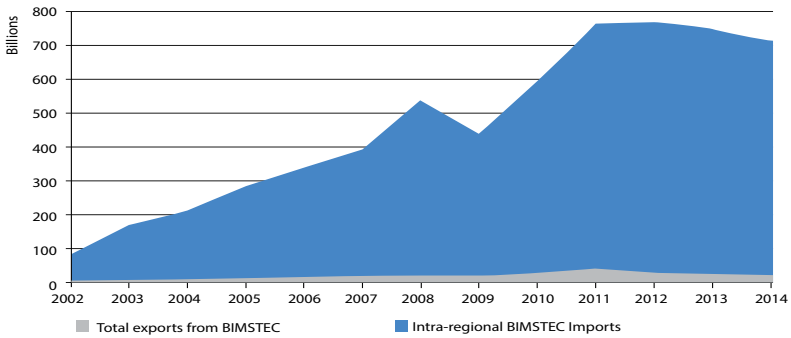
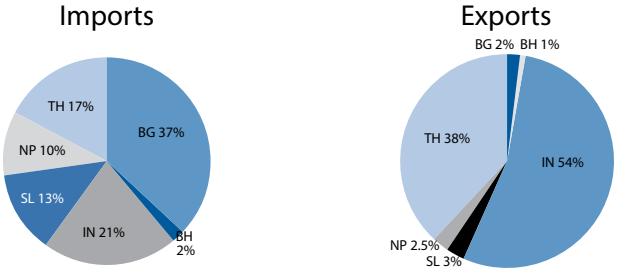


Figure 2. Total imports and intra-regional imports of BIMSTEC
Source: WITS

TH, accounting for more than 50 and 35 percent respectively (Figure 3) of intra-regional exports.

Imports from within the region also show a growth of 17 percent between 2002 and 2014, increasing from USD 4.2bn to 20.4bn, as shown in Figure 2. While imports of BIMSTEC from the world increased on average 23 percent a year during this period, imports from the region still accounts for about 2.7 percent of total imports of BIMSTEC. In fact, intra-regional imports fell from 5.3 percent in 2002. A country-wise breakdown of the imports by BIMSTEC nations indicates that IN, TH and BG are the major importers in the region (Figure 3). The three countries account for about 75 percent of total imports within? the region.

Figure 3. Main trading countries within BIMSTEC, 2011.



Source: Computed from WITS

Table 2. Intra-regional exports (in %) of country's total exports, 2011.

	BG	BH	IN	SL	MY	NP	TH	BIMSTEC
BG	0.00	0.00	1.94	0.18	0.04	0.01	0.18	2.33
BH	5.83	0.00	75.73	0.00	0.00	0.36	0.02	81.94
IN	1.13	0.07	0.00	1.48	0.15	0.85	0.92	4.60
SL	0.46	0.00	5.21	0.00	0.00	0.01	0.76	6.43
MY								
NP	2.87	0.35	67.69	0.02	0.00	0.00	0.24	71.18
TH	0.53	0.01	2.26	0.21	1.24	0.03	0.00	4.29
BIMSTEC	0.83	0.04	1.26	0.88	0.58	0.46	0.51	4.58

Source: Computed from WITS

BIMSTEC is an important destination for exports of BH and NP as a substantial portion of exports from these countries (over 60 percent) is sent to IN. For other countries of the region, BIMSTEC is not an important export market – accounting for 4-6 percent of their total exports. This is reflected by low intra-regional exports in BIMSTEC (4.58%).

Table3: Intra-regional imports (in %) of country's total exports, 2011.

	BG	BH	IN	SL	MY	NP	TH	BIMSTEC
BG	0.00	0.00	11.23	0.17	0.37	0.00	22.78	34.56
BH	0.35	0.00	72.28	0.00	0.00	0.29	2.51	75.43
IN	0.13	0.04	0.00	0.16	0.27	0.11	1.09	1.80
SL	0.12	0.00	22.08	0.00	0.04	0.00	2.49	24.74
MY								
NP	0.33	0.04	63.42	0.02	0.02	0.00	1.71	65.53
TH	0.02	0.00	1.33	0.04	1.45	0.00	0.00	2.84
BIMSTEC	0.09	0.03	2.18	0.12	0.62	0.07	1.99	5.09

Source: Computed from WITS

In terms of imports in the region, BIMSTEC is an important source of imports not only for BH and NP but also for BG and SL -though to a lesser extent. These countries are mainly dependent on India and in the case of BG on TH in addition to IN. IN and TH do not depend on the region as much as their smaller counterparts for their import requirements. Intra-regional import was about 5 percent in 2011.

Overall intra-regional trade in the BIMSTEC remains low-about 3-4 percent, as shown in Figure 4. Lower intra-regional trade could be attributed to various reasons: lower purchasing power of BIMSTEC countries, especially the LDCs; supply-side constraints on the part of small countries in the region with limited capacity to meet the demand generated by the larger economies; presence of high logistics and transport costs; high tariffs within the region; trade in low technology intensive type of tradable products with little or no opportunities for disintegration and fragmentation in the production chain (ASSOCHAM, 2014).

Figure 4. Intra-BIMSTEC trade as a share of total BIMSTEC trade.

Source: Computed from WITS

SL's Existing Trading Arrangements

BIMSTEC is one of the many regional trade agreements that SL has signed up to. At present, the potential benefit from a BIMSTEC agreement to SL is limited to increased market access to TH and MY since SL already has some access to IN, BG, BH and NP through bilateral and regional trade agreements (Wijayasiri & De Mel, 2008).

Currently, SL participates in two regional agreements: the South Asian Free Trade Area (SAFTA) Agreement and the Asia-Pacific Trade Agreement (APTA), and two bilateral agreements: the Indo-SL Free Trade Agreement (ISFTA) and the Pakistan-SL Free Trade Agreement (PSFTA).

