BUILDING INFRASTRUCTURE IN CLMV: OPPORTUNITIES FOR INDIA

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Project Team:

Mr. David Sinate, Chief General Manager

Mr. Vanlalruata Fanai, Deputy General Manager

Ms. Sara Joy, Chief Manager

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EXECUTIVE SUMMARY

An integral part of the Association of Southeast Asian Nations (ASEAN), the CLMV region – covering Cambodia, Lao PDR, Myanmar and Vietnam - represents a group of rapidly growing economies with rising consumption, favourable geo-strategic location, access to rich natural resources and biodiversity and an industrial workforce with lowest wages among ASEAN countries. With growing importance in the global and regional value chains, CLMV countries occupy a unique position in the ASEAN region. Moreover, these four Southeast Asian countries are attracting greater global attention in the recent years, given their huge potential for future development

CLMV countries accounted for 32.0 percent of ASEAN's total geographical area, 26.4 percent of ASEAN's population and around 13.7 percent of its GDP in 2019. With preferential market access pacts that the region has in place with key markets such as China, the European Union and USA, the CLMV region has the potential to become one of the major hubs in the global trade arena as it continues to increase its economic and strategic footprint in Asia. CLMV's geographic location gives it a natural advantage as it forms a strategic link between South Asian and Southeast Asian markets.

Macroeconomic Overview of CLMV Countries

CLMV countries are having strong macroeconomic fundamentals, as indicated by their strong economic growth in the past few years. The steady influx of foreign capital in the recent years is a major factor behind supporting the strong growth in the region. Even among ASEAN countries, CLMV countries have the highest growth rates, especially Cambodia and Vietnam, with an estimated growth rate of 7 percent each in 2019, which is much above that of other ASEAN members.

Though the current COVID-19 pandemic and subsequent measures to contain the spread had hit economic activities hard in the first half of 2020 through reduced tourist arrivals, disrupted supply chains and dwindling external demand, the economies are already on a path of recovery. As per the World Economic Outlook (WEO) database of the International Monetary Fund (IMF), except for Cambodia which is estimated to be in a recession (-2.8 percent growth in 2020) due to its heavy dependence on tourism receipts and exports revenue, rest of the CLMV economies have expanded in the later half of the year, with estimated GDP growth rates of 0.2 percent for Lao PDR, 2 percent for Myanmar and 1.6 percent for Vietnam during 2020. According to the IMF, in the next five years (2021-2025), the CLMV region will be expanded further by over 6 percent.

The region has the advantage of low-wage labour force and abundant natural resources over the other economies in ASEAN. According to a recent report by the OECD, CLMV countries have the lowest wage rates among ASEAN countries leading to lower costs of production[1]. While the daily minimum wage rates of other ASEAN countries ranges between US$ 3.0 – US$ 7.6 for Indonesia and US$ 9.4 - US$ 10.1 in case of Thailand, it was much lower in the case of CLMV countries with Myanmar having minimum wage of US$ 2.4, Lao PDR at US$ 3.6, Cambodia at US$ 5.7 and in Vietnam in the range of US$ 4.7 to US$ 5.3.

In terms of economy size, however, CLMV countries witness a sharp disparity among themselves as nominal GDP in Vietnam is almost thrice that of combined GDP of Cambodia, Lao PDR and Myanmar. At the same time, while the combined GDP of CLMV countries more than doubled to an estimated US$ 444 billion in 2019, from US$ 200.3 billion recorded in 2010, corresponding increase was not observed in the share of the region in overall ASEAN's GDP, which increased from 9.9 percent in 2010 to 13.7 percent in 2019, indicating the need for higher pace of growth for the region vis-à-vis that of the rest of ASEAN. Except for Myanmar, the annual average consumer price inflation of CLMV countries remained moderate in 2019, and the trend is expected to continue in the medium term.

Foreign Trade of CLMV Countries

With growing importance of trade, the share of CLMV region in ASEAN's total trade has increased from 9.2 percent in 2010 to 21.4 percent in 2019. However, there exist wide disparities in trade among CLMV countries. For example, Vietnam has the largest volume of trade among CLMV countries, with total trade reaching US$ 518.1 billion in 2019, accounting for 86.1 percent of total trade of CLMV region. Moreover, Vietnam alone accounted for 18.4 percent of ASEAN's total trade in 2019, while the combined share of Cambodia, Lao PDR and Myanmar was a marginal 1.7 percent. Lao PDR has the lowest trade volume among CLMV countries, with total trade reaching US$ 11.6 billion in 2019. According to the World Bank database, trade

[1] *Integrating Southeast Asian SMEs in Global Value Chains: Enabling Linkages with Foreign Investors, OECD-UNIDO, 2019*

openness is very high for Vietnam (210 percent) and Cambodia (124 percent) and is moderate for Lao PDR (75 percent) and Myanmar (61 percent).

During 2010-2019, CLMV's global exports increased more than three-fold from US$ 88.6 billion to US$ 303.2 billion, with a resultant rise in its share in ASEAN's exports from 8.4 percent in 2010 to 21.3 percent in 2019. During the same period, CLMV's imports also increased over three-fold from US$ 96.4 billion in 2010 to US$ 298.1 billion in 2019, resulting in a rise in its share in ASEAN's imports from 10.1 percent in 2010 to 21.4 percent in 2019. CLMV region has a trade surplus of US$ 5.1 billion in 2019, as compared to a trade deficit of US$ 7.8 billion in 2010.

CLMV as region majorly exported electrical machinery and equipment (32.4 percent of total exports of the region in 2019), readymade garments (14.4 percent), footwear and gaiters (6.9 percent), machinery and mechanical appliances (4.4 percent) and furniture (3.3 percent).

USA was the major export destination, accounting for 22 percent of total exports of CLMV in 2019. Other major export destinations include China (16.4 percent), Japan (7.6 percent), South Korea (6.8 percent), Thailand (3.7 percent) and Germany (2.8 percent). India's share in CLMV's exports in 2019 increased to 2.5 percent from 2.2 percent in 2010.

The major imports from the CLMV region in 2019 include electrical machinery and equipment (27.1 percent of total imports of the region), machinery and mechanical appliances (9.1 percent), mineral fuels, oils and products of distillation (7.6 percent), plastics and articles (5.9 percent), and iron and steel (4.4 percent).

China was the major source of the region's imports in 2019, accounting for 30.6 percent of total imports to CLMV countries, followed by South Korea (16.1 percent), Japan (7.1 percent), Thailand (6.7 percent), Taiwan (5.4 percent), USA (5.1 percent) and Malaysia (3.0 percent). India's share in CLMV's imports decreased to 1.8 percent in 2019 from 2.1 percent in 2010.

FDI Inflows in CLMV Countries

According to the UNCTAD, FDI inflows to the CLMV region increased by a CAGR of 3.9 percent (higher than ASEAN's 3.6 percent growth) to US$ 23.1 billion in 2019, as compared to US$ 16.4 billion in 2010. Intra-ASEAN investments are the major sources of FDI inflows to CLMV countries. The CLMV region accounted for 14.9 percent of the total FDI inflows to ASEAN in 2019, increasing marginally from 14.5 percent share in 2010. On the other hand, CLMV countries being not major global investors, outward FDI from the region moderated from US$ 954 million in 2010 to US$ 566.8 million in 2019, mainly due to lower FDI outflows from Vietnam. During

2019, Cambodia and Vietnam were the only CLMV countries to record significant outward direct investments, at US$ 102 million and US$ 465 million, respectively. The region accounted for a marginal 1.0 percent of total FDI outflows from ASEAN in 2019, decreasing from 1.5 percent share in 2010.

As in the case of trade, Vietnam attracted the highest investments in the region, and accounted for 69.6 percent of the region's inflows in 2019, followed by Cambodia (16.0 percent), Myanmar (11.9 percent) and Lao PDR (2.4 percent).

According to fDi Markets database, during the period 2010-2019, 'coal, oil and natural gas' has emerged as the major sector attracting foreign investment in the CLMV region, followed by real estate, renewable energy, financial services and electronic components sectors. The major investor in the region was Japan, accounting for 18.6 percent of total investment during the period, followed by South Korea (18.0 percent), Thailand (10.7 percent), China (7.0 percent), USA (6.4 percent), Singapore (6.3 percent) and Malaysia (4.2 percent). India featured as the 16th largest investor in the region, with a 1.5 percent share in total investment during the same period.

India's Trade with CLMV Countries

During the last decade, India's total trade with the CLMV countries has increased by a CAGR of 12.7 percent from US$ 5.0 billion in 2010 to US$ 14.5 billion in 2019, largely dominated by exports except in 2019. The share of CLMV in India's trade with ASEAN has increased significantly during 2010-2019. As regards exports, the share of CLMV in India's exports to ASEAN peaked at 27.4 percent in 2016, from 12.3 percent in 2010, before settling at 19.7 percent in 2019. The share of CLMV in India's imports from ASEAN, on the other hand, reached the peak of 13.6 per cent in 2019 from 7.2 percent in 2010.

