

De, Prabir

Working Paper

Regional integration in Bay of Bengal region in post-COVID-19 period

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Prabir De

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ASIA-PACIFIC RESEARCH AND TRAINING NETWORK ON TRADE

WORKING PAPER

Regional integration in Bay of Bengal region

in post-COVID-19 period

Prabir De¹

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¹ Professor, ASEAN-India Centre (AIC), Research and Information System for Developing Countries (RIS), New Delhi, e-mail: prabirde@hotmail.com. Author is grateful to Durairaj Kumarasamy for his research assistance and analytical support. Author has benefitted from periodic discussions on this topic with a host of scholars, and in particular is grateful to Mia Mikic for her guidance and encouragement. The author also appreciates assistance of ARTNeT in disseminating this paper. Views are author's own.

Abstract

Bay of Bengal countries have been affected heavily by the ongoing Coronavirus pandemic. This article argues that the regional cooperation could help in reducing the costs of pandemic-driven barriers. The responses to the Corona pandemic also suggest a greater scope of regional cooperation among the countries in the Bay of Bengal region. Regional integration may help the Bay of Bengal countries overcome divisions that impede the flow of trade in goods and services, people and ideas, particularly when all members have been facing a common challenge to beat the Coronavirus pandemic. This paper briefly discusses the major challenges being faced by the Bay of Bengal countries, and the way forward in the post-COVID-19 period. It presents the trends in economic growth in the region, which has been the key to regional economic integration, and analyses the likely economic loss due to the COVID-19 pandemic. The article discusses the magnitude of the Coronavirus pandemic in the Bay of Bengal region, followed by a discussion on the progress and achievements in regional cooperation in the Bay of Bengal region with particular reference to the pandemic period. It also presents the opportunities and the regional response to deal with the ongoing pandemic.

Keywords: Bay of Bengal, BIMSTEC, Trade, Regional integration, COVID-19

JEL codes: F1, F13

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List of Abbreviations

APT	ASEAN Plus Three
ASEAN	Association of South-East Asian Nations
BCF	BIMSTEC COVID-19 Fund
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
FTAs	free trade agreements
GDP	gross domestic product
IMF	International Monetary Fund
LDCs	least developed countries
MoU	memorandum of understanding
MVA	Motor Vehicle Agreement
PHEIC	Public Health Emergency of International Concern
RPHLN	ASEAN Regional Public Health Laboratories Network
SAARC	South Asian Association for Regional Cooperation
SDGs	Sustainable Development Goals
SOM	senior officials' meeting
SOPs	standard operating procedures
TH	Trilateral Highway
TTF	Technology Transfer Facility
WHO	World Health Organization

1. Introduction

The Bay of Bengal region is presently home to around 1.6 billion people, which constitute around 23 per cent of the world population. It brings together US\$3 trillion economy, which accounts for 4 per cent of the global GDP and 3.7 per cent of the global trade. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a seven-nation organization of Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand. BIMSTEC, the regional initiative in the Bay of Bengal region, is a unique regional cooperation initiative in terms of geographical contiguity and access to ocean. It not only has direct access to the Bay of Bengal but also enjoys shared history and civilizational links.

Bay of Bengal countries are at different stages of development having different income levels. It has three developing countries (India, Sri Lanka and Thailand) and four least developed countries (LDCs) (Bangladesh, Bhutan, Nepal and Myanmar). On one hand, the region has two landlocked LDCs (Bhutan and Nepal), while, on the other, it has five littoral countries. Three Bay of Bengal countries, namely, Bangladesh, Myanmar and Nepal, are likely to gain developing country status a few years from now (perhaps as early as in 2026).

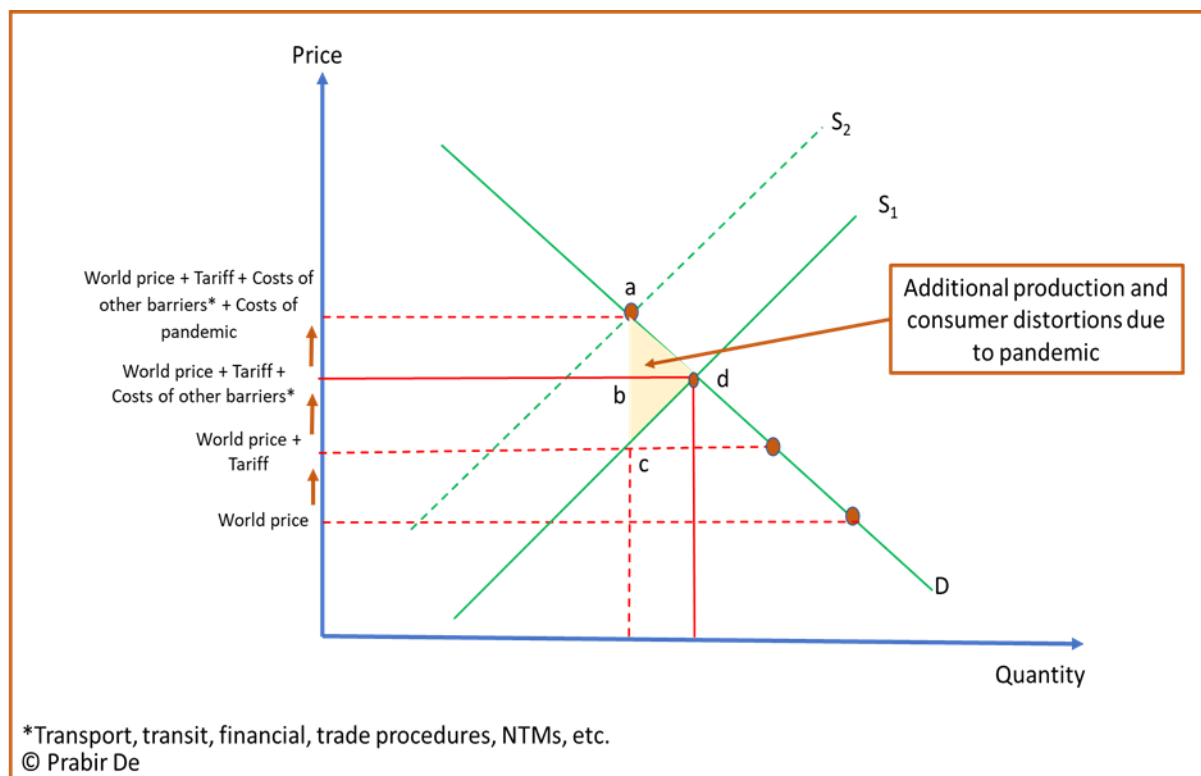
Among seven member countries, five members of BIMSTEC are also members of SAARC, two are members of ASEAN and six are part of SASEC.² BIMSTEC appears as a connector to multiple regional initiatives. For example, due to cross-regional FTAs between some of the member countries, BIMSTEC has become an effective alternative for the Bay of Bengal countries to connect with the world. Notwithstanding its cross-regional structure, BIMSTEC has high economic potential, given the region's economic dynamism, huge market and rich natural resources.