SAPTA/SAFTA

Seven SAARC members (BG, BH, IN, the Maldives, NP, Pakistan and SL) signed the South Asian Preferential Trade Agreement (SAPTA) in 1993. Four rounds of trade liberalization were completed under SAPTA and each round contributed to increase product coverage and deepen tariff concessions (WTO, 2010). However, due to the slow pace of trade liberalization, SAFTA was signed in 2004 and came into operation in 2006 superseding SAPTA.

The pace of liberalization under SAFTA has also been slow due to the large size of sensitive lists, prevalence of non-tariff barriers (NTBs), exclusion of services and investments, high transaction costs and the political uncertainties between countries, especially between IN and Pakistan (De Mel, 2007). Intra-regional trade in South Asia was as low as 5 percent in 2006 at the time SAFTA came into effect. The much expected growth in intra-regional trade has not been materialized to date despite the operationalization of the agreement (De Mel, 2007).

ISFTA

One of the significant bilateral FTAs to emerge in the region was the IN-SL FTA (ISFTA), which was signed in 1998. Despite the delays in negotiations owing to domestic concerns, the Agreement came into force in 2000 and has since continued to be implemented according to the schedules that were agreed upon (Weerakoon, 2010). SL's trade with IN has gradually changed in terms of value and composition after its implementation. Immediately preceding the agreement (1995-2000), average annual exports from SL to IN were $39 million (close to 1 percent of SL's overall exports) while average imports from IN were $509 million (close to 10 percent of

SL's overall imports) (Kelegama, 2014). While IN was an important source of imports even prior to the FTA, it was not a major export market, and in 2000 it ranked 14th in terms of export destinations of SL (Kelegama, 2014). By 2012, however, IN became the third largest export destination after the European Union (EU) and the United States (US) (Kelegama, 2014). The number of products exported by SL to IN have also increased since the implementation of the ISFTA. While in 1999 SL exported 505 products to IN, by 2005 this had more than doubled to 1,062, and by 2012 had further risen to 2,100 (Kelegama & Karunaratne, 2013). Imports from IN to SL have also increased at a rapid rate following the implementation of the ILFTA, from $ 600 million in 2000 to $ 3,640 million in 2012 (Kelegama, 2014). Furthermore, IN has become SL's main source of imports since 1997. Nevertheless, the bulk of imports from IN to SL (petroleum, vehicles, sugar, cotton, iron and steel, and pharmaceutical products) do not receive preferential treatment and remain outside the Agreement (Kelegama & Karunaratne, 2013). In fact, over 70 percent of SL's imports from IN have been in the negative list (Kelegama & Karunaratne, 2013).

PSFTA

After the significant market access SL gained following the ISFTA, PSFTA was signed in 2002 and came into effect in 2005. SL's trade with Pakistan has accelerated during 2005-2010 since the PSFTA entered into force in 2005.

Although the exports from SL to Pakistan have increased from $ 56 million in 2003 to $ 36 million in 2007 and SL has diversified its export basket to Pakistan over time due to the Agreement, the share of exports has remained the same at 0.7 percent out of SL's total export (Kelegama & Karunaratne, 2013). Imports from Pakistan to SL have accelerated at a faster pace rising from $ 71 million in 2003 (1 percent of total imports), to $ 178 million in 2007 (1.6 percent of total imports) (Kelegama & Karunaratne, 2013).

However, trade between the two countries has occurred outside the PSFTA as the products that were traded between the two countries have been in the negative lists of both countries. Pakistan's negative list, which consists of 540 tariff lines, contains many of SL's main exports to Pakistan including tea, rubber products, certain ceramics, paper products and several textile and garment products (IPS, 2007).

APTA

Asia's first multilateral preferential trade agreement, known as the Bangkok Agreement, was signed in 1975. Trade negotiations under the Agreement have followed a positive list, product-by product approach. The agreement was renamed as Asia-Pacific Trade Agreement (APTA) and signed on 2 November 2005 and came into effect on 1 September 2006 (ESCAP, 2006). Currently, members of the Agreement include: BG, China, IN, Republic of Korea, Laos? People's Democratic Republic, SL, and Mongolia.

APTA has adopted modalities for extending negotiations into other areas such as NTMs and entering into Framework Agreements on Trade Facilitation, Trade in Services and Investments. SL has ratified the Framework Agreements on Trade Facilitation and Investment, and members are currently engaged in following up on the implementation of these Agreements. APTA is the only trading arrangement that SL is a partner with countries outside South Asia: China and Korea. APTA has helped SL to enhance a market access particularly to these two major markets. SL's major export items under APTA include coir products, rubber tyres, gloves, tea, apparel, activated carbon, porcelain ware, floor tiles and fish products. Under APTA, SL receives tariff concessions (Andree, 2010) for over 1,858 products exported to China. These account for around 50 percent of total exports to China from SL (Kelegama, 2009). However, the utilization of these concessions remains low (Kelegama, 2009).

Role of BIMSTEC-FTA

To penetrate the South Asian markets SL has been moving from regional to bilateral trade agreements due to the sluggish progress of SAFTA. Provisions made under the bilateral agreements are much more favorable than the provisions provided by SAFTA. Both the bilateral agreements have given SL greater market access to IN and Pakistan. Nevertheless, the trade between SL and IN, and SL and Pakistan still occur outside the FTAs due to the restrictions maintained by all three countries. Negative list, restrictive rules of origin (ROO) criteria and Non-Tariff Measures (NTMs) are some of the measures that hamper SL's trade with IN and Pakistan. For these reasons, although there has been an improvement in trade between SL and FTA partners, utilization of agreements has been low. For instance, ISFTA utilization rate for SL's exports, which peaked to 99 percent in 2003, have since then witnessed a steady decline to 65 percent by 2013. Further, ISFTA utilization for imports was only 14

percent in 2013. In this context, BIMSTEC FTA could provide greater access to IN, BH, BG and NP beyond the existing agreements as well as to TH and MY if the Agreement is more comprehensive/ambitious in its coverage of trade and addresses the problems/issues which have limited the use of the agreements already in place in the region.