While India continued to maintain trade surplus with Myanmar, Cambodia and Lao PDR, India's trade balance with CLMV has turned into a deficit of US$ 1.1 billion in 2019, from a surplus of US$ 674 million in 2010, due to increased imports of electrical machinery and equipment from Vietnam, along with sharp fall in marine product exports (frozen shrimps and prawns) to Vietnam. Vietnam remained the major trading partner for India from the CLMV region, accounting for 87.9 percent of India's total trade with the region, followed by Myanmar (10.1 percent), Cambodia (1.7 percent) and Lao PDR (0.2 percent).

Meat and edible meat offal, with a share of 21.6 percent in total exports, are the major export items from India to CLMV in 2019, followed by iron and steel (15.9 percent of exports to CLMV), pharmaceutical products (6 percent), vehicles other than railway or tramway (5.8 percent), fish and crustaceans (5.0 percent) and cotton (4.7 percent).

Electrical machinery and equipment accounted for over half of India's total imports from CLMV in 2019, which is almost entirely imported from Vietnam. Other major imports in the same year include copper and articles (6.3 percent of total imports from CLMV), inorganic chemicals (5.6 percent), edible vegetables and certain roots (4.3 percent), machinery (4.1 percent), rubber and articles (3.1 percent) and articles of iron or steel (2.9 percent).

India's Investment Relations with CLMV

Alongside trade, India's investments in the CLMV region have also received a boost in recent years. CLMV countries are receiving strong investment interest from India mainly due to their high-growth markets, low wage labour and natural resource reserves. During April 1996 to August 2020, India's approved direct investments in joint ventures (JVs) and wholly owned subsidiaries (WOS) in CLMV countries amounted to US$ 1.3 billion (1.5 percent of outward investments by India in ASEAN), with the bulk of flows directed towards Vietnam (56.4 percent of the total flows to CLMV). During 2019-20, Indian investments in CLMV was US$ 153.4 million (3.3 percent of India's investments in ASEAN during the year).

During April 2010 to March 2020, major sectors in CLMV attracting Indian investments include manufacturing (including mining), followed by agriculture, hunting, forestry and fishing, and construction. India's manufacturing investments were mainly in Vietnam, while investments in agriculture, hunting, forestry and fishing were mainly in Myanmar.

FDI inflows to India from CLMV countries stood at US$ 64.3 million during April 2000 and June 2020. These investments have been largely dominated by inflows from Cambodia (78 percent of total inflows) and Myanmar (13 percent).

Status of Infrastructure in CLMV Countries

CLMV countries are among the fastest growing countries not only in the ASEAN region, but also globally. Given their level of developments vis-à-vis other ASEAN countries, the CLMV countries need to sustain this high growth pace, supported by infrastructure development, both in terms of new infrastructure and upgradation of existing infrastructure. CLMV countries hold a geographical advantage over other ASEAN countries due to the presence of land routes connecting the two largest Asian economies, India and China. As has been identified through various studies, the growing demand for new infrastructure and upgradation of existing infrastructure pose a great challenge for CLMV countries.

Road Transportation

In order to maintain the growth momentum of CLMV countries, it is essential to strengthen the existing transport infrastructure facilities such as rail, roads, port and airport, which could connect domestic economy effectively and, thus, improving competitiveness and reduce trade and transaction costs. The road network and road length vary across countries in the region. Cambodia and Vietnam have witnessed a rise in the share of paved roads in the last decade, though CLMV countries lag behind other ASEAN countries. Lao PDR has the lowest ratio of paved roads among CLMV countries, immediately after Cambodia and Myanmar. Road density is another important parameter for comparison and analysis of the progress of road development. Although CLMV countries made considerable progress in improving their respective road densities, these countries are still lagging behind other ASEAN countries. Looking at the situation of road network in CLMV, it can be said that economic integration of the region is being held back by dearth of transport infrastructure. CLMV countries require immense efforts and resources to match with the existing road network in other ASEAN countries.

Rail Transportation

Inefficiencies and an inadequate railroad network contribute to high costs of doing business in CLMV countries. Despite recent improvements in transport and logistics efficiency, these countries still face numerous challenges. According to the UNESCAP, Myanmar has the longest transport rail network among ASEAN members, while Lao PDR has the lowest. Rail network in Myanmar consists of a total route length of 6,112 km, comprising 5,406 km of single route and 706 km of double route, and total track length of 7,944.3 km.

Maritime Transportation

Maritime transportation is essential for economic integration of CLMV countries. In line with the increase of total sea-borne international trade of ASEAN countries from 1.8 billion tons in 2009 to 3.1 billion tons in 2018, CLMV's total international cargo throughput also increased from 0.2 billion tons to 0.3 billion tons during the same period. CLMV countries account for around 10.4 percent of total sea-borne trade of ASEAN. As per the UNCTAD, while Singapore ranked 1st globally out of 132 countries in terms of median time spent in port by dry bulk carriers (0.12 days) during 2018, Myanmar ranked 129th with a median time of 9.07 days. Similarly, Myanmar ranked 147th out of 156 economies, in terms of median time spent in port by container ships (2.77 days) and ranked 168th out of 174 economies in terms of median time spent in port by break bulk vessels (4.63 days) during 2018.

Air Transportation

Though there has not been broad based development in terms of number of domestic airports and domestic cargo traffic across CLMV countries, domestic passenger traffic has increased almost four-fold in these countries in the last decade. Among CLMV countries, Vietnam has the highest number of international air passengers at 25.3 million in 2018, followed by Cambodia (9.4 million), Myanmar (4.5 million) and Lao PDR (2.3 million). CLMV countries fell behind ASEAN countries except Brunei in terms of international passenger traffic. At the same time, among all ASEAN countries, Lao PDR witnessed the maximum growth in international passenger traffic during the decade, indicating improvement in air transport infrastructure, along with other favourable factors in the country. There has also been an exponential growth in term of both international cargo loaded and unloaded in CLMV countries in the last decade.

Digital Connectivity Infrastructure

Among ASEAN countries, Lao PDR has the lowest mobile cellular telephone subscriptions per 100 people. Moreover with 51.9 mobile cellular subscriptions per 100 people, it is more than half of the subscription in Philippines, which has the second lowest subscription. CLMV countries also lag behind other ASEAN countries in terms of mobile-broadband subscriptions per 100 people, broadband internet subscriptions per 100 people and fibre internet subscriptions per 100 people. Internet penetration remains uneven among ASEAN economies, with CLMV countries having lowest network coverage. Only 23.6 percent of population in Myanmar and 25.5 percent of population in Lao PDR use internet, implying that majority of population in CLMV are without internet connectivity. As per Economic Research Institute for ASEAN and East Asia (ERIA), the average internet connection speeds also varies widely in ASEAN with fixed-line connections in Singapore are on average 15 to 16 times faster than in Myanmar. Development of 4G networks and access to electricity are still critical issues, especially with respect to Cambodia, Lao PDR, and Myanmar, given that these countries also lag behind in terms of e-commerce and e-government.

Utility Infrastructure

According to Energy for Growth Hub, ASEAN countries are diverse with different energy challenges. While few countries including Brunei, Malaysia, Singapore, Thailand and Vietnam are high electricity consumers, with universal access to electricity, Myanmar and Cambodia are yet to deliver universal access. The access to electricity in these countries is limited by challenges related to distribution and transmission networks, particularly in rural areas. Despite recent improvements, Myanmar’s access to electricity remains much lower compared to other ASEAN countries. Only 54.8 percent of rural population in the country currently has access to electricity. Electricity supply quality which measures electric power transmission and distribution losses as a percentage of domestic supply indicates that 13.0 percent and 10.2 percent of total electricity supplied in Cambodia and Vietnam, respectively, is lost between sources of supply and points of distribution and in the distribution to consumers. This is high compared to other ASEAN countries and indicating the low technical quality of the network and the inefficiency of the distribution system. Vietnam has attained universal access to electricity, though rapid growth in demand in the country is putting severe pressure on increasing capacity, quality, and efficiency of the electricity infrastructure.