All seven Bay of Bengal countries have been affected heavily by the ongoing coronavirus (COVID-19) pandemic. Illustrated in figure 1, the COVID-19-driven pandemic forces the price of the traded goods to go up with a mark-up over and above the market price, thereby causing additional economic welfare losses. The

² Two (Bangladesh and India) are participating States in the region's oldest preferential trade agreement – Asia-Pacific Trade Agreement (APTA). See more at <https://www.unescap.org/apta>.

triangle acd in figure 1 is the loss of welfare attributed to the shift of market equilibrium from d to the less efficient market equilibrium a due to increase in price as a result of rise of non-tariff barriers (bcd) and additional cost imposed due to pandemic (abd). The economic logic is that removal of the additional costs of ongoing pandemic coupled with enhanced trade facilitation and connectivity would raise the trade volumes and economic welfare subsequently in the Bay of Bengal region.

Figure 1: Illustration of economic distortions due to coronavirus pandemic



Source: Drawn by author.

The responses to the coronavirus pandemic also suggest a greater scope of regional cooperation among the countries in the Bay of Bengal region. Here, regional cooperation could help in reducing the costs of pandemic-driven barriers and facilitating the regional integration. Regional integration may help the Bay of Bengal countries overcome divisions that impede the trade flows, movement of people and capital, particularly when all members have been facing a common challenge to beat the coronavirus pandemic. WHO rightly stated: "With a fast-moving pandemic, no one is safe, unless everyone is safe."

In view of the above, this paper briefly discusses the major challenges being faced by the Bay of Bengal countries in recent period, and the way forward in the post-COVID-19 period. Rest of the paper is arranged as follows. Section 2 presents the trends in economic growth in the region, which has been the key to regional economic integration, and analyses the likely economic loss due to the COVID-19 pandemic. Section 3 then discusses the magnitude of the coronavirus pandemic in the Bay of Bengal region, followed by a discussion on the progress and achievements in regional cooperation in the Bay of Bengal region with particular reference to the pandemic period in Section 4. Section 5 then presents the opportunities and the regional response to deal with the ongoing pandemic. Finally, paper concludes with Section 6.

2. Rising Bay of Bengal and the coronavirus pandemic

The decade (2010-2019) came out highly rewarding in terms of growth in the Bay of Bengal region. Noted in Table 1, between the two consecutive decades, smaller economies in the Bay of Bengal region managed to grow faster than larger economies in the later decade, which is a positive sign of regional prosperity and inclusivity. With a rate of growth of over 10 per cent per annum, the GDP of Bangladesh, for example, expanded over five times in the last two decades, and reached to US\$302.57 billion in 2019 from US\$53.37 billion in 2000. In terms of growth, Nepal comes next. Such a spectacular expansion of economic size was accompanied by higher openness to trade, strong global growth and a powerful regional partnership in the Bay of Bengal region.

Another vital aspect of the Bay of Bengal region is that it has two relatively large middle-income economies, namely, India and Thailand, which generously provide higher market access to the remaining Bay of Bengal countries, thus pulling up the regional demand and supply on a continuous basis. India is a rising economic power, whereas, Thailand, on the other, is the second largest economy in ASEAN. Besides, a sense of common public goods (e.g. shared natural resources, security, education, cuisine, music) is quite distinctly visible among the countries in the region.

Table 1: GDP growth of BIMSTEC countries

	GDP (2000-2009)		GDP (2010-2019)	
	Size, 2000 (US\$ billion)	Growth* (2000-2009), (%)	Size, 2019 (US\$ billion)	Growth* (2010-2019), (%)
Bangladesh	53.37	6.74	302.57	10.13
Bhutan	0.42	11.26	2.53	5.04
India	468.39	11.10	2868.93	5.52
Myanmar	8.91	15.28	76.09	4.38
Nepal	5.49	8.87	30.64	6.71
Sri Lanka	16.33	9.92	84.01	4.01
Thailand	126.39	8.34	543.55	4.77

Note: *CAGR GDP taken at current price

Source: Author's own based on data downloaded from WDI, the Word Bank

Table 2: Intra-BIMSTEC trade matrix, 2019

	Bangladesh	Bhutan	India	Myanmar	Nepal	Sri Lanka	Thailand	Intra-BIMSTEC	Share in World (%)
Bangladesh		0.00	0.98	0.03	0.05	0.03	0.03	1.12	3.11 (1.66)
Bhutan	0.00		0.50	0.00	0.00	0.00	0.00	0.51	97.59 (84.94)
India	8.13	0.69		0.96	7.10	4.23	4.33	25.45	7.83 (5.11)
Myanmar	0.07	0.00	0.64		0.00	0.03	3.26	3.99	22.03 (16.10)
Nepal	0.01	0.00	0.66	0.00		0.00	0.00	0.68	68.85 (42.84)
Sri Lanka	0.13	0.00	0.79	0.03	0.03		0.04	1.02	8.73 (2.81)
Thailand	0.98	0.00	7.32	4.35	0.10	0.38		13.14	5.35 (2.11)

Notes: * Intra-BIMSTEC Trade Matrix is in terms of export **Number in parentheses show corresponding data for the year 2000