Issues Related to Existing Trading Arrangements of SL and Lessons for BIMSTEC

Negative List

Due to the negative list approach of negotiations, the existing FTAs of SL have not been able to garner the potential benefits. For instance, while 42 percent of SL's exports to IN are restricted by the IN Negative List in SAFTA, 54 percent of IN's imports from? SL fall under the Negative list in the SAFTA. However, the Negative Lists are comparatively smaller in the case of bilateral agreements; only 3.3 percent of SL's exports to IN fall under the Negative List in the ILFTA (de Mel, n.d.). Also, 44 percent of imports from IN fall under the Negative List of SL in the ILFTA (de Mel, n.d.). BIMSTEC should be mindful in its approach to liberalization considering the lessons learnt from the existing FTAs in the region. It is important to strike a balance between domestic sensitivities and market access offered under the BIMSTEC FTA, and to keep the size of the Negative Lists to a minimum as much as possible.

NTMs

Although tariff schedules have been liberalized to a certain extent, SL's trade expansion with FTA partners has been impeded by NTMs including tariff-rate quotas (TRQs). For example, IN has maintained tariff-rate quotas for tea, garments and textile while Pakistan maintained tariff-rate quotas for tea, garments and betel. Hence bulk of the tea exports from SL to IN and Pakistan have been outside the FTAs. BIMSTEC region, like other regions, suffers from various forms of NTMs (Prabir De, 2016), which are likely to affect trade expansion when tariffs are reduced. NTMs should be identified at the onset of negotiating a BIMSTEC FTA and addressed along with tariff reductions/eliminations. In fact, rationalization of NTMs would facilitate regional trade, much more than mere tariff cuts. With regard to TRQs, there should be binding commitments to reduce/eliminate them over time as part of the Agreement.

Rules of Origin

Varying and overlapping ROO criteria under different agreements have caused confusion among traders. Moreover, stringent ROO criteria have also hampered utilization of FTAs. For instance, SAFTA and ISFTA require a change of tariff classification at four-digit level (de Mel, n.d.). This rule has had a detrimental effect on SL's exports where a change in tariff classification at the four-digit level is difficult to achieve. On the other hand, PSFTA has a more favorable change in tariff classification requirement of HS six-digit (de Mel, n.d.).

As mentioned before, BIMSTEC members are already linked with each other through several sub-regional trade agreements with their own ROOs, which have created arguments over the determination of BIMSTEC ROOs. In negotiating a trade agreement in BIMSTEC, it is therefore important to relax and simplify the rules of origin so that they are easy for traders to understand and to comply with, while ensuring that the necessary controls are in place to prevent fraud. More importantly, ROO should try not add to the existing confusion with the multiplicity of trade agreements and their own ROOs.

Mutual Recognition Agreements

The lack of MRAs between SL and its FTA partners has resulted in various additional checks/ testing/certifications on the goods by the importing country although the goods have been previously checked, tested and certified by the relevant, approved authorities in SL. Some of the issues faced by traders include: non-acceptance of testing methods and standards; packaging, labeling and markings; and duplication of health and safety checks in IN and SL. This has resulted in delays and additional costs for both exporters and importers of both countries.

MRA between the countries, especially between key agencies such as Standards Institutes and Industrial Technology Institutes, can assist in reducing the necessity to carry out additional checks. If the governments can agree on testing/certifying bodies in each country then extra money and time would not have to be spent on additional testing and certifications. For this reason, an MRA should be signed together with the BIMSTEC trade agreement specifying the mutually recognized or agreed standards.

National Awareness and Consultation

Lack of knowledge/awareness among traders of the concessions offered by the FTAs has been a key impediment to garner benefits of FTAs. Although a majority of exporters/importers are aware of the FTA, there are SMEs who lack awareness of specific information on the duty concessions offered and the processes attached to acquiring the preference (ROO, TRQs etc.). In order to bridge the information gap, widespread awareness campaigns are a vital necessity to disseminate information effectively, especially among SMEs.

Past experiences also reveal that the public consultations during trade negotiations have been mostly restricted to government institutions and the commerce and trade departments, where other stakeholders like traders and service trade-related providers were not adequately represented/consulted. Consultations should not be reserved purely to the governments and to the commerce and trade departments but rather with stakeholders at large. This can ease exporter-importer concerns, demonstrate that challenges in the agreements can be addressed in a participatory manner, and help create broader public awareness of and confidence in the opportunities and benefits of the agreements.

Institutional support

The absence of a fixed body to address problems arising when trading under the agreement is an impediment in using the FTAs. When problems arise regarding a shipment (i.e. documentation), there is no formal body of authority that takes up the complaints and addresses them quickly. Quick response is essential due to high costs of delays and if the cost benefit under the FTA is negated then the traders will not be encouraged to export/import further. Hence an inquiry point to address all trade-related matters is a priority that needs attention. Furthermore, customs cooperation on HS code classification is also an important measure that needs attention as disagreement on HS classification is often a bottleneck for traders.

Trade Facilitation

Trade facilitation is also essential to overcome bureaucratic issues in countries with which SL has bilateral and regional trading arrangements.

Within the BIMSTEC, more emphasis should be given to trade facilitation; there is a need to reduce bureaucratic delays and paper work at the border, and upgrade customs procedures (i.e. single window). One of the indicators of trade facilitation is the number of documents required to complete the export/import process and the costs associated with trading. For easing up cross-border movement, existing trans-border formalities, customs procedures need to be simplified (Rahman & Kim, 2016). Such a process will partly address some of the non-tariff barriers in the region and catalyze trade. According to the ESCAP, trade facilitation is a more powerful driver of trade than tariff reductions when tariff levels are already low (Kelegama, 2016).