The percent of population using at least basic drinking water services remain relatively low for Cambodia, Lao PDR and Myanmar compared to other ASEAN countries, while the ratio is much lower in case of availability of improved piped water supply. There is also significant disparity between access rates in urban and rural areas. Water tariffs at the capital cities of CLMV countries except Vietnam (US$ 0.24 per M^3) remain low, at US$ 0.15 per M^3 in Cambodia, US$ 0.19 per M^3 in Lao PDR and US$ 0.02 per M^3 in Myanmar. While percentage of population having improved sanitation facilities (piped and non-piped) in CLMV countries remain lower than most ASEAN countries, the ratio is much worse in case of piped sewer connection. Piped Sewage facility is only available for less than 1 percent of population in Myanmar and Vietnam, 1.1 percent of population in Lao PDR, while it is relatively higher at 14.3 percent in the case of Cambodia.

Infrastructure Financing Gap in CLMV

According to the ADB, the infrastructure gap in the ASEAN region, including CLMV countries from 2016 through 2030 is approximately US$ 2.8 trillion, or US$ 184 billion annually. Similarly, as per G20 Global Investment Hub, CLMV countries excluding Lao PDR has an infrastructure investment gap (the difference in required infrastructure spending and actual investment spending) of US$ 242 billion (Cambodia – US$ 28 billion, Myanmar – US$ 112 billion and Vietnam – US$ 102 billion) up to 2040. This infrastructure gap is driven by factors such as rapid economic growth, urbanization, population growth, communication needs, as well as various other factors such as trade and environment sustainability etc. Individual countries in the region mostly mobilize domestic resources for infrastructure development. However due to budgetary constraints, domestic resources alone are not sufficient to meet the infrastructural funding requirements existing in these countries.

In this scenario, public-private partnerships (PPPs) can be an effective financing method in connectivity projects to build and implement new infrastructure or to renovate, operate, maintain or manage existing transport infrastructure facilities. There is also a great need and opportunity for private investment in infrastructure sector in CLMV. The region's limited innovative financing products hinders private investment. Infrastructure bonds, especially socially responsible bonds and green bonds are some of the innovative methods of financing projects in infrastructure related industries. In order to attract increased investment in the CLMV region from private sector, the first step is to ensure that projects are bankable, commercially viable and profitable. This requires more project preparation facilities from the initial stage of project design to the completion of project. Better performance by the existing participants with an improved regulatory environment is also necessary for CLMV countries to overcome this demand-supply gap. Improvements in Logistics Performance Index (LPI) and Doing Business rankings, along with incorporating measures to simplify and streamline the investment regimes and processes, would not only lower the cost of doing business in CLMV countries, but also would improve their investment attractiveness.

India and CLMV Cooperation in Infrastructure Sector

CLMV forms an important sub-region for India. Connectivity became an important issue of convergence between CLMV countries and India, and is a priority for India and CLMV countries. In order to provide a boost to the 'Act East Policy' and to link to Southeast Asian markets, the Indian Government has multiple connectivity projects, through land, water, and air, along with digital connectivity projects.

Land Connectivity Projects include Kaladan Multi-Modal Transit Transport Project (KMMTTP) and India-Myanmar-Thailand (IMT) Trilateral Highway. KMMTTP will connect Kolkata seaport with Sittwe seaport in Rakhine State, Myanmar by sea (an economic corridor of 539 km). In Myanmar, it will then link Sittwe seaport to Paletwa, Chin State, Myanmar through the Kaladan river boat route (158 km), and then from Paletwa by road to Zorinpui, Mizoram in NER (210 km). It thus uses sea, river and road transport modes to facilitate a development corridor in Myanmar and also movement of cargo between Indian mainland and the NER. KMMTTP is expected to contribute to the economic development of the North East states of India by allowing goods from Kolkata port to reach India's North East states more economically, and thereby reducing pressure on the Siliguri Corridor. In the absence of an alternate route, the development of this project not only serves the economic, commercial and strategic interests of India, but also contributes to the development of Myanmar as well, supporting its economic integration with India.

The IMT Trilateral Highway is a 1,360 km long flagship land connectivity project, connecting India, Myanmar and Thailand through Moreh (India), Bagan (Myanmar) and Mae Sot (Thailand), respectively. India is undertaking construction of two sections of the IMT Trilateral Highway in Myanmar namely, 120.74 km Kalewa-Yagyi road section; and 69 bridges along with the approach road on the 149.70 km Tamu-Kyigone-Kalewa (TKK) road section.

Sea route accounts for the bulk of India-ASEAN trade and a key instrument to integrate regional economic connectivity. Maximizing the trade potential of India with CLMV countries require development of a well-developed maritime infrastructure and appropriate policies. The ASEAN-India maritime transport cooperation agreement has been proposed by India to expand its maritime connectivity with the ASEAN. Increased demand for air cargo services, ease of doing business and tourism are the major drivers of air connectivity between India and the ASEAN countries. However, among the CLMV countries India has direct flights only to Myanmar. The majority of air traffic is concentrated in countries like Singapore, Malaysia and Thailand as the airport hubs at Singapore, Kuala Lumpur and Bangkok have well developed passenger as well as cargo handling facilities and infrastructure.

In addition to physical connectivity, digital connectivity is equally important to improve India-CLMV trade and investment relations, especially in the background of current COVID-19 pandemic. Infrastructural access is a precondition for the dimensions of digital connectivity within CLMV and ASEAN, and between India and ASEAN in general, and CLMV in particular. Digital connection could benefit from transportation and energy infrastructural projects, which will include laying fibre optics cables along railroads and energy pipelines. In order to improve communication services, Myanmar has set up cross-border fibre optic networks with several countries including India, providing end-to end-connectivity solutions in the country. India has announced US$ 1 billion Lines of Credit to ASEAN countries (including CLMV) in November 2015 to promote projects that support physical and digital connectivity, and later a grant of US$ 40 million was offered to CLMV countries to kick start digital connectivity projects in the sub-region. A Project Development Fund (PDF) with a corpus of US$ 77 million to develop manufacturing hubs in CLMV countries, which can be utilized to strengthen digital connectivity between India and ASEAN was also announced. India is also planning to set up Digital Village Concept in CLMV countries, which involves provision of internet and mobile services using sustainable technologies and renewable energy sources.

India, through its various Lines of Credits, support CLMV countries in acheiving enhanced electricity access and water management. India is in discussions with Myanmar to establish a High Capacity High Voltage Grid Interconnection between the Indian power grid and the Myanmar grid. India has also recently proposed to construct a US$ 6 billion petroleum refinery in Thanlyn region near Yangon, Myanmar, while as part of establishing a regional power grid in BIMSTEC, a 3,000 km-long power grid is being planned from Myanmar-Thailand to India.

Export-Import Bank of India (India Exim Bank) through its various financial programmes including Lines of Credit, Buyer's Credit under National Export Insurance Account

(BC-NEIA), support to project exports and overseas investment finance programmes has supported several Indian companies to execute infrastructure programmes in CLMV countries, which have contributed to the host country's developmental endeavours and have assisted in narrowing developmental gaps in such countries. The ₹ 500 crore PDF created in August 2016 by Government of India, to catalyse Indian private sector investments in CLMV countries, will be operated through the India Exim Bank, which will act as the Empowered Institution under the Initiative.

India and CLMV: New Arenas of Cooperation in Infrastructure

As the world is facing severe uncertainties due to the current pandemic, there is a greater need today than ever before for increased cooperation among India and ASEAN countries, especially CLMV countries. Moreover, due to various events in the recent times, including the ongoing pandemic, US-China trade issues, global recession and associated uncertainties, several investors from China and other countries are shifting abroad, mostly to other Asian economies, with the purpose of reducing operation costs, market diversification and search for new markets, and reduce the effect of future business uncertainties. Both CLMV countries and India have been identified as attractive alternative destinations for these investments. To leverage on these opportunities, India and CLMV countries need to upgrade their existing infrastructure especially connectivity infrastructure and logistics services, along with skill upgradation of its citizens. A collaboration between India and CLMV countries in these areas will be beneficial for both regions.

Cooperation in Energy Sector and Water Management

Investment in clean energy and power generation from renewable sources have been on a rise in India, largely at the back of energy security concerns, government support, initiatives taken on account of climate change, increasing cost competitiveness of renewable energy technology and, favorable foreign investment policy. India's experience in the renewable energy sector can be of immense benefit to CLMV countries in their efforts towards sustainable development. The huge energy demand in CLMV counties and existing demand and supply gap offer great opportunities for Indian investors. Further, the governments of CLMV countries have adopted pro-renewable stance by issuing a number of investment incentives. For instance, Vietnam has introduced the feed-in-tariff (FIT) scheme for solar and wind power and has permitted 100 percent foreign ownership of Vietnamese energy companies.

Important public infrastructure and power projects in CLMV, funded totally or in part by India's LOCs have made it possible for Indian companies to extend their footprint in these economies. India is engaged with CLMV countries in energy infrastructure development through building hydropower projects, power transmission lines and substations and oil and gas pipelines, etc. Similarly, India and CLMV countries could cooperate in water resource development and water management to ensure universal supply of clean drinking water. This cooperation could cover areas such as water supply, irrigation, storm water management, floods management, water pollution management, and sanitation management. This could go a long way towards integrated water resource management in the region and strengthening capacity for future integration.