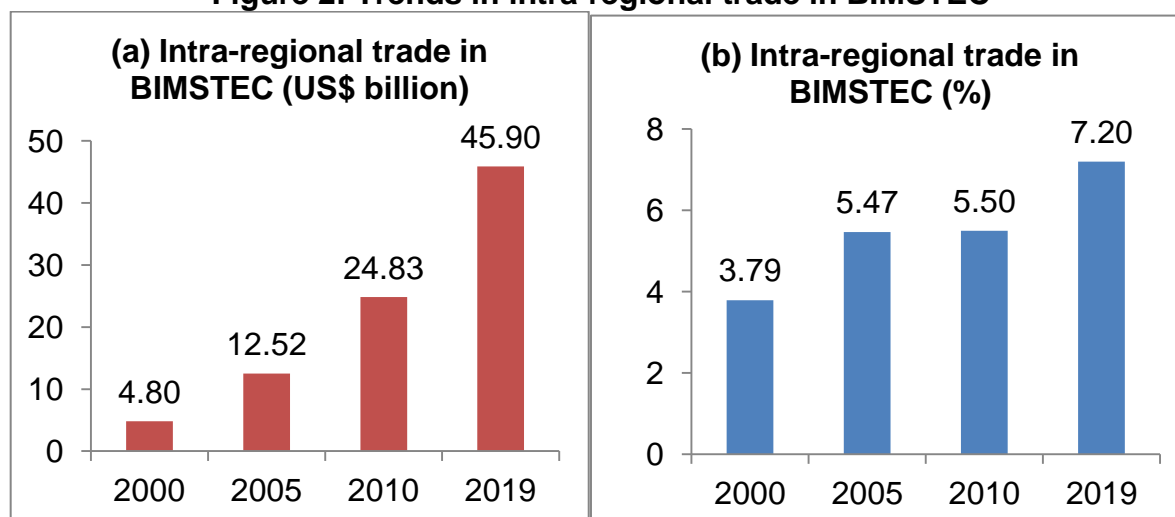
Source: Author's calculation based on DOTS, IMF

Today, the entire Bay of Bengal region has been hit hard by the coronavirus pandemic. Dual effects of the pandemic and the global and national lockdown have caused havoc on the Bay of Bengal countries as a result of which regional economies except Bangladesh, Bhutan and Nepal are already plunged into economic recession in 2020 (IMF, 2020). The Bay of Bengal region is likely to witness about 9.11 per cent GDP loss (US\$355.37 billion) in US\$ current price or

7.67 per cent in PPP terms (Int\$ 952.80 billion) during 2020-22 – perhaps the highest economic loss ever since the Great Depression of 1930s. Smaller economies depending on the region for their ‘bread and butter’ are more vulnerable to such crisis. Let’s examine this vulnerability in terms of trade.

The rising intra-regional trade is another manifestation of growing regional integration in the Bay of Bengal region – increased to 7.20 per cent in 2019 from 5.50 per cent in 2010 (figure 2). Dependence on the region in terms of trade has gone up. Bhutan and Nepal heavily depend on the Bay of Bengal region for their trade (Table 2). For example, almost 98 per cent of Bhutan’s global exports were directed to the Bay of Bengal in 2019, increased from 85 per cent of 2000. Similarly, about 69 per cent of Nepal’s global exports were directed to the Bay of Bengal region, up from 43 per cent of 2000. India, the largest economy of the Bay of Bengal region, has exported US\$25.45 billion in 2019 to the region, followed by Thailand (US\$13 billion) and Myanmar (US\$4 billion). Intra-regional trade during the COVID-19 pandemic period has faced deceleration and the trade volume has declined.

Figure 2: Trends in intra-regional trade in BIMSTEC



Source: Calculated based on DOTS, IMF

2.1 Likely trade scenario in post-COVID-19 period

We have estimated the future trade scenario in Bay of Bengal region based on a Gravity model. Appendix 1 presents the model, detailed methodology and estimated results. The results are robust and statistically significant. Table 3 and figure 3

present India's likely export to and import from Bay of Bengal countries for the years 2021 and 2025. The following three findings are worth noting:

First, India's exports to Bay of Bengal countries may face deceleration in 2021, compared to previous years. India's total exports to Bay of Bengal region are likely to exceed US\$30 billion by 2021 (which was US\$25.5 billion in 2019) and US\$45 billion by 2025. On the other, exports of remaining Bay of Bengal countries to India are estimated to grow slowly. In 2019, rest of Bay of Bengal countries exported only US\$10.7 billion to India, which, based to our trade forecast, is likely to touch only US\$12.5 billion in 2021 and US\$18 billion in 2025. Therefore, this trend clearly suggests that India's imports from Bay of Bengal region may face higher deceleration, compared to India's exports during 2021 to 2025.

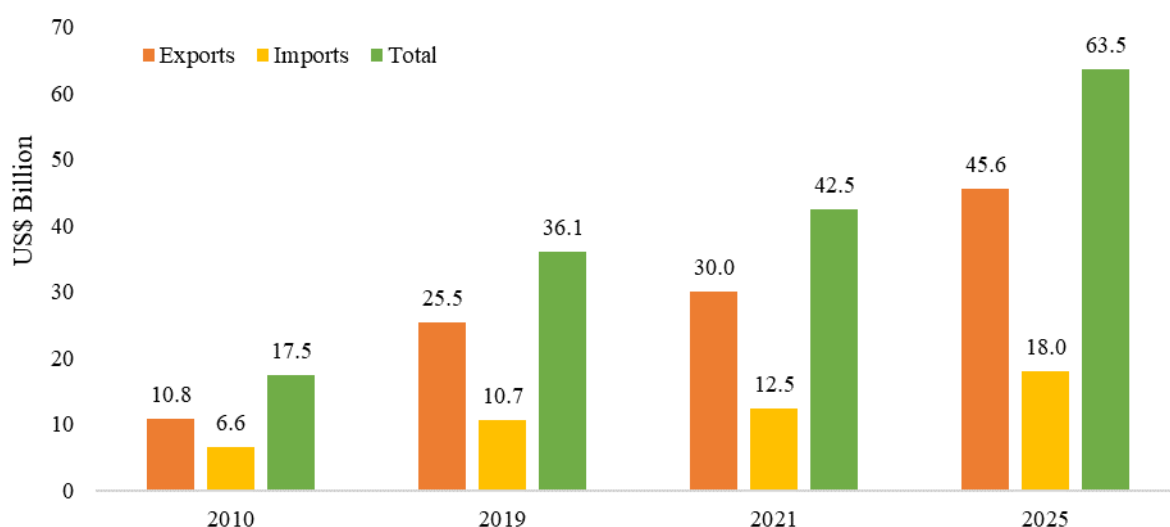
Table 3: Trade forecast based on Gravity model
India's exports to and imports from BIMSTEC countries for 2021 and 2025