Comprehensive Agreements

A strategically negotiated comprehensive agreement, including agreements on services and investments, and MRAs can address shortcomings of existing agreements to a large extent and boost FDI between partner countries. In the case of the ISFTA, the governments' efforts to develop it into a Comprehensive Economic Partnership Agreement (CEPA) were not successful due to some concerns expressed by local groups on the agreement (i.e. the nature of agreement itself and drawbacks in the FTA) (Kelegama, 2014). BIMSTEC could take cues from Sri Lanka's experience in negotiating with its trading partners into account in its negotiations on a services and investment agreements.

Connectivity

In addition to trade facilitation issues, and weak supply-side issues, the full potential of the region will remain largely untapped due to poor connectivity. In fact, lack of connectivity has been identified as one of the drawbacks that make the BIMSTEC as one of the least integrated regions in the world (Prabir De, 2016).

Road and railway connectivity within the region is poor in BIMSTEC (ASSOCHAM, 2014). A substantial portion of intra-BIMSTEC trade at present uses land and sea routes but a major problem is that there are many missing highway links in addition to poor condition of roads which hinder the movement of goods. Railway links are non-existent while the region suffers from railway gauge mismatch (for example, broad gauge in IN while TH, MY and BG have meter gauge). Also, ports need to be modernized and their efficiency

increased. Without improvements in connectivity, there cannot be any effective regional cooperation and improved intra-regional trade. These weaknesses add to high intra-regional trade costs and negate benefits of geographical proximity. Improvements in infrastructure and connectivity are a necessity to realize BIMSTECs trade and investment potential (Rahman and Kim, 2016).

It is encouraging to note that countries within the region are working to improve physical connectivity in the region. Significant efforts are underway to address infrastructure and connectivity constraints in the region (Prabir De, 2016). While the Asian Development Bank, the World Bank and other development organizations plan to support infrastructure financing in the region, some of the BIMSTEC countries like IN and TH have taken steps to build cross-border infrastructure unilaterally.

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Thailand

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Blue Economy: How would Mangroves in Thailand Further Advance and Sustain Connectivity in the Bay of Bengal Region

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Abstract

Advancing intra-regional connectivity in the Bay of Bengal would benefit all the countries, mainly through socio-economic development, particularly in the transport, trade, energy, tourism and telecommunication sectors. All these efforts would create new opportunities for development and significantly narrow the development gap within the region. While recognizing the tangible benefits of linkages between countries through social and economic development, as the region advances connectivity for shared and sustained prosperity, integration of environmental sustainability into sectoral development should also be taken into account.

The Bay of Bengal is one of the largest marine ecosystems with high biological resources that contribute to the improvement of lives and livelihoods of its coastal populations. The Bay supports a wide range of habitats, including extensive tracts of mangroves straddling across the Bay along its coastline from Sri Lanka and India on the west, Bangladesh on the north, to Myanmar and Thailand on the east. Healthy mangrove forests and their ecosystems provide flora and fauna habitats, restored fisheries, local sustainable income opportunities, shoreline protection, increased carbon sequestration and coastal protection from sea level rise and climate change-induced weather events.

The most extensive mangrove forests in Thailand are located along the Andaman coast of the Bay of Bengal. Serving as valuable habitats and nursery areas for fishes and other marine living resources, mangroves are a critical component of Thailand's socio-economic activities with tourism and fisheries contributing significantly to local and national economic development. A significant part of Thailand's mangrove forests along the coast of Andaman Sea was lost due to converting forest land to brackish water shrimp farming in the 1980s and then damaged by the 2004 tsunami. Hence the widespread loss of Thailand's coastal habitats has required the government to introduce specific policies and measures for

mangrove conservation and restoration. The policies include the recently adopted Marine and Coastal Resources Management Act that encourages participation of coastal communities and local governments in mangrove restoration and conservation. Thailand's experience with mangrove forest management would serve as a model for other South and Southeast Asian countries to formulate an appropriate policy for conservation and management of their mangrove forests.

The case of mangrove conservation and management in Thailand illustrates how important it is to integrate ecosystems and long-term livelihood concerns into the development agenda. It is also important to invest in understanding the context in which seascape connectivity has a role in the conservation and utilization of marine resources for promoting people-to-people connectivity and blue economy in the Bay of Bengal, while maximizing the marine and maritime cooperation across all the countries within the Bay region.

Introduction

Promotion of people-to-people contacts in and among the South and Southeast Asian countries as a strategy to strengthening mutual understanding and goodwill among the people would facilitate State-to-State cooperation, particularly in areas of mutual interests. Based on the creation of a network and cooperation through harnessing people-to-people contacts in the Bay of Bengal region, a number of interstate initiatives, including economic and security cooperation, can be realized and further enhanced. Through the people-to-people approach, the Bay of Bengal people can realize their full potential in social and economic development and help improve connectivity among the regions while contributing to wider integration.

With the emphasis on sustainable development, which recognizes that economic growth must be socially inclusive and environmentally sound, this paper discusses the importance of promoting blue economy in the Bay of Bengal region. The objective of this paper is to illustrate key policy points relevant to current and future efforts to strengthening regional cooperation in the Bay of Bengal in the context of people-to-people connectivity and blue economy concepts by drawing on Thailand's experience with mangrove management policy and practices. Such policy initiatives and local practices shared with Thailand's neighboring countries in the South and Southeast Asian region could be further exchanged with the Bay of Bengal countries, particularly through the existing political and technical bodies such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

The Bay of Bengal Region

The Bay of Bengal region, as defined for the purpose of this study, comprises Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand. The region brings together 1.6 billion people (2015) – 21 percent of the world population, and a combined GDP of over $ 2.84 trillion (2014) . One of the key principles to ensuring overall prosperity and more 'people-to-people' contact between the inhabitants of the region is to treat the region as one geographical, biophysical and economic entity while respecting political boundaries, and national, ethnic, religious and cultural identities.