Cooperation in E-Commerce and Digital Connectivity

In this era of Industry 4.0, technological knowledge and digital skills are vital for unlocking the full potential of countries. The current pandemic has enhanced the use of digital technologies across sectors, successfully preventing the global economies from reaching a standstill in terms of production, supply chain management, and services. With the large number of internet users both in India and CLMV, there exists huge opportunity for Indian investment in IT and ITeS in areas such as e-commerce, e-learning, Business Process Outsourcing (BPO), tele-medicine, financial services, telecommunications, consultancies and media and entertainment services. India is among the fastest growing B2C e-commerce markets today. CLMV countries and India could also collaborate in strengthening digital connectivity by investing in digital infrastructure, especially internet coverage and broadband connectivity.

Cooperation in Physical Connectivity Network Development

Lack of adequate access to electricity, transport and communication is a major challenge to the industrial growth of CLMV countries. Connectivity with CLMV countries is a strategic priority for India as improving connectivity by air, sea and road is key to strengthening trade ties between India and the CLMV region. All infrastructure sectors like roads, railways, ports (sea) and airports require massive investments where international developers can get involved with joint venture operations or as a supplier. While India has made considerable progress in implementing IMT Trilateral Highway and the KMMTTP, issues related to increasing the maritime and air connectivity between CLMV and India and transforming the corridors of connectivity into economic corridors are under discussion. The problems associated with existing projects need to be solved on an urgent basis. IMT Trilateral Highway construction and KMMTTP, earlier expected to be completed by 2020-21, are expecting some delays due to the current pandemic, which once implemented will enhance connectivity between India and the region.

A possible extension to IMT Trilateral Highway to Cambodia, Lao PDR and Vietnam, which is under consideration could also be beneficial for both regions. A consensus on finalizing the proposed protocol of the India-Myanmar-Thailand Motor Vehicle Agreement (IMT MVA) has been reached, which will have a critical role in realizing seamless movement of passenger, personal and cargo vehicles along roads linking India, Myanmar and Thailand. India has also launched several Quick Impact Projects in CLMV countries, which could be extended to more sectors. There also exists need for more multi-modal freight transfer facilities to ensure efficient transport connectivity among CLMV countries and with India to harness the benefits of geographical proximity.

Promoting integration and collaboration among India and CLMV countries is essential for successful implementation of various projects between the countries. Effective utilization of PDF between India and CLMV countries could further facilitate Indian investments in the CLMV region. For India, additionally, there exists strategic interests in developing the cross-border infrastructure. There is an urgent need to improve the necessary border infrastructure at various trading points to facilitate cross-border movement of goods between India and Myanmar.

As Government of India (GOI) aims for a self-reliant India, by promoting domestic manufacturing through “Make in India” campaign, setting up of manufacturing infrastructure in CLMV countries would supplement the Atmanirbhar Bharat Abhiyan. Indian companies today are increasingly bidding for projects funded by Multilateral Development Banks (MDBs). Due to their technical expertise and relevant experience in various infrastructure sectors, Indian companies are often well placed to secure contracts in projects funded by MDBs, and could utilize this experience to undertake projects in the CLMV region.

1. MACROECONOMIC OVERVIEW OF CLMV COUNTRIES

An integral part of the Association of Southeast Asian Nations (ASEAN), the CLMV region – covering Cambodia, Lao PDR, Myanmar and Vietnam - represents a group of rapidly growing economies with rising consumption, favourable geo-strategic location, access to rich natural resources and biodiversity and an industrial workforce with lowest wages among ASEAN countries. With growing importance in the global and regional value chains, CLMV countries occupy a unique position in the ASEAN region. Moreover, these four Southeast Asian countries are attracting greater global attention in the recent years, given their huge potential for future development.

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CLMV countries are having strong macroeconomic fundamentals, as indicated by their strong economic growth in the past few years. The steady influx of foreign capital in the recent years is a major factor behind the strong growth in the region. Even among ASEAN countries, CLMV countries have the highest growth rates, especially Cambodia and Vietnam, with an estimated growth rate of 7 percent each in 2019, which is much above that of other ASEAN members.

Though the current COVID-19 pandemic and subsequent measures to contain the spread had hit economic activities hard in the first half of 2020, through reduced tourist arrivals, disrupted supply chains and dwindling external demand, the economies are already on a path of recovery. As per the World Economic Outlook (WEO) database of the International Monetary Fund (IMF), except for Cambodia which is estimated to be in a recession (-2.8 percent growth in 2020) due to its heavy dependence on tourism receipts and exports revenue, rest of the CLMV economies have expanded in the later half of the year, with estimated GDP growth rates of 0.2 percent for Lao PDR, 2 percent for Myanmar and 1.6 percent for Vietnam during 2020. According to the IMF, in the next five years (2021-2025), the CLMV region will be expanded further by over 6 percent. Growth in Cambodia would be driven by steady inflow of foreign capital, especially in infrastructure. Increased infrastructure projects, energy exports and expected rise in tourist arrivals are expected to support growth in Lao PDR, while strong investment activity and expansion of SEZ operations would support Myanmar. Recent ratification of Free Trade Agreement (FTA) with the EU is expected to boost trade and investment in Vietnam. Moreover, the country has been quite successful in placing itself as a successful alternative to China, especially for electronics and mobile phones companies, as Vietnam offers options for re-exporting back to China, or enlarge their operations to other ASEAN economies and the EU.

The region has the advantage of low-wage labour force and abundant natural resources over the other economies in ASEAN. According to a recent report by the OECD, CLMV countries have the lowest wage rates among ASEAN countries leading to lower costs of production[2]. While the daily minimum wage rates of other ASEAN countries ranges between US$ 3.0 – US$ 7.6 for Indonesia and US$ 9.4 - US$ 10.1 in case of Thailand, it was much lower in the case of CLMV countries with Myanmar having minimum wage of US$ 2.4, Lao PDR at US$ 3.6, Cambodia at US$ 5.7 and in Vietnam in the range of US$ 4.7 to US$ 5.3 **(Table 1.1)**. Moreover, as estimated by the Asian Development Bank (ADB), the availability of abundant and young workforces in CLMV countries are expected to keep labour costs relatively low in the coming decades.

Table 1.1: Minimum Wages in ASEAN Countries

(US$)

Country	Daily Minimum Wage	Monthly Minimum Wage
Myanmar	2.4	71
Lao PDR	3.6	108
Cambodia	5.7	170
Vietnam	4.7 - 5.3	146 - 165
Philippines	5.7 - 7.5	170 - 224
Indonesia	3.0 – 7.6	91 - 228
Malaysia	7.5 – 8.1	224 - 243
Thailand	9.4 – 10.1	283 - 303
Brunei Darussalam	No minimum wage	-
Singapore	No minimum wage	-

Note: Minimum wage as of August 31, 2018

Source: Organisation for Economic Co-operation and Development (OECD)

[2] *Integrating Southeast Asian SMEs in Global Value Chains: Enabling Linkages with Foreign Investors, OECD-UNIDO, 2019*

In terms of economy size, however, CLMV countries witness a sharp disparity among themselves as nominal GDP in Vietnam is almost thrice that of combined GDP of Cambodia, Lao PDR and Myanmar. At the same time, while the combined GDP of CLMV countries more than doubled to an estimated US$ 444 billion in 2019, from US$ 200.3 billion recorded in 2010, corresponding increase was not observed in the share of the region in overall ASEAN's GDP, which increased from 9.9 percent in 2010 to 13.7 percent in 2019, indicating the need for higher pace of growth for the region vis-à-vis that of the rest of ASEAN **(Table 1.2)**. Except for Myanmar, the annual average consumer price inflation of CLMV countries remained moderate in 2019, and the trend is expected to continue in the medium term.