	India's exports to BIMSTEC				BIMSTEC's exports to India			
	2010*	2019*	2021	2025	2010*	2019*	2021	2025
	(US\$ billion)							
Bangladesh	3.02	8.13	9.76	16.12	0.36	1.23	1.48	2.44
Myanmar	0.27	0.96	1.09	1.78	1.12	0.51	0.57	0.93
Sri Lanka	3.31	4.23	4.80	7.30	0.52	0.99	1.13	1.72
Thailand	2.14	4.33	5.06	6.98	3.95	7.04	8.22	11.35
Bhutan	0.16	0.69	0.81	1.12	0.19	0.25	0.29	0.40
Nepal	1.91	7.10	8.52	12.26	0.51	0.65	0.78	1.12
BIMSTEC	10.82	25.45	30.05	45.56	6.64	10.67	12.47	17.95

Note: The forecast for the year 2021 is based on the IMF forecasted GDP growth rate. For the year 2025, we assume the growth rate of GDP for India would be at 7 per cent and for other BIMSTEC countries it would vary between 4 to 6 per cent based on average of last five years of GDP. *Actual export

Source: Author's own

**Figure 3: Trade forecast based on Gravity model
India's exports to and imports from BIMSTEC for 2021 and 2025**



Note: The forecast for the year 2021 is based on the IMF forecasted GDP growth rate. For the year 2025, we assume the growth rate of GDP for India would be at 7 per cent and for other BIMSTEC countries it would vary between 4 to 6 per cent based on average of last five years of GDP. Data for 2010 and 2019 are actual export

Source: Author's own

Second, India's top three export partners in Bay of Bengal are likely to be Bangladesh, Nepal and Thailand in 2021 and Bangladesh, Nepal and Sri Lanka in 2025. However, in case of India's top three import partners among Bay of Bengal countries will continue to be Thailand, Bangladesh and Sri Lanka. Unlike India's exports, the forecasts suggest no change among India's top three import partners.

Third, exports of smaller and landlocked countries, namely, Bhutan, Myanmar and Nepal, to India are forecasted to grow faster in post-COVID-19 years, suggesting a likely emergence of higher market access in India.

To sum up, with the rise of uncertainties, the COVID-19 pandemic has disrupted normal economic activities and life in the Bay of Bengal region. Assuming that the outbreak can be minimised from here with success in rolling out of COVID-19 vaccines and stronger global growth, the Bay of Bengal may witness the quickest growth rebound in the second half of 2021 or early 2022. However, with advanced economies contracting and spread of the virus and other disasters continuing, a comfortable economic rebound is likely to be uncertain. More importantly, an

economic recession can lead to long-term damage to the regional economy, particularly output and productivity growth. In such unfolding scenario, a comprehensive strategy addressing the impact of the current crisis focusing on growth supportive reforms may put the Bay of Bengal countries back on a sustained growth path, rebound the region's trade and strengthen the regional integration.³

3. Dealing with coronavirus pandemic in Bay of Bengal region

Coronavirus pandemic has had a devastating impact on the Bengal of Bengal countries – health or otherwise. Illustrated in Table 4, BIMSTEC countries have witnessed 13 per cent of world's total COVID-19 cases and about 8 per cent of world's total death as on 10 January 2021. India, Bangladesh and Nepal are the top three most-affected countries in terms of number of COVID-19 cases and deaths, followed by Myanmar, Sri Lanka and Thailand. The least-affected countries in the Bay of Bengal are Bhutan and Thailand in terms of total deaths. It seems these two countries have successfully escaped the brunt of the pandemic.

While all of these countries went into strict lockdown since as early as March 2020 as a measure to safeguard them from the pandemic, peaks of devastation were however reached only after the lift of lockdown. As on 10 January 2021, the total number of coronavirus cases in the Bay of Bengal region has surpassed the 11 million mark, while the deaths have increased to over 1,64,000 (Table 5). India accounted for the world's second highest number of cases and deaths at 1,04,73,696 and 1,51,265, respectively. Bangladesh came in second place with 5,23,302 infections and 7,803 deaths. Nonetheless, the recovery rate is quite high in the Bay of Bengal region. As on 10 January 2021, over 10 million people have recovered from the COVID-19, representing about 17 per cent of cases of the global recovery. Success of such recovery is due mainly to the tests conducted through the RT-PCR across the region, more particularly in India (131,027 per million people) and rapid treatment of COVID-19 patients. Nevertheless, the economic costs of the pandemic have already been huge and are still expanding.

³ This was also the general consensus of the 21st session of the BIMSTEC SOM, held virtually on 2 September 2020.

Table 4: COVID-19 Cases in the Bay of Bengal region*

Country	Total cases	Total deaths	Total recovered	Tot cases/ 1M pop	Deaths/ 1M pop	Tests/ 1M pop
India	1,04,73,696	1,51,265	1,01,00,053	7,550	109	1,31,027
Bangladesh	5,23,302	7,803	4,67,718	3,161	47	20,364
Nepal	2,65,268	1,927	2,58,968	9,019	66	67,577
Myanmar	1,31,186	2,858	1,14,609	2,403	52	36,925
Sri Lanka	48,665	232	42,091	2,268	11	64,761
Thailand	10,547	67	6,566	151	1	17,425
Bhutan	825	1	469	1,063	1	4,29,651
Bay of Bengal (BoB)	1,14,53,489	1,64,153	1,09,90,474	3,659	41	1,09,676
World	9,08,79,233	19,46,619	6,49,74,697	11,659	250	
BoB share in world (%)	12.60	8.43	16.92

*As on 10 January 2021

Source: Calculated by author based on data downloaded from the WHO.

With the current declining trend in terms of new cases and deaths, BIMSTEC countries are now looking towards the COVID-19 vaccines which are being rolled out, mainly by India in the region. India, which is globally known for supplying affordable drugs, is all set to roll out the COVID-19 vaccines. Seven Indian pharmaceutical companies race to develop vaccines for the coronavirus (Table 6). Vaccines in India will be easier to administer and transport across the region. On three counts, namely, availability, accessibility and affordability, India's vaccines suit much better to the Bay of Bengal countries (Table 5(a)). Thus, it is quite logical that Bay of Bengal countries may depend on India for the COVID-19 vaccine. India has successfully supplied over 5 million doses of COVID-19 vaccines to most of the BIMSTEC countries excluding Thailand as donation (Table 5(b)). India has also ensured more supply of the vaccines in the neighbourhood.