Geophysical and Biophysical Settings

The Bay of Bengal is a northern extension of the Indian Ocean, positioned between India and Sri Lanka in the west, Bangladesh

to the north, and Myanmar and the northern part of the Malay Peninsula (Thailand) to the east. It is approximately 1,000 miles (1,600 kilometers) wide, covering 6.2 million square kilometers, with an average depth near 8,500 feet (2,600 meters). The maximum depth is recorded at 15,400 feet (4,694 meters). The continental shelf around its perimeter is mostly narrow. About 66 percent of the Bay's seawater area lies within the Exclusive Economic Zones Boundaries (EEZs) of the Bay's countries, the remaining being the high seas area are outside any country's jurisdiction. The very deep Java Trench is a feature of the south eastern side of the Bay, from the Andaman Islands in the north to the coast of Sumatra in the south, with depths reaching over 5,000 meters.

Weather conditions in the Bay of Bengal, particularly along its northern coast, are very active and favorable for a hazard to occur. Overall, the Bay of Bengal generally spawns three to five tropical cyclones a year in the spring and fall months, bringing intense winds and severe flooding. Tropical cyclones usually develop in the Southeastern Bay of Bengal and track either north to northwestward toward Bangladesh or west to northwestward to the eastern coast of India. Because of its low-lying land, southern Bangladesh is especially susceptible to these storms. The Bay's eastern part has tropical climate. The coasts of Myanmar, southern part of Thailand and the Andaman and Nicobar Islands usually see no severe climate condition except for tropical storms and rains in late summer (end of May).The Bay of Bengal region is vulnerable to a changing climate due to a combination of uncertain weather patterns, rising sea levels and changing trans-boundary river flows.

Numerous large river systems, including the massive Ganges and Ayeyarwady as well as the transboundary rivers such as the Tsangpo-Brahmaputra, drain directly into the Bay of Bengal. These rivers discharge huge quantities of freshwater and large quantities of silt into the Bay's coastal plains and deltas. A large volume of rainfall and river flows with freshwater inputs and nutrients make the Bay of Bengal's coasts a high primary production area. Due to a range of factors, including upstream development activities and climate change that further exacerbate water stress throughout the region, uncertainty about the future flows of the region's major rivers can pose a formidable challenge to the Bay's environmental health and productivity.

Three important critical habitats are found along the Bay of Bengal coasts. These include mangroves (11.9 percent of world mangrove resources); coral reefs (8.0 percent of the world's coral reefs ; and

seagrass. Other key biodiversity and natural resources in the areas include marine living resources that support major fisheries, a large number of endangered and vulnerable species, and extensive mineral and energy resources. The Bay's ecosystems and natural resources are of considerable social and economic importance to its bordering countries, with activities such as fishing, shrimp farming, tourism and shipping contributing to food security, employment and national economies.

The Bay of Bengal biophysical condition is threatened by pollution which can be transboundary in nature. The priority transboundary pollution issues in the Bay of Bengal region are: sewage-borne pathogens; organic load from sewage and other sources; marine litter; increasing nutrient inputs; oil pollution; persistent organic pollutants (POPs) and persistent toxic substances (PTSs); and mercury. Major sources of pollution in the bay region include widespread discharge of untreated or inadequately treated domestic, industrial and agricultural wastewater; inadequate solid waste management, including widespread discharges of solid waste into rivers and coastal waters and the open burning of solid waste which generates dioxins and furans; increasing emissions of nutrients from fertilizer use in agriculture, expanding aquaculture, and atmospheric emissions from industry and fossil fuel burning; and routine operational discharges of oil from shipping and dumping of waste oil by vessels and vehicles on land.

Socio-economic Settings

The Bay of Bengal is fast becoming a key area of economic and strategic development in the Indo-Pacific region where trade and maritime logistics take place. Countries around the Bay of Bengal, including Bangladesh, Sri Lanka and Myanmar, are currently experiencing high growth rates. Aspiring toward the development achieved among their wealthier neighbors in South and Southeast Asia, these Bay of Bengal countries are liberalizing their economies, and economic interactions among the countries have grown gradually in recent years. Improved political relationships among the governments has provided an opportune time for the Bay of Bengal littorals to explore both bilateral and multilateral cooperation in resources sharing, inter-linking connectivity and joint efforts to enhance security in the region.

The Bay of Bengal countries characterized by a diverse economic backgrounds, ranging from the highest GDP per capita (Thailand: $ 14,870) to the lowest GDP per capita (Nepal: $ 2,410) . Recent economic growth in the littorals has been mainly driven by the

industrial and service sectors, resulting in increasing economic activities and population growth in the coastal zone. Economic benefits generated by the development and high concentration of people in these coastal regions include improved transportation links, industrial and urban development, revenue from tourism and food production.

The coastal population of the Bay of Bengal countries is estimated to be over 300 million, with fisheries and coastal aquaculture as major sources of income or food supply. Based on a global analysis, over 50 percent of all of the world's coastal poor live in the countries of the Bay of Bengal. With relatively small economies, marine living resources are extremely important for the livelihoods of the people and communities along the coastal areas, in particular as a source of food and employment. Marine and freshwater fishery production targets have been a priority area in the development agenda of the Bay of Bengal littorals.