Table 1.2: Macroeconomic Scenario in ASEAN Countries

Country	Nominal GDP (US$ billion)			Real GDP growth (%)			Inflation (% Change)		
	2018	**2019**	**2020[e]**	**2018**	**2019**	**2020[e]**	**2018**	**2019**	**2020[e]**
Brunei Darussalam	13.6	13.5	10.6	0.1	3.9	0.1	1.1	-0.4	0.3
Cambodia	24.4	26.7	26.3	7.5	7.0	-2.8	2.4	2.0	2.5
Indonesia	1042.7	1120.1	1088.8	5.2	5.0	-1.5	3.3	2.8	2.1
Lao PDR	18.1	19.1	18.7	6.3	5.2	0.2	2.0	3.3	6.5
Malaysia	358.7	364.7	336.3	4.8	4.3	-6.0	1.0	0.7	-1.1
Myanmar	66.7	68.6	70.9	6.4	6.5	2.0	5.9	8.6	6.1
Philippines	346.8	376.8	367.4	6.3	6.0	-8.3	5.2	2.5	2.4
Singapore	373.2	372.1	337.5	3.4	0.7	-6.0	0.4	0.6	-0.4
Thailand	506.4	543.6	509.2	4.2	2.4	-7.1	1.1	0.7	-0.4
Vietnam	304.0	329.5	340.6	7.1	7.0	1.6	3.5	2.8	3.8

Source: IMF, World Economic Outlook (WEO) October 2020 and India Exim Bank Analysis

In addition to labour costs, CLMV countries witness very low cost of electricity, resulting in increased FDI inflows to electricity-intensive manufacturing. For instance, electricity is considerably cheaper in Lao PDR than in Thailand or Vietnam. Favourable labour dynamics, abundant natural resources and cheap electricity along with an improving investment environment has supported the region to become a preferred global investment destination, though the region is facing challenges in terms of developments in infrastructure, healthcare and logistics. This provides an immense potential for further development and thus growth.

Three CLMV Countries, namely, Cambodia, Lao PDR and Myanmar, are classified among the United Nation (UN)'s list of Least Developed Countries (LDCs). As per the UN Department of Economic and Social Affairs (UN DESA), in the next Committee for Development Policy (CDP) triennial review of the LDC category scheduled for

February 2021, Lao PDR and Myanmar could be recommended for graduation from the LDC category[3] depending on their performance on the LDC criteria and other aspects of development trends.

The investment opportunities in this region have so far been tapped to a large extent by many countries that are already involved in infrastructural and other developmental projects in the region. There still exists a large potential, as the investment needs in these high growth economies are huge.

Foreign Trade of CLMV Countries

The importance of international trade as a growth facilitator has been recognized by CLMV countries and is evident from their growth performance in recent years. CLMV countries now account for one-fifth of the total trade volume of ASEAN countries, reflecting the growing importance of CLMV countries in the grouping. Increase in trade activity in the region was supported by rise in both exports and imports of CLMV countries.

With growing importance of trade, the share of CLMV region in ASEAN's total trade has increased from 9.2 percent in 2010 to 21.4 percent in 2019. However, there exist wide disparities in trade among CLMV countries. For example, Vietnam has the largest volume of trade among CLMV countries, with total trade reaching US$ 518.1 billion in 2019, accounting for 86.1 percent of total trade of CLMV region. Moreover, Vietnam alone accounted for 18.4 percent of ASEAN's total trade in 2019, while the combined share of Cambodia, Lao PDR and Myanmar was a marginal 1.7 percent. Lao PDR has the lowest trade volume among CLMV countries, with total trade reaching US$ 11.6 billion in 2019. According to the World Bank database, trade openness is very high for Vietnam (210 percent) and Cambodia (124 percent) and is moderate for Lao PDR (75 percent) and Myanmar (61 percent).

During 2010-2019, CLMV's global exports increased more than three-fold from US$ 88.6 billion to US$ 303.2 billion, with a resultant rise in its share in ASEAN's exports from 8.4 percent in 2010 to 21.3 percent in 2019. During the same period, CLMV's imports also increased over three-fold from US$ 96.4 billion in 2010 to US$ 298.1 billion in 2019, resulting in a rise in its share in ASEAN's imports from 10.1 percent in 2010 to 21.4 percent in 2019. CLMV region has a trade surplus of US$ 5.1 billion in 2019, as compared to a trade deficit of US$ 7.8 billion in 2010, mainly reflecting significant jump in Vietnam's exports **(Table 1.3)**.

[3] *Covid-19 and Graduation from the LDC category, Committee for Development Policy, United Nations, May 2020*

Table 1.3: Merchandise Trade of CLMV Countries

(US$ billion)

	Exports		Imports		Total Trade		Trade Balance	
	2010	**2019**	**2010**	**2019**	**2010**	**2019**	**2010**	**2019**
Cambodia	5.6	14.8	4.9	20.3	10.5	35.1	0.7	-5.5
Lao PDR	1.9	5.8	1.8	5.8	3.7	11.6	0.1	0.0
Myanmar	8.9	18.0	4.9	18.6	13.7	36.6	4.0	-0.6
Vietnam	72.2	264.6	84.8	253.4	157.1	518.1	-12.6	11.2
CLMV	**88.6**	**303.2**	**96.4**	**298.1**	**185.1**	**601.3**	**-7.8**	**5.1**
ASEAN	**1054.1**	**1422.3**	**953.2**	**1391.0**	**2007.3**	**2813.2**	**101.0**	**31.3**

Source: ITC Trade Map, derived from UN COMTRADE and India Exim Bank Analysis

Amongst CLMV countries, Vietnam is the largest exporter, with exports of US$ 264.6 billion in 2019 (87.3 percent of CLMV's exports), followed by Myanmar (5.9 percent), Cambodia (4.9 percent) and Lao PDR (1.9 percent). As regards imports, Vietnam is the largest importer in the CLMV region (accounting for 85 percent of CLMV's imports), followed by Cambodia, Myanmar, and Lao PDR.

CLMV as region majorly exported electrical machinery and equipment (32.4 percent of total exports of the region in 2019), readymade garments (14.4 percent), footwear and gaiters (6.9 percent), machinery and mechanical appliances (4.4 percent) and furniture (3.3 percent).

USA was the major export destination, accounting for 22 percent of total exports of CLMV in 2019. Other major export destinations include China (16.4 percent), Japan (7.6 percent), South Korea (6.8 percent), Thailand (3.7 percent) and Germany (2.8 percent). India's share in CLMV's exports in 2019 increased to 2.5 percent from 2.2 percent in 2010.

The major imports from the CLMV region in 2019 include electrical machinery and equipment (27.1 percent of total imports of the region), machinery and mechanical appliances (9.1 percent), mineral fuels, mineral oils and products of distillation (7.6 percent), plastics and articles (5.9 percent) and iron and steel (4.4 percent).

China was the major source of the region's imports in 2019, accounting for 30.6 percent of total imports to CLMV countries, followed by South Korea (16.1 percent), Japan (7.1 percent), Thailand (6.7 percent), Taiwan (5.4 percent), USA (5.1 percent) and Malaysia (3.0 percent). India's share in CLMV's imports decreased to 1.8 percent in 2019 from 2.1 percent in 2010. Major traded products and trading partners of CLMV countries are provided in **Table 1.4**.

Table 1.4: International Trade of CLMV Countries, 2019

Country	Major Exports	Major Export Destinations	Major Imports	Major Import Sources
Cambodia Exports: US$ 14.8 bn Imports: US$ 20.3 bn	• Apparel and clothing, knitted or crocheted (40.5%) • Apparel and clothing, not knitted or crocheted (15.4%) • Footwear, gaiters and parts (8.6%) • Articles of leather; travel goods and articles (7.4%) • Electrical machinery and equipment (3.9%)	• USA (29.8%) • Japan (7.7%) • Germany (7.3%) • China (6.8%) • UK (6.6%)	• Knitted or crocheted fabrics (13.2%) • Vehicles other than railway or tramway (11.7%) • Mineral fuels, oils and distillation products (11.7%) • Machinery and mechanical appliances (7.0%) • Electrical machinery and equipment (5.3%)	• China (37.4%) • Thailand (15.9%) • Vietnam (13.4%) • Japan (4.4%) • Taiwan (3.9%)
Lao PDR Exports: US$ 5.8 bn Imports: US$ 5.8 bn	• Mineral fuels, oils and distillation products (23.2%) • Ores, slag and ash (11.3%) • Copper and articles (7.5%) • Electrical machinery and equipment (6.9%) • Pulp of wood or fibrous cellulosic material (4.9%)	• Thailand (41.4%) • China (28.8%) • Vietnam (18.2%) • Japan (1.6%) • India (1.6%)	• Mineral fuels, oils and distillation products (16.1%) • Electrical machinery and equipment (13.6%) • Vehicles other than railway or tramway (9.0%) • Machinery and mechanical appliances (8.9%) • Articles of iron or steel (6.4%)	• Thailand (50.3%) • China (29.0%) • Vietnam (7.8%) • Japan (2.0%) • Singapore (1.5%)
Myanmar Exports: US$ 18.0 bn Imports: US$ 18.6 bn	• Mineral fuels, oils and distillation products (24.2%) • Apparel and clothing, not knitted or crocheted (21.0%) • Apparel and clothing, knitted or crocheted (7.0%) • Cereals (5.7%) • Edible vegetables, roots and tubers (5.4%)	• China (31.7%) • Thailand (17.9%) • Japan (7.9%) • USA (4.6%) • Germany (3.6%)	• Mineral fuels, oils and distillation products (19.8%) • Machinery and mechanical appliances (9.3%) • Electrical machinery and equipment (6.7%) • Vehicles other than railway or tramway (6.1%) • Iron and steel (5.0%)	• China (34.7%) • Singapore (18.2%) • Thailand (11.7%) • Malaysia (5.1%) • Indonesia (4.9%)
Vietnam Exports: US$ 264.6 bn Imports: US$ 253.4 bn	• Electrical machinery and equipment (36.7%) • Footwear, gaiters and parts (7.2%) • Apparel and clothing, not knitted or crocheted (5.7%) • Apparel and clothing, knitted or crocheted (5.6%) • Machinery and mechanical appliances (4.9%)	• USA (23.2%) • China (15.7%) • Japan (7.7%) • South Korea (7.5%) • Hong Kong (2.7%)	• Electrical machinery and equipment (30.7%) • Machinery and mechanical appliances (9.2%) • Plastics and articles (6.3%) • Mineral fuels, oils and distillation products (6.1%) • Iron and steel (4.5%)	• China (29.8%) • South Korea (18.5%) • Japan (7.7%) • Taiwan (6.0%) • USA (5.7%)