India has indigenously developed the COVAXIN by Bharat Biotech. Another vaccine, namely Covishield, developed by the Oxford University, is manufactured by the Serum Institute of India. Both have been approved for emergency use in India. The advantage of Indian vaccines is affordability as well as safety. Thailand, on the other hand, has signed a deal with UK-based AstraZeneca to supply COVID-19 vaccine. Bangkok-based Siam Bioscience signed a letter of intent with AstraZeneca to supply

200 million doses.⁴ Thailand has also placed order to China's Sinovac to supply COVID-19 vaccines. Bangladesh's Beximco Pharmaceuticals Ltd. (BPL) has signed a deal with the Serum Institute of India to get COVID-19 vaccine. Besides approaching India, some Bay of Bengal countries have also signed contract with the WHO's COVAX facility for the vaccine (e.g. Sri Lanka, Bangladesh).

Table 5(a): COVID-19 vaccines offered to Bay of Bengal countries

Country	Vaccine makers	Availability*	Affordability**	Accessibility***
India	Bharat Biotech, Serum Institute, Zydus Cadila, Panacea Biotech, Indian Immunologicals, Mynvax, Biological E	High	High	High
China	Sinovac Biotech, Sinophar, CanSino, CNBG, ZFLongkema	Medium	High	Low

Notes: *In terms of capability and number of manufacturers in the country. **In terms of price (as cheap as US\$ 5 to 15) ***Capital-to-Capital distance.

Source: Author's own based on several secondary sources

Table 5(b): Supply of COVID-19 vaccines by India*

Country	Doses
Bhutan	150,000
Bangladesh	2,000,000
Myanmar	1,500,000
Nepal	1,000,000
Sri Lanka	500,000
Thailand	Not yet
Total	51,50,000

Note: *First lot supplied as on 28 January 2021 and all are donations

Source: Author's own based on MEA and other secondary sources

The current challenges for the Bay of Bengal countries are, therefore, mainly threefold: first, secure/arrange the vaccines at an affordable rate; second, supply the vaccines with the required technology and sophistication; and third, assure safe and secure implementation of the vaccines and manage the post-vaccination

⁴ Refer, <https://www.voanews.com/covid-19-pandemic/thai-firm-joins-astrazeneca-make-covid-19-vaccine-southeast-asia>

complications or emergencies.⁵ BIMSTEC Secretariat, for example, has a strong role to play in managing the coronavirus pandemic including distribution of COVID-19 vaccines and following up the progress and emergency. The need for a stronger regional body is, thus, felt important not only for securing smooth coordination but also overcoming the barriers while supplying the vaccine across the region. BIMSTEC Foreign Ministers have rightly agreed to leverage regional cooperation through BIMSTEC process in order to combat the adverse effects of the pandemic.⁶

4. The CoVID-19 pandemic and regional cooperation in Bay of Bengal region: A primer

Although BIMSTEC made its humble beginning in the year 1997, until recently, it was a low profile regional bloc and there are many reasons for this under-achievement (De, 2018; Basu and Ghosh, 2020; ORF, 2020). Nevertheless, one can see a rejuvenated momentum to the BIMSTEC process at present due mainly to political directions as it has received at the BRICS-BIMSTEC Outreach Summit, held at Goa in 2016. The 4th BIMSTEC Summit, held at Kathmandu in 2018, has recommended three key measures: (i) strengthening BIMSTEC Secretariat; (ii) activating the BIMSTEC institutions; and (iii) setting up BIMSTEC Development Fund. Substantial progress has been made thereafter in terms of taking steps to energise the BIMSTEC integration. Of recently, the regional cooperation in the Bay of Bengal has received further momentum during the current pandemic period. The Bay of Bengal countries have pledged to fight off the coronavirus pandemic together.⁷ Following supporting developments in the last few years and in recent months add high value to the integration process in BIMSTEC, and provide further support to its integration process.

⁵ However, Kurian (2020) has nicely outlined a set of recommendations to strengthen the cooperation in health sector in BIMSTEC. Available at: https://www.orfonline.org/research/in-the-shadow-of-covid19-reimagining-bimstecs-health-futures/#_ednref20

⁶ Refer, Press Release of BIMSTEC Secretariat dated 2nd September 2020, available at https://bimstec.org/?page_id=3204

⁷ Refer, the BIMSTEC leaders' messages delivered on 23rd establishment year of BIMSTEC on 6th June 2020, available at https://bimstec.org/?page_id=3537 Also, read the Keynote Address delivered by the Secretary (East), MEA at the 5th BNPTT Meeting, 2020 (Das, 2020).

Box 1: Activities of BIMSTEC in 2020

- India organized the BIMSTEC's Conference on Combating Drug Trafficking in February 2020 in physical mode.
- The 21st Session of the BIMSTEC Senior Officials' Meeting (SOM), comprising Foreign Secretaries of the BIMSTEC Member States, was virtually held on 2 September 2020 hosted by Colombo. The Foreign Secretaries/Senior Officials' from the BIMSTEC Member States attended the Meeting.
- BIMSTEC countries organized the 2nd BIMSTEC Expert Group Meeting on Poverty Alleviation, held virtually on 12 November 2020. The EGM reviewed the progress achieved and discussed the new measures to further Agenda 2030 as envisioned by the leaders of BIMSTEC.
- A Webinar on Harmonization of Curricula for Mutual Recognition of Traditional Medicine Degrees of BIMSTEC Countries was held virtually on 3 November 2020, hosted by the Ministry of Ayush of the Government of India. Delegates from all BIMSTEC Member States attended the Webinar to understand the system and process in the respective Member States in order to explore the strategies of establishing a harmonized system for mutual recognition of the traditional medicine degrees offered.
- The Third Meeting of the BIMSTEC Transport Connectivity Working Group (BTCWG) was held virtually on 8 December 2020, hosted by India. The Meeting finalized the BIMSTEC Master Plan for Transport Connectivity that was developed with the technical assistance of the Asian Development Bank (ADB). The Master Plan is a ten-year strategy and action plan that will guide the development of transport connectivity as well as its synergies with other areas of connectivity.
- The Second Meeting of the BIMSTEC Network of Tour Operators was held virtually in Colombo, Sri Lanka on 8-9 December 2020. The Meeting deliberated on the progress and status of the recommendations of the First Meeting of the BIMSTEC Network of Tour Operators and Plan of Action on Tourism Development for BIMSTEC Region.
- The fifth BNPTT (BIMSTEC Network of Policy Think-Tanks) was organized by India virtually on 21-22 December 2020.