Geopolitical and Institutional Settings

Emerging as a regional strategic hub, the Bay of Bengal opens up enormous economic opportunities and potentials for the littorals to chart out a shared vision of building a community based on peace, prosperity and stability. At the regional level, partnerships between and within the Bay of Bengal countries have been established through bilateralism and multilateralism. The later combines multiple interests among the Bay of Bengal littorals with areas in common. In areas of political and economic cooperation, key institutional arrangements include the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), the South Asian Association for Regional Co-operation (SAARC), the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), the UNEP Regional Coordinating Unit for East Asian Seas, the Asia-Pacific Fishery Commission (APFIC), the Network of Aquaculture Centers for Asia (NACA), the Indian Ocean Fisheries Commission (IOFC), the Indian Ocean Tuna Commission (IOTC), the International Forum for the Indian Ocean (IFIOR), the Indian Ocean Rim Initiative, the South Asian Co-operative Environment Programme (SACEP), and the Indian Ocean Marine Affairs Co-operation (IOMAC).

Countries bordering the Bay of Bengal are governed by a range of different systems, all are promoting economic growth and development. Most of the littorals have relatively well-formulated

legislations and policies to regulate the different sectors. Many countries have adopted decentralization policies that present a multilayered system of governance (national-provincial/state and local), and therefore the form and type of institutional arrangements vary widely from country to country and in each country, particularly those with actual or potential responsibility for environmental protection and the management of coastal and marine resources.

Due to the complex nature of the coastal areas and government bureaucracies, key challenges for effective management of and coordination among various economic sectors include weak governance (especially at the local level) and insufficient human capacity and government funding for enforcing laws and regulations, particularly those concerned with marine living resources and critical habitats. As part of the global society's response to the ecological and economic consequences of ecosystem degradation, there is a need for the Bay of Bengal governments to recognize and adopt internationally accepted concepts and norms such as the ecosystem-based approach and the precautionary principle.

Blue Economy as a Framework for Sustainable Development

The Blue Economy concept supports a growth strategy in the ocean sector with low environmental impacts. This concept has emerged as a feasible development path compatible with sustainable growth, founded in line with the concept and principles of and mutually supportive with the Green Economy. The strongest global endorsement of the concept has been the adoption of the UN Sustainable Development Goal 14 which seeks to "conserve and sustainably use the oceans, seas and marine resources for sustainable development."Emerging as a tool, which offers specific mechanisms for Small Island Developing States (SIDS) and coastal countries to address their sustainable development challenges, the blue economy encompasses all marine-related economic activities, including aquaculture, coastal tourism, shipping, energy, tourism, fisheries, transport, offshore oil and gas and other sectors. The integrated ecosystem concept appears to be one of the major potential advances in successfully combining business, society and the environment. Such an approach seek to change economic and industrial behavior to reduce impacts on the marine environment and in turn increase human welfare by carefully balancing the environmental, economic, and social capital required to support a sustainable, ecosystem-based approach to economic development activities.

The Blue Economy concept is expanded in a rational way to cover areas beyond the seas and oceans. As recently used in the African context, the Blue Economy concept includes recognition that the productivity of healthy freshwater and ocean ecosystems can ensure aquatic and marine-based economic benefits of both coastal and landlocked countries. Based on the emerging concept, the blue economy seeks to move from the current sectoral approach and requires an integrated, holistic, and participatory approach that includes sustainable use and management of resources for societal progress at multiple levels. In addition, the transition to a new blue economy will require governments to take policy and action in developing new approaches to managing environmental challenges and finding ways to partner with industry to foster innovation that may not occur on its own. This includes the need for mainstreaming the Blue Economy into national and regional development plans, where applicable.

Thailand's Blue Economy: The Case of Mangroves

Thailand has become an upper-middle income economy since 2011, with sustained strong growth and impressive poverty reduction. Thailand's economy grew at an average annual rate of 7.5 percent in the late 1980s and early 1990s. The country has recently faced economic and political challenges that have led to modest growth rates at 0.8 percent in 2014, 2.8 percent in 2015, and estimated at 2.5 percent in 2016. The industrial and service sectors are the main sectors in the Thai gross domestic product, followed by trade and logistics, communication, agriculture and fisheries, and construction and mining sectors. Telecommunications and trade in services are emerging as centers of industrial expansion and economic competitiveness.

Thailand's unemployment rate has held below 1 percent since 2011, reported as 0.56 percent at the end of 2014 and is forecast to go down to 1.01 percent in May 2016. A large proportion of the country's workforce have been absorbed by subsistence agriculture, self-employment, or as workers in the informal sector (e.g. own-account work, street vendors, motorbike taxis). As Thailand continues to industrialize, its urban population accounts for 50.4 percent of the total population (2015). Based on a recent estimate, 40 percent or 27 million people live along Thailand's coastline.

National Marine Interests and Activities

The marine environment and coastal areas are essential components of the Thai economy and society, and contribute tremendously to national development. Thailand has a total marine area of 316,118.3 km2 which is divided into the Gulf of Thailand in the Pacific Ocean on the east side and the Andaman Sea in the Indian Ocean on the west side. The Royal Thai Government officially established the Exclusive Economic Zone (EEZ) of the Kingdom of Thailand in 1981. Thailand's EEZ covers a total area of approximately 420,280 km2, of which 116,280 km2 are in the Andaman Sea. The country's maritime border is shared with Cambodia and Vietnam in the south east, Myanmar in the west and Malaysia in the south. Thailand has a total coastal line of approximately 2,815 kilometers, 937 of which lies on the Andaman Sea and 1,878 on the Gulf of Thailand.

In terms of the national interest, the value of Thailand's marine resources estimated to be about 24 trillion baht. The coastal zones are of economic and ecological significance both at the local and national level. Based on the initial ocean economy assessments recently conducted by PEMSEA (the Partnerships in Environmental Management for the Seas of East Asia), the coastal and marine sector has contributed significantly to Thailand's national economy. The total economic value of coastal and marine resources in Thailand is around USD 27.67 billion. Almost 37 percent of the value of ecosystems and selected endangered species came from indirect use and non-use values (including mangrove forests for carbon sequestration, coastal protection, and fish breeding ground and nursery). Marine fisheries and aquaculture, as well as coastal tourism and marine transportation, are the main economic activities along the country's coasts.