Source: ITC Trade Map, derived from UN COMTRADE and India Exim Bank Analysis

The pandemic induced lockdowns had a severe impact on CLMV countries, especially on manufacturing and exports. A distinct case is that of the textile industry in CLMV countries, where Cambodia, Myanmar and Vietnam are heavily dependent on China for raw materials and supplies for its garment industries. The fall in external demand also had severe impact on CLMV countries, especially Cambodia and Vietnam, as these countries are heavily dependent on exports.

In the CLMV region, Cambodia is the most severely affected country, due to its heavy dependence on tourism revenue and exports, especially garments. Moreover, the country heavily relies on USA and the EU for its exports, which are among the most vulnerable markets to the spread of pandemic. The partial withdrawal of "Everything But Arms" (EBA) preferential treatment by the EU has also affected Cambodian exports. Natural gas, the major export item of Myanmar has been heavily impacted by the fall in fuel price in the global market. Textiles, the second largest exported item of the country is also affected by the close down of factories, but the EU's €5 million Myan Ku Fund assistance to Myanmar's garment sector has eased the pressure on garment industry worker's to some extent. The increased demand in electronic goods industry, especially for computer equipment and integrated circuits to meet work from home requirements and ease in supply chain disruptions in the latter half of the year, along with having a well-diversified trading partners are estimated to have resulted in a quick recovery in Vietnam. Moreover, in June 2020, Vietnam ratified its FTA with the EU, which is expected to increase the EU's investments in Vietnam.

Significance of CLMV Countries

CLMV is one of the fastest growing regions, witnessing exponential growth in trade and investment. CLMV region is often called as the last frontier market of Southeast Asia, occupying critical geo-strategic position. According to several reports, several Asian multinational enterprises (MNEs) are shifting their production to CLMV countries for competitive production costs coupled with rising trade tensions between USA and China[4].

Cambodia, Lao PDR and Myanmar benefit from the EBA preferential treatment by the EU, while Vietnam benefits from the Generalized System of Preferences (GSP) Scheme. The EBA scheme grants unilateral duty free and quota free for all exports, except arms and ammunition to the EU, while standard GSP reduces the EU import duties for about 66 percent of all product tariff lines. A country is being granted EBA status if it is listed as an LDC by the UN Committee for Development Policy.

[4] *ASEAN Investment Report 2019*

Cambodia and Myanmar are also beneficiaries of the US GSP scheme, which provides duty-free treatment to goods of designated beneficiary countries. Around 5,000 tariff items are eligible for GSP benefits—approximately 3,500 of which are available to all GSP countries and approximately 1,500 of which are available solely to Least Developed Beneficiary Developing Countries (LDBDCs). In order to benefit from GSP, a good must be imported directly and is either wholly obtained or sufficiently manufactured in a GSP country (i.e., all third-country materials need to undergo substantial transformation in addition to at least 35 percent of the good's value has been added in the beneficiary country). Being LDC countries, Cambodia, Lao PDR and Myanmar are also GSP beneficiaries from other countries like Australia, Belarus, the EU, Iceland, Japan, Kazakhstan, New Zealand, Norway, Russia and Switzerland. Cambodia and Lao PDR are also GSP beneficiaries from Canada and Turkey[5].

Indian companies setting up manufacturing in CLMV countries would be able to access GSP benefits to export in the EU and USA, especially in sectors such as textile manufacturing. India has been terminated from USA's list of developing country beneficiaries under GSP, based on market access in June 2019. Hence, establishing a manufacturing unit in these countries may help India gain greater market access through lower tariffs.

Box 1.1: Partial Withdrawal of "Everything But Arms" Treatment of Cambodia

Cambodia has enjoyed the preferential treatment under EBA, the EU's trade arrangement for LDCs. With effective from August 12, 2020, the EU has partially withdrawn Cambodia's duty-free quota-free access to the EU market temporarily, covering goods such as garments, footwear and travel goods. The withdrawal of preferential access to the EU market concerns approximately 20 percent of Cambodia's exports to the EU, as these exports would be subject to general tariffs applicable to any other member of the World Trade Organization. The remaining 80 percent of Cambodia's exports continue to enjoy preferential (duty-free, quota-free) access to the EU market.

Source: European Commission (https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1469)

[5] *Generalized System of Preferences - List of Beneficiaries 2018, UNCTAD*

2. RECENT TRENDS IN FOREIGN DIRECT INVESTMENT OF CLMV COUNTRIES

CLMV countries are a group of four heterogeneous economies, with vast difference in terms of geographical size, population, economic development, trade openness and export structures. Three CLMV countries (except for Vietnam) enjoy duty-free market access with ASEAN member countries, duty-free quota-free export programs of several advanced economies, and LDC special treatments offered by few emerging economies. The rapid economic growth witnessed in the past decade by CLMV countries, along with abundant natural resources and availability of cheap labour has succeeded in keeping these countries in the forefront as probable low-cost regional alternatives to China for export-oriented manufacturing. At the same time, various challenges faced by CLMV countries such as relatively high electricity tariffs, inadequately educated workforce and limited connectivity infrastructure act as deterrent for them to achieve their potential as a future investment hub.

FDI Inflows in CLMV Countries

The CLMV region has witnessed increased FDI inflows in the recent years, supported by increased inflows primarily in the infrastructure sector. Cost advantages, market factors, including regional integration, dynamic industrial developments and improvement of investment and business environment in the region supported investments.

According to the UNCTAD, FDI inflows to the CLMV region increased by a CAGR of 3.9 percent (higher than ASEAN's 3.6 percent growth) to US$ 23.1 billion in 2019, as compared to US$ 16.4 billion in 2010 **(Table 2.1)**. Intra-ASEAN investments are the major sources of FDI inflows to CLMV countries. Ongoing infrastructure investments, including investments under the Belt and Road Initiative (BRI) by China, have also contributed to the continued flow of foreign investments in the CLMV economies. The CLMV region accounted for 14.9 percent of the total FDI inflows to ASEAN in 2019, increasing marginally from 14.5 percent share in 2010. On the other hand, CLMV countries being not major global investors, outward FDI from the region moderated from US$ 954 million in 2010 to US$ 566.8 million in 2019, mainly due to lower FDI outflows from Vietnam. During 2019, Cambodia and Vietnam were the only CLMV countries to record significant outward direct investments, at US$ 102 million and US$ 465 million, respectively. The region accounted for a marginal 1.0 percent of total FDI outflows from ASEAN in 2019, decreasing from 1.5 percent share in 2010.

As in the case of trade, Vietnam attracted the highest investments in the region, and accounted for 69.6 percent of the region's inflows in 2019, followed by Cambodia (16.0 percent), Myanmar (11.9 percent) and Lao PDR (2.4 percent). As regards outflows, Vietnam and Cambodia accounted for 82.0 percent and 18.0 percent, respectively, of FDI outflows from the region in 2019.