Source: Author's own based on BIMSTEC Secretariat

First, BIMSTEC has a permanent secretariat at Dhaka with a Secretary General as its Head. Under the guidance of Secretary General, a professional team is now driving the BIMSTEC regional cooperation programme.

Second, BIMSEC countries have completed negotiation of the BIMSTEC Charter and rationalization of sectors and sub-sectors which is expected to be tabled before the leaders during the forthcoming 5th BIMSTEC Summit.⁸

Third, member countries are motivated to speed up the cooperation to deal with the challenges of COVID-19, both within and across the region. Some of the BIMSTEC countries have set up the COVID-19 Special Fund under SAARC and undertaken joint efforts to coordinate the regional programmes.

Fourth, BIMSTEC has completed the Master Plan for BIMSTEC Connectivity, which is expected to get endorsement of BIMSTEC leaders at the forthcoming 5th BIMSTEC Summit.

Fifth, BIMSTEC Foreign Secretaries at 21st Session of the BIMSTEC Senior Officials' Meeting (SOM), held on 2 September 2020, finalized some important legal instruments including BIMSTEC Convention on Mutual Legal Assistance in Criminal Matters; Memorandum of Association on the Establishment of BIMSTEC Technology Transfer Facility (TTF) in Colombo, Sri Lanka; BIMSTEC Charter; and Memorandum of Understanding (MoU) on Mutual Cooperation between Diplomatic Academies/Training Institutions of BIMSTEC Member States. These legal instruments are envisaged to be signed at the 5th BIMSTEC Summit.

Sixth, BIMSTEC countries are presently negotiating (i) BIMSTEC Coastal Shipping Agreement; and (ii) BIMSTEC Motor Vehicle Agreement.

Seventh, BIMSTEC Foreign Secretaries at 21st Session of the BIMSTEC Senior Officials' Meeting (SOM), held on 2 September 2020, also approved the Memorandum of Understanding (MoU) between the BIMSTEC Secretariat and the Asian Development Bank for enlisting greater project support in the region.

Recent months have shown increasing awareness of the opportunities offered through stronger regional cooperation in BIMSTEC (refer Box 1 for some important

⁸ At the moment, there are 14 sectors in BIMSTEC, and some of the member countries have suggested reducing the number of sectors to just 5. Appendix 2 presents the list of current sectors of cooperation.

developments). The responses to the Coronavirus pandemic suggest a greater scope of regional cooperation among the countries in the Bay of Bengal region.⁹

5. Post-COVID-19 challenges and regional cooperation contours

The COVID-19 pandemic has imposed three major calls to overcome the current challenges: first, stronger regional cooperation in the public health sector and related services; second, enhanced trade facilitation to augment supply chain resiliency; and third, restore growth in the economy. Exhibit 1 illustrates some of the priorities and opportunities for the region. The key message is that measures to mitigate COVID-19-related challenges must lead to reduce the costs of the pandemic in the region. The responses to the pandemic suggest a greater scope of regional cooperation among the countries in the Bay of Bengal region with particular reference to Sustainable Development Goals (SDGs) (De, 2021a, 2021b; Basu Ray Chaudhury, 2021).

5.1 Public health

National public health strategy in the Bay of Bengal countries has primarily focused on containing the COVID-19 infection. The region is to witness a unified response to COVID-19 pandemic. From the sheer Coronavirus management, the Bay of Bengal countries are now busy in securing vaccines and protecting the supply chains. Barring India, remaining BIMSTEC countries do not have the required capability to manufacture sophisticated vaccines and related drugs and medical formulations. For natural reasons, India could become the vaccine hub for the entire Bay of Bengal region and beyond. The Bay of Bengal countries should give renewed focus to public health management and epidemiology research and training. Collective action in public health will pave the way in effectively controlling the virus within and beyond boundaries. What can be done jointly and regionally?

⁹ Refer, also, Islam (2020), available at <https://opinion.bdnews24.com/2020/06/06/bimstec-to-stay-course-in-post-covid-19-era/>

First and foremost, countries have to reach a consensus on a protocol concerning health security coordination and cooperation mechanisms in the Bay of Bengal region.

Second, countries need to strengthen and empower the BIMSTEC Secretariat to draw a regional plan and a strategy for public health management, followed by on-time endorsements of member countries.

Third, the Bay of Bengal countries could set up a BIMSTEC Facility to Fight Pandemic (BFFP) and a BIMSTEC COVID-19 Fund (BCF) under the supervision of the BIMSTEC Secretariat. The *modus operandi* of the BFFP BCF can be discussed and agreed upon through mutual consultation. The BFFP is a shared facility to improve the region's capacity to fight the pandemic. The Fund may encourage research projects aiming to diagnostics, vaccines and therapeutics for not only COVID-19 virus but also similar or other viral contamination. Thailand being the current chair of Public Health in BIMSTEC may lead the discussion. In parallel, a Bay of Bengal-wide R&D Blueprint may be taken up. The Blueprint should aim to improve inter-country coordination, develop new protocols and SOPs, among others.

Exhibit 1: Priorities and opportunities in the Bay of Bengal region

Priorities	Opportunities
<ul style="list-style-type: none"> •Check the economic loss of the region, bring back growth and ensure resilient recovery •Promote trade, investment, tourism, etc. •Complete the ongoing negotiations (e.g. BIMSTEC coastal shipping agreement) •Encourage cooperation in Industry 4.0, public health, disaster management, climate change, etc. 	<ul style="list-style-type: none"> •Connectivity-driven integration: BIMSTEC Master Plan of Connectivity, BIMSTEC coastal shipping agreement, BIMSTEC trade facilitation agreement, BIMSTEC MVA, etc. •People-centric development partnership, value chains, comprehensive economic partnership, areas of cooperation - health, renewable energy, e-commerce, etc. •Logistics and supply chain management •Digital economy •Energy cooperation •New technology: S&T cooperation

Source: Author's own

Fourth, a network of BIMSTEC Epidemiologists and Scientists may be set up to promote exchange of scholars, research findings and innovation. Besides, it could

organize regional-level seminars and workshops, leading to strengthening the regional knowledge pool and resources.