Coastal and marine fisheries are important to Thailand as sources for food, employment, and international trade. Thailand has one of the world's largest fish and seafood industries and the sector is of vital importance to the country's economy. About 90 percent of its production is exported, accounting for 4 percent of the country's total exports. It is estimated that the seafood industry in Thailand provides either direct or indirect employment for over 650,000 workers. A recent report reveals that large numbers of migrant workers from Thailand's neighboring countries, particularly Cambodia, Laos and Myanmar, have participated in the Thai seafood industry, both at sea and on land. It was officially estimated in 2015 that 71,132 migrants are working in sea fisheries.

As part of Thailand's national policy, the government has introduced a series of law and policy frameworks to promote sustainable development of the marine fisheries sector. Recent developments on policy and strategic measures for Thai fishing industry include an action plan for improving working conditions in Thai fisheries; guidelines for the installation of a vessel monitoring Systems (VMS) on vessels operating in international waters; a Hazardous Work List in the shrimp and seafood industry for young workers between 15-17 years of age; a Ministerial Regulation to Protect Labour in the Sea Fishing Industry (2014); measures to register and legalize irregular migrants, codes of conduct adopted by Thai seafood industry associations; the new Royal Ordinance on Fisheries B.E. 2558 (2015) aiming to improve official oversight of Thai fisheries to better reflect current industry realities establishes a fisheries management scheme, and improves port-state measures in line with international standards; and the formulation and implementation of the National Plan of Action to Prevent, Deter and Eliminate IUU Fishing.

According to Thailand's 11th National Economic and Social Development Plan (2012-2016), which describes key development strategies to move Thailand forward on a more sustainable path and pave way to achieve high income country in a longer term, transportation development is a key national policy. Guided by the national plan, Thailand's new transportation development strategies (2015-2022) have been developed, consisting of five key programs – one of which concerns maritime transport development, aimed at enhancing competitiveness and promoting regional connectivity. Key long-term national development activities include projects on corridor networks, regional supply chain and production base, and Special Economic Zone Development.

As part of Thailand's new transportation development strategies, in making Thailand a leading marine hub in the region, a focus is on development of ports and facilities for yachts and cruise ships to promote coastal and marine tourism along Thailand's coasts. Thai marine tourism industry has been expanded rapidly and set high on the country's national tourism development agenda. Based on recent studies by Thailand's Ministry of Transport, some 11 potential locations have been identified where ports could be developed on the Andaman Sea coast. Some of the best tourist destinations and natural attractions in Thailand are found along the coasts and within the marine parks. Thailand has a total of 22 declared marine national

parks, covering a total estimated area of 5,812 km2 or 1.8 percent of the total marine area of Thailand, 15 of which are located in the Andaman Sea.

People and Mangroves: Social-Ecological Connectivity

Mangroves in the coastal areas play a key role as essential habitats for several species of animals, including migratory shorebirds and waders and spawning and nursery grounds for many commercially important fish and shellfish species, as well as provide important indirect services such as coastal tourism, improving coastal water quality, and shoreline stability. As evidenced by the traditional knowledge of artisanal fishers in Asia, the role mangroves play as nursery grounds for many commercial aquatic species has been well understood.

Mangrove forests also consolidate soft sediments deposited along coasts, reduce soil erosion, and mitigate coastal storm and flood impacts. An early observation in south Indian villages after the December 2004 tsunami suggested that mangroves, as well as coastal trees and shrubs, minimized disastrous wave energy and reduced the number of casualties. During tropical storms, mangroves can serve as life-saving belts to help filter the energy of strong winds and tidal waves. Mangrove ecosystems and the diverse resources and services they provide (wood, food and fuel) are critical to the livelihood security of highly vulnerable coastal populations throughout the tropics.

The importance of mangroves to fish populations by providing habitat connectivity, nursery grounds and trophic function has been extensively studied in recent years. There are overwhelming scientific findings on the role mangroves play in supporting on-site and near-shore fisheries. A recent research concluded that mangrove conservation and restoration in areas close to human populations will render the greatest return on investment with respect to enhancing fisheries. Mangroves are also key for local communities in providing major contributions to and sustaining their livelihoods while allowing the people to adapt to climate change. On a transboundary scale, there appears to be a positive relationship between the area of mangroves and offshore fisheries yields. Thailand's mangroves are also important on a global scale as the country is home to 35 of a total of 50 species found worldwide.

Due to the complexity of marine physical and biological factors (such as tidal range, salinity, mangrove and fish species) as well as the extent of human disturbance, the linkages between mangroves

and coastal to offshore fisheries are highly site-specific and a more comprehensive understanding of mangroves' ecosystem services and their values from both ecological and socio-economic perspectives will enhance the sustainable management of both mangroves and fisheries.

However, mangroves are under severe environmental problem as the forest areas have been fragmented resulting from human activities and natural disasters. In addition, the vulnerability of mangroves to climate change is a growing concern, while their further loss may have wider negative consequences on marine ecosystems and climate in general. Mangrove area and ecosystem destruction is common, especially in South and Southeast Asian countries, including Thailand.

Mangroves forests are present along Thailand's coasts in all the 23 coastal provinces, with an estimated area of 2,501.94 km^2. A survey conducted in 1996 estimated 80 percent of Thailand's mangrove forest is found on the west coast of the peninsula or the Andaman sea coast. However, only seven percent of the total area covered by mangroves is found within protected areas such as marine national parks.