Table 2.1: FDI Inflows into ASEAN Countries

(US$ billion)

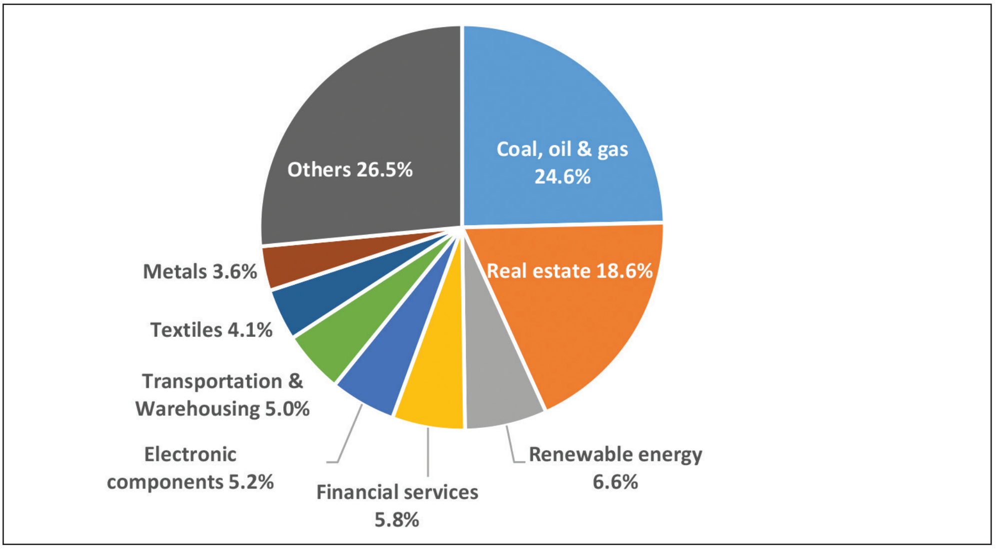
Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Brunei Darussalam	0.5	0.7	0.9	0.8	0.6	0.2	-0.1	0.5	0.4	0.3
Cambodia	1.4	1.5	2.0	2.1	1.9	1.8	2.5	2.8	3.2	3.7
Indonesia	13.8	19.2	19.1	18.8	21.8	16.6	3.9	20.6	20.6	23.4
Lao PDR	0.3	0.3	0.6	0.7	0.9	1.1	0.9	1.7	1.3	0.6
Malaysia	9.1	12.2	9.2	12.1	10.9	10.1	11.3	9.4	7.6	7.7
Myanmar	6.7	1.1	0.5	0.6	0.9	2.8	3.0	4.3	3.6	2.8
Philippines	1.3	2.0	2.4	2.3	5.3	4.4	6.9	8.7	6.6	5.0
Singapore	57.5	39.9	60.1	56.7	73.3	59.7	68.8	83.6	79.7	92.1
Thailand	14.6	1.4	9.1	15.5	4.8	5.6	1.8	6.7	10.4	4.1
Vietnam	8.0	7.5	8.4	8.9	9.2	11.8	12.6	14.1	15.5	16.1
CLMV	**16.4**	**10.5**	**11.5**	**12.2**	**12.9**	**17.5**	**19.0**	**22.9**	**23.6**	**23.1**
ASEAN	**113.0**	**85.9**	**112.4**	**118.4**	**129.5**	**114.2**	**111.7**	**152.3**	**148.9**	**155.7**
% Share of CLMV in ASEAN	**14.5**	**12.2**	**10.2**	**10.3**	**9.9**	**15.3**	**17.0**	**15.0**	**15.8**	**14.9**

Source: World Investment Report, 2020, UNCTAD and India Exim Bank Analysis

According to fDi Markets database[6], during the period 2010-2019, 'coal, oil and natural gas' has emerged as the major sector attracting foreign investment in the CLMV region, followed by real estate, renewable energy, financial services and electronic components sectors **(Chart 2.1)**. The major investor in the region was Japan, accounting for 18.6 percent of total investment during the period, followed by South Korea (18.0 percent), Thailand (10.7 percent), China (7.0 percent), USA (6.4 percent), Singapore (6.3 percent) and Malaysia (4.2 percent). India featured as the 16th largest investor in the region, with a 1.5 percent share in total investment during the same period.

[6] *Financial Times' fDi Markets tracks cross-border investment in a new physical project or expansion of an existing investment which creates new jobs and capital investment. This data differs from official data on FDI flows as company can raise capital locally, phase their investment over a period of time, and can channel their investment through different countries for tax efficiency.*

Chart 2.1: Sector wise FDI Inflows to CLMV Countries

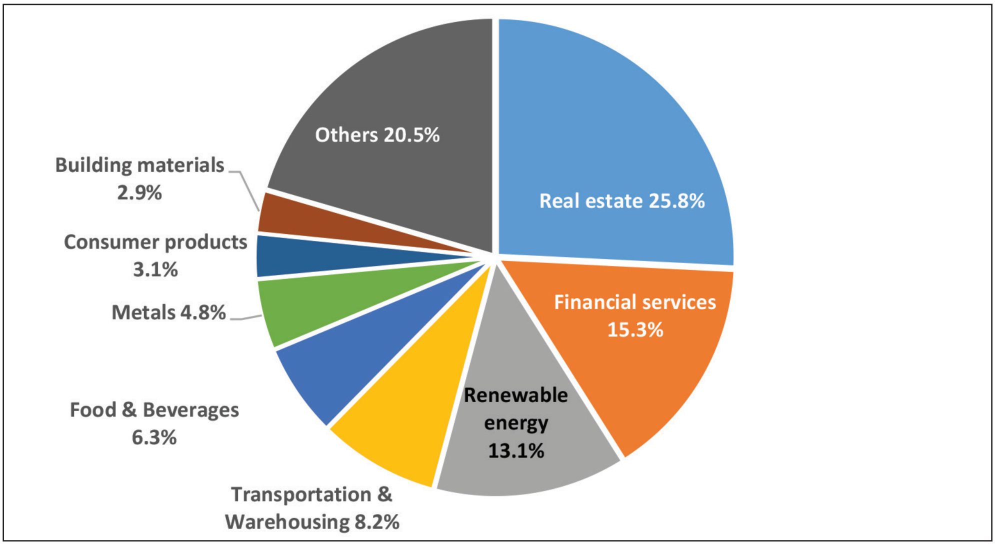


Source: fDi Markets Database and India Exim Bank Analysis

Cambodia

According to the UNCTAD, Cambodia received FDI inflows of US$ 3.7 billion in 2019 as compared to US$ 1.4 billion in 2010, driven by increased investments in manufacturing and services. This is the highest ever investment received by the country, with maximum investments in the year coming from China, intra-ASEAN countries and Japan. Cambodia also received the largest FDI among LDCs in 2019. According to fDi Markets database, during the period 2010-2019, real estate sector has emerged as the major sector attracting foreign investment in the CLMV region, followed by financial services, renewable energy, transportation and warehousing, food and beverages, and metals sectors **(Chart 2.2)**. Major investors in the country during the same period include China (22.2 percent share in total investment to Cambodia), Japan (14.7 percent), Malaysia (13.2 percent), Singapore (8.9 percent), Thailand (8.7 percent), USA (6.1 percent), Vietnam (4.9 percent), Hong Kong (4.0 percent), and South Korea (3.2 percent). India was the 14th largest investor in Cambodia, with a 1.3 percent share in total investment during the same period.

Chart 2.2: Sector wise FDI Inflows to Cambodia



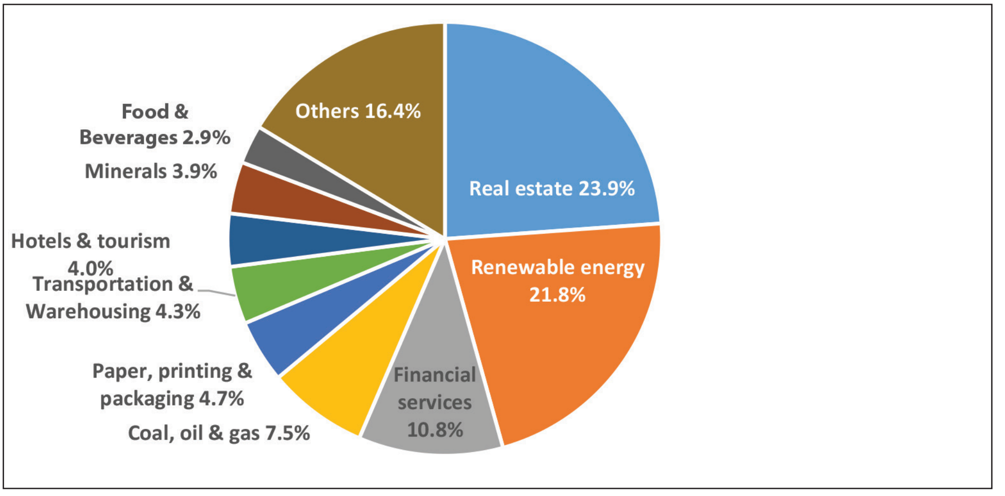
Source: fDi Markets Database and India Exim Bank Analysis

Lao PDR

According to the UNCTAD, in Lao PDR, FDI inflows more than halved to an eight-year low of US$ 557 million in 2019 (a fall of 58 percent) from US$ 1.3 billion in 2018, due to diminishing investment in capital-intensive projects in power generation and mining. Thailand, with a share of 41.7 percent of total investment to the country, was the largest investor in Lao PDR during 2010-2019, followed by China (22.8 percent), Vietnam (10.5 percent), Japan (6.6 percent), USA (4.0 percent), South Korea (3.3 percent), Cambodia (2.6 percent) and Malaysia (2.2 percent).