ASEAN offers many important lessons to the Bay of Bengal region. For example, as noted in Djalante *et al.* (2020), ASEAN's policy approach to beat epidemics has been grounded on its unique and pragmatic networks in what is so-called as the ASEAN Plus Three (APT) (including China, Japan and South Korea) for regional disease surveillance mechanisms, which has developed a Protocol for Communication and Information Sharing on Emerging Infectious Diseases, with a standardized Protocol for Communication and Information Sharing on Emerging Infectious Diseases that encourages member states to report all cases of diseases that are categorized as a Public Health Emergency of International Concern (PHEIC). For example, past programmes include the cooperation of Disaster Safety of Health Facilities and the ASEAN+3 Field Epidemiology Training Network as well as the ASEAN Regional Public Health Laboratories Network (RPHLN) through the Global Health Security Agenda platform. However, it is not clear how such networks contribute to effective policymaking during the storm of COVID-19. Appendix 3 presents the list of ASEAN's responses to COVID-19. ASEAN experience recommends that the Bay of Bengal countries may consider setting up a senior officers' level interaction for public health development mechanism responding to COVID-19.

5.2 Enhanced trade facilitation and regional connectivity

Logistics support is pivotal to the success of immunization services across the region. Only high-quality logistics can help countries to gain from COVID-19 preparedness in terms of faster and adequate supply of high-quality vaccines and immunization-related materials across the border. The key areas of logistics support include vaccine management and monitoring, cold chain management and immunization safety, among others.¹⁰ In particular, multimodal connectivity in combination of air and land transportation is critical to the supply of COVID-19 vaccines from India to remaining Bay of Bengal countries. Here, trade facilitation measures such as simplification of customs procedures, zero duty on medical

¹⁰ Refer, for example, to the WHO (2020)

products and services and mutual recognition of standards will be important to further build up and strengthen the supply chain in the region. Besides, in the post-COVID-19 period, the Bay of Bengal countries should expedite the conclusion of the pending BIMSTEC FTA and Customs Cooperation Agreement, which would ensure increased trade within the region. Therefore, enhanced trade facilitation coupled with supply chain resilience can only ensure an effective supply of vaccine on time and at a low cost across the region.

Regional connectivity is at the core of BIMSTEC cooperation. BIMSTEC Secretariat and the ADB have developed the BIMSTEC Transport Connectivity Master Plan. This grand plan presents the transportation vision for seamless connectivity surrounding the Bay of Bengal region and beyond. It has identified 261 projects for construction, expansion and modernisation of existing transport infrastructure involving an estimated cost of US\$120 billion.

Connectivity matters a lot to the Bay of Bengal region (Yhome, 2017). Achievement in coastal shipping between India and Bangladesh is phenomenal. Completion of BIMSTEC coastal shipping agreement will pave the way for seamless movement of cargo and passenger vessels in the Bay of Bengal. Abolition (partial or full) of Cabotage among BIMSTEC countries will play the much-desired catalytic role in promoting trade and connectivity. Trilateral Highway is getting ready, thereby would lead to connect the BIMSTEC overland. Bangladesh has shown interest to join the TH project. Bangladesh is at the verge of completion of Padma Bridge, which would better facilitate, when completed, trade and transportation. Bhutan and Nepal are already well connected with BIMSTEC but require capacity augmentation. Border infrastructure and connectivity is another area that needs drastic reforms and development. Early completion of BIMSTEC Motor Vehicle Agreement (MVA) will add huge momentum to the BIMSTEC economic connectivity. Next, rail and digital connectivity have immense potential to enhance the trade in the region and beyond. BIMSEC countries may negotiate a BIMSTEC Railway Agreement. Along with it, a regional air transportation agreement in cargo and passenger services will lead to promote faster mobility of goods and services like tourism, health and education. Maritime connectivity in BIMSTEC is another area which requires our utmost attention. Almost 25 ports are active in the Bay of Bengal, and BIMSTEC is yet to

have a network of ports. A regional network of ports in the Bay of Bengal is essential to share vital information, undertake training and capacity building, and work together to deal with common challenges, particularly in the post-COVID-19 period. A stronger network may be helpful to share best practices and for the purpose of better coordination.

Another golden opportunity in the post-COVID-19 period is exchange of energy. Quality of electricity is critical to supply of vaccines and medicines. BIMSTEC Secretariat is now planning to complete a BIMSTEC Grid Interconnection Master Plan Study to establish a regional electricity grid to facilitate energy trade.

Bay of Bengal countries also need development partner like Japan who can provide the investment, technology and infrastructure.

6. Conclusion

Bay of Bengal countries look at BIMSTEC as a tool for development, and the effectiveness of this tool needs to be reassessed in the post-COVID-19 period. The foregoing discussion tells us that regional integration can lead to substantial economic gains in the Bay of Bengal region, particularly in the Post-COVID-19 period. In other words, regional integration in the Bay of Bengal can be a building block for global integration. However, the benefits of the regionalism are likely to depend on the integration spirit of the Bay of Bengal countries. This article postulates the next round of the integration of the Bay of Bengal region at a time when coronavirus-driven pandemic is appeared as a common enemy to the entire region.

Countries in this region have been affected heavily by the ongoing coronavirus pandemic. This article argues that the regional cooperation could help in reducing the costs of pandemic-driven barriers. The responses to the coronavirus pandemic also suggest a greater scope of regional cooperation among the countries in the Bay of Bengal region. Regional integration may help the Bay of Bengal countries overcome divisions that impede the flow of trade in goods and services, people and ideas, particularly when all members have been facing a common challenge to beat the coronavirus pandemic.

Sri Lanka, the current Chair of BIMSTEC, is going to host the 5th BIMSTEC Summit as well as the 17th BIMSTEC Ministerial Meeting in early 2021. With the holding of the 5th BIMSTEC Summit, the chairmanship of the organization will go from Sri Lanka to Thailand. These meetings are likely to add further momentum to regional cooperation and integration in Bay of Bengal region. Recommendations of this paper may help overcome the common challenges and rebuild the region as the centre of gravity in Indo-Pacific.