Thailand lost about 15 percent of its mangrove area in the period of 1980-2000, which was due largely to high population pressure and conversion of mangroves for pond shrimp culture, mining and infrastructure development. While shrimp farms accounted for about 64 percent of mangrove area conversion throughout the country, changes in mangrove area in Thailand's Andaman coast were due mainly to the growth of the tin mining industry, construction of fishing port facilities, and urban development. Mangroves were also significantly damaged by the 2004 tsunami. Economic activities such as excessive tourism activities and improper management of coastal water pollution have further contributed to the degradation of Thailand's mangroves.

The Thai government has a special interest in mangrove management as evidenced by various plans, policies and measures in the many levels of administration. Early attempts to manage the coastal areas in Thailand focused on resolving coastal land-use conflicts, particularly the conversion of mangrove areas for aquaculture and urban development. A number of cabinet resolutions on the management, protection and conservation of mangrove resources had been adopted since 1979. In addition, attempts were made by the government to rehabilitate degraded mangroves through the implementation of an integrated coastal management (ICM)

approach involving the relevant national government agencies and local administrative organizations as well as local communities.

Apart from specific provisions of the existing laws and policies for the enhancement and conservation of national environmental quality, recent developments on Thailand's national strategy and policy for mangrove management and conservation include the implementation of the Eleventh National Economic and Social Development Plan (2012-2016) which includes a strategy on securing natural resources and conservation areas; the National Biodiversity Strategy and Action Plan 2015-2021 and the Master Plan on Integrated Biodiversity Management 2015-2021 with a strategy to 'protect the interests of the country and managed to enhance and share the benefits of biodiversity in accordance with the Green Economy;' and the new Enhancement of Marine and Coastal Resources Management Act B.E. 2558 (2015) that recognizes the status and role of coastal community for participating in resource management.

Recognizing the importance of interactions between the people and their mangrove forests for the success of coastal area management, the Thai Government has encouraged community participation of one form or another in coastal and marine resource management. In fact, community participation in coastal resources management is generally accepted as a fundamental and practical way to promote compliance with laws and regulations and ensure the sustainability of marine resources. Evidence showed that participation of local communities in management of mangrove forests brings, simultaneously, triple sustainable benefits: environmental, social and economic. Through effective implementation of the existing laws and policies that support the participation of communities and local governments in decision-making, and by further improving the awareness and capability of the stakeholders in the coastal areas, Thailand can have a good understanding of both people-ecological connectivity and people-to-people linkages in mangrove conservation and management for the benefits of all.

Summary and the way forward: Blue Economy in the Bay of Bengal Context

Most of the population in the Bay of Bengal region lives close to water. Major cities and economic activities in the littorals are concentrated along the coastal areas and major rivers that flow toward the Bay. Increasing population and changing land use for

coastal and river-based economic activities including tourism, water-based commerce and industries, fisheries and aquaculture, energy production, and mineral exploitation are driving the growing demand for transport and physical connectivity in coastal and river delta areas. These trends in natural resource exploitation and coastal development are degrading the Bay of Bengal's natural capital such as mangroves and fisheries at a rapid rate.

The combined effects of increased population growth, economic and technical development, as well as climate variability, are threatening the aquatic and marine ecosystems that provide social and economic benefits to the Bay of Bengal littorals. This situation has raised awareness and concern of various stakeholders on the need to sustainably manage water-related and marine areas as "development spaces," leading to the concept of Blue Economy. Unless the governments and all the beneficiaries of the ecosystems take action, development pressures will further degrade the countries' natural habitats and negatively impact the Blue Economy that can provide better quality of life for all within the ecological limits of the planet.

Thailand has engaged in national and regional efforts on sustainable coastal management through the integrated coastal management approach for many decades. The Thai Government decided in 1979 at the beginning of disappearing mangrove forests that measures would be taken to protect the national marine interests derived from mangroves-fisheries-local livelihoods linkages. This prompted the formulation of a clear mission policy on mangroves conservation and rehabilitation along the country's coasts. A broad range of management measures and tools have been adopted to maximize the benefits and help secure the long-term future of mangroves and the people who rely on them, including the involvement of local governments and communities in mangrove management.

The case of Thailand's mangrove management experience shows that, in an effort to achieve the full benefits of marine ecosystems for the people and the economy, a clear understanding of people-ecological connectivity is a key. It also illustrates that, through an integration of ecosystem and long-term livelihood concerns into the national development agenda, the potential of linking development of coastal and marine resources to diversify the economy and expand the benefit space for the Thai economy can be realized-an example of the blue economy policy formulation that highlights the importance of having a sound management proactively maximizing the national benefits from coastal and marine resources.

Thailand's experience in promoting and implementing the Blue Economy concept can serve as a model for aspiring or exchanging with the Bay of Bengal countries to formulate policies for their coastal habitats, particularly mangrove forests. The mangrove case perfectly illustrates how important it is to invest in the knowledge of marine ecosystems across the Bay of Bengal region. At the national level, it is important to invest in improving economic governance for promoting the Blue Economy in each of the Bay of Bengal littorals, as well as in understanding the context in which seascape connectivity has a role in the conservation and utilization of marine resources such as mangrove forests. At the regional level, through the existing institutions including BIMSTEC, a more people-oriented sustainable and inclusive development pathway can be further enhanced to maximize marine cooperation across the Bay of Bengal region. An initial step toward developing Blue Economy for the Bay of Bengal region could be to raise people's awareness and facilitate a good understanding on the Blue Economy resource base, including both natural and human capital.

In the case of natural capital, a thorough understanding of the Blue Economy for the Bay of Bengal region would require undertaking an initial step to conduct an extensive resource mapping exercise in both the aquatic and marine environments, including mangrove ecosystems and resources. A systematic scientific review and economic analysis of the mangrove ecosystem integrity in the Bay of Bengal is an important preparatory step toward developing Blue Economy that is critical to the sustainability of the region.

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