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Appendix 1

Estimated Gravity model

To estimate the determinants of India's trade with BIMSTEC, we have used least square dummy variable (LSDV) model based on augmented gravity model framework as given in equation (1) using cross-section data for the year 2019.

$$\ln X_{ij} = \alpha + \beta_1 \ln Y_i + \beta_2 \ln Y_j + \beta_3 D_{ij} + \beta_4 \text{common_lang}_{ij} + \beta_5 \text{contig}_{ij} + \beta_6 \text{colony}_{ij} + \beta_7 \text{common_currency}_{ij} + \beta_8 \text{fta_wto}_{ij} + \beta_9 \text{Trade Costs}_{ij} + u_{ij} \quad (1)$$

where,

i is the exporting country

j is the importing country

X_{ij} is export of country i to country j

Y_i is GDP of the country i

Y_j is GDP of the country j

D_{ij} is distance between country i and j

contig stands as dummy for common border (1 if the two countries share a common border and 0 otherwise)

common_lang is a dummy for common language (1 if both countries have a common language, 0 otherwise)

colony is dummy for colony (1 if both countries had a colonial relationship and 0 otherwise)

comcur is dummy for common currency (1 if both the countries are sharing common currency and 0 otherwise)

fta_wto stands as dummy for member for free trade agreement (1 if both the countries are members of FTA and 0 otherwise)

Trade Costs is the entry cost of the reporter and partner country.

Our analysis covers maximum possible geographical coverage of world bilateral trade flows covering about 150 countries. In addition, the set of other explanatory variables that may influence the level of trade often includes dummy variables such as common language, common border, colony, common currency, FTA. The Gravity

model is commonly used for assessing the effect of FTA / PTA on trade flows. The FTA dummy is used to capture the trade creation and trade diversion effects of an existing FTA or PTA in the Gravity model. The Gravity data such as distance, colonial, common currency, free trade agreements, and others are collected from CEPII database. In addition, GDP, GDP per capita, population, and other variables are available in the World Development Indicators (WDI) of the World Bank. The aggregate level bilateral trade data is available in DOTS, IMF; and more disaggregate level bilateral data are available in UNCTAD Database and WITS Database.

Based on Gravity modelling framework, we then projected the India's trade with BIMSTEC countries for the years 2021 and 2025. The forecast in 2021 is based on the IMF's forecasted GDP growth rate (IMF, 2020). In case of the year 2025, we assume the growth rate of GDP for India is at 7 per cent for India, and, for the BIMSTEC countries, it ranges between 4 to 6 per cent based on past five-year growth rate of GDP.

Estimated results

	Model
Log of GDP _i	0.70*** (9.9)
Log of GDP _j	0.92*** (23.8)
Log of Distance _{ij}	-1.01*** (6.16)
FTA _{ij}	0.55** (1.94)
Common Currency _{ij}	1.44*** (2.75)
Common Colony _{ij}	-0.28 (1.16)
Common Language _{ij}	0.65*** (3.13)
Common Border _{ij}	-0.016 (0.03)
Trade Costs _{ij}	-0.04** (1.65)
Constant	-20.61*** (20.63)
Number of Observations	2414
F-Stat.	350.85***
R ²	0.75
Adjusted R ²	0.74

Note: The parentheses shows ** 5 per cent and *** 1 per cent level of significance, respectively.

Appendix 2

Country-led specific area of cooperation under BIMSTEC

Area of Cooperation	Lead Country
Trade & Investment	Bangladesh
Technology	Sri Lanka
Energy Sector	Myanmar
Transport and Communication	India
Tourism	India
Fisheries	Thailand
Agriculture	Myanmar
Cultural Cooperation	Bhutan
Environment & Disaster Management	India
Public Health	Thailand
People to People Contact	Thailand
Poverty Alleviation	Nepal
Counter-Terrorism and Transnational Crime	India
Climate Change	Bangladesh

Source: BIMSTEC Secretariat, Dhaka

Appendix 3

ASEAN Health Cooperation on Epidemic Preparedness: 2003–2020

Timeline	Forms of Cooperation
2003–2009 SARS and H1N1	<ul style="list-style-type: none"> • ASEAN +3 Emerging Infectious Diseases (EID) Programme (2004–2008) • ASEAN Highly Pathogenic Avian Influenza (HPAI) Task Force • ASEAN Cooperation on Animal Health • ASEAN Work Programme on HIV/ AIDS III (2006–2010) • ASEAN-Japan Project for Stockpile of Antivirals and PPE against Potential Pandemic Influenza (2006–2013) • Regional Framework for Control and Eradication of HPAI (2006–2008) • ASEAN Assessment of National Multi-Sectoral Pandemic Preparedness and Response (2007–2010) • Regional Strategy for Progressive Eradication of HPAI (2008–2010) • ASEAN +3 Partnership Laboratories (APL) • MOU between ASEAN Secretariat and WHO
2010–2019 Broader health risks	<ul style="list-style-type: none"> • One ASEAN One Response Framework in ASEAN Agreement on Disaster Management and Emergency Response (AADMER) • Disaster Safety of Health Facilities in the AADMER Work Programme (2010–2015) • ASEAN +3 Field Epidemiology Training Network (FETN) • ASEAN Risk Communication Resource Centre • ASEAN Emergency Operations Centre (EOC) Network for public health emergencies • ASEAN Coordinating Council Working Group (ACCWG) on Public Health Emergencies • ASEAN Plus Three Field Epidemiology Training Network (ASEAN+3 FETN) • ASEAN Risk Assessment and Risk Communication Centre (ARARC) • Public health laboratories network under the ASEAN Health Cluster 2 on Responding to All Hazards and Emerging Threats • Regional Public Health Laboratories Network (RPHL) through the Global Health Security Agenda platform
2020 onwards	<ul style="list-style-type: none"> • ASEAN Plus Three Senior Officials Meeting for Health Development (APT SOMHD) Mechanism Responding to COVID-19 • ASEAN Health Ministers and ASEAN Plus Three Health Ministers in Enhancing Cooperation on COVID-19 • ASEAN BioDiaspora Virtual Centre (ABVC) for Big Data Analytics and Visualization

Source: Djalante *et al.* (2020)



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ARTNeTontrade



@ARTNeTontrade



ARTNeT Group



artnetontrade@un.org

ARTNeT Secretariat,
United Nations ESCAP
Rajadamnern Nok Avenue
Bangkok 10200, Thailand
Tel: +66(0) 22881410