According to fDi Markets, during 2010-2019, the major sectors attracting investment in Lao PDR include real estate, renewable energy, financial services, coal, oil and gas, paper, printing and packaging, and hotel and transportation and warehousing **(Chart 2.3)**.

Chart 2.3: Sector wise FDI Inflows to Lao PDR



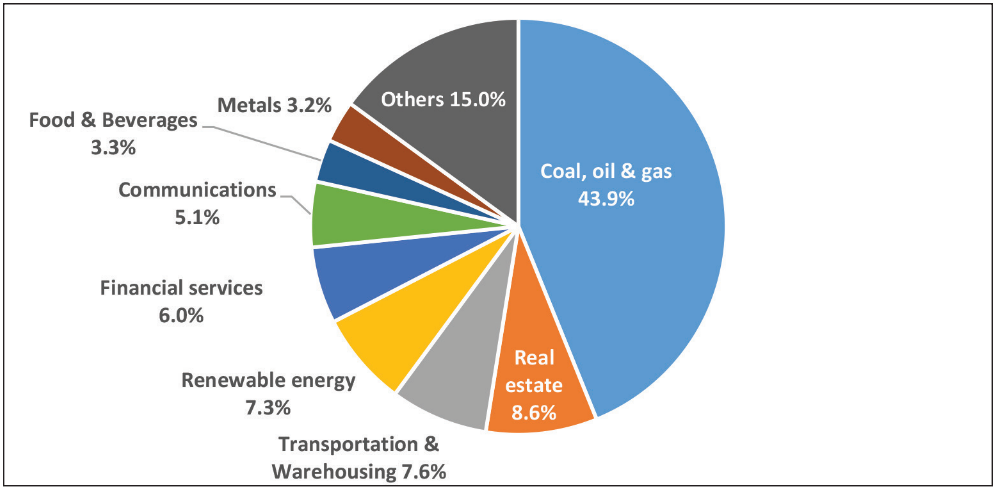
Source: fDi Markets Database and India Exim Bank Analysis

Myanmar

According to the UNCTAD, in Myanmar, FDI inflows decreased for the second year to US$ 2.8 billion, a fall of 22 percent, the lowest level in five years. Policy reforms to facilitate FDI such as full liberalization of wholesale and retail trade, liberalization of foreign investment in mining, and opening of financing and banking services to branches of foreign banks are yet to be effective in attracting investments.

According to fDi Markets, the major sectors receiving investment in Myanmar were coal, oil and natural gas sector, followed by real estate, transportation, renewable energy, financial services and communications **(Chart 2.4)**. Japan accounted for the highest FDI contribution to Myanmar during 2010-2019, accounting for a share of 32.7 percent, followed by Thailand (17.9 percent), China (8.3 percent), Vietnam (5.5 percent), Singapore (4.4 percent) and South Korea (4.2 percent). India was the 8th largest investor in the country during 2010-2019, with a 3.6 percent share in total investment.

Chart 2.4: Sector wise FDI inflows to Myanmar



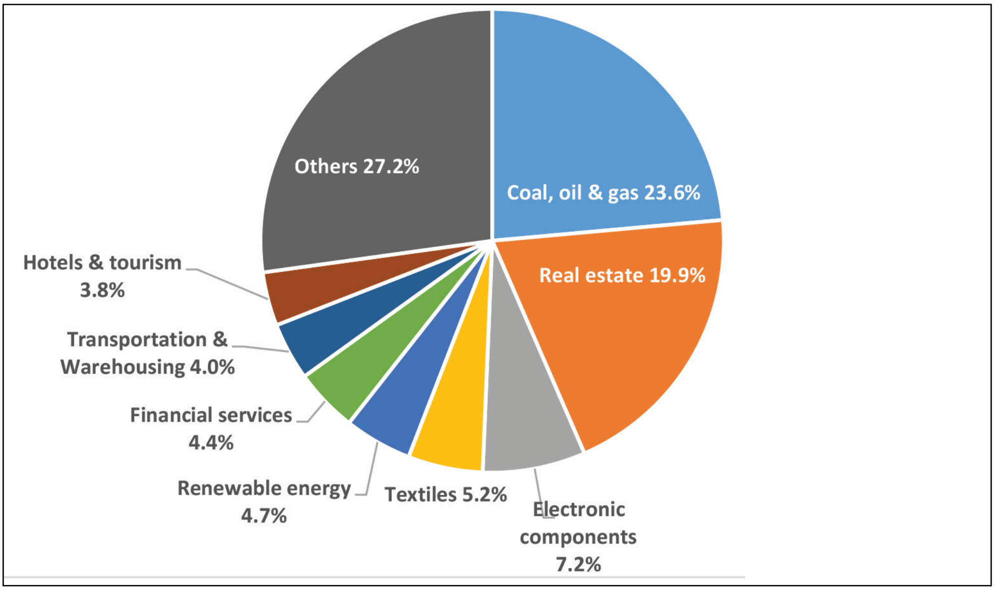
Source: fDi Markets Database and India Exim Bank Analysis

Vietnam

According to the UNCTAD, Vietnam received FDI inflows of US$ 16.1 billion during 2019, increasing from US$ 15.5 billion in the previous year, with robust inflows to manufacturing sector. Relocations of investment by MNEs to avoid the recent US-China trade tensions supported FDI inflows. For instance, companies including US-based Intel and Japan-based Nintendo and Kyocera have relocated operations from China to Vietnam. Low production costs, relatively stable economic environment and tax incentives have contributed to the increased FDI inflows in recent years to the country, supporting its emergence as an electronics manufacturing hub in ASEAN.

According to fDi Markets database, Vietnam has been the highest recepient of investment among CLMV countries during 2010 to 2019. Coal, oil and natural gas sector received the maximum investment in Vietnam during the period, followed by real estate, electronic components, textiles and renewable energy **(Chart 2.5)**. Major investors in Vietnam during 2010-2019 were South Korea (24.1 percent of total investment), Japan, USA, Thailand, Singapore, Taiwan, Kuwait, China and Malaysia.

Chart 2.5: Sector wise FDI inflows to Vietnam



Source: fDi Markets Database and India Exim Bank Analysis

3. RECENT TRENDS IN INDIA'S TRADE AND INVESTMENT WITH CLMV COUNTRIES

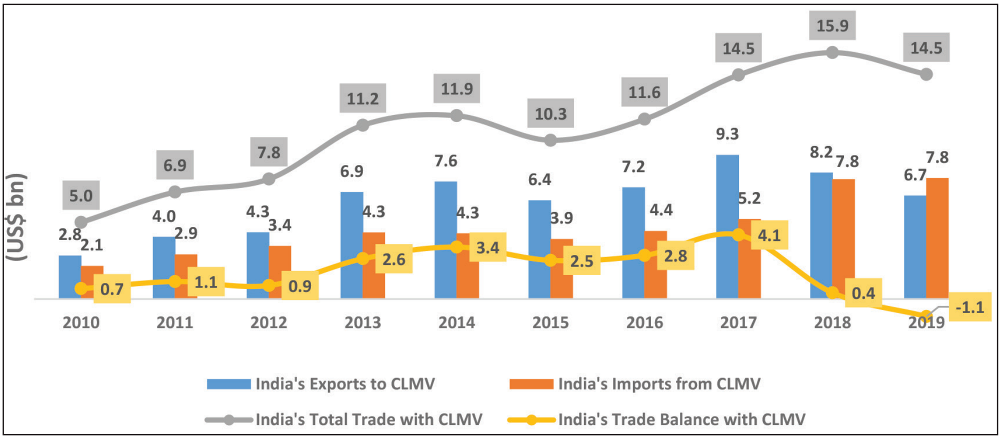
India and ASEAN have been bound together by shared history and cultural and strategic ties. Geographical proximity of CLMV countries to North East Region of India have strengthen this pre-existing relations, by necessitating the need for common infrastructure, especially to promote connectivity. These relationships were further strengthened with India's "Act East Policy". Despite being summit level partners, India's economic engagements with the region has been relatively modest.

Trade linkages between India and ASEAN witnessed rapid expansion owing to the increasing intensity of economic engagements with India-ASEAN FTA in goods coming into force in 2010. Alongside trade, India's investments in the ASEAN region have also received a boost in recent years. ASEAN countries are receiving strong investment interest from India mainly due to their high-growth markets, low wage labour and natural resource reserves. India's total trade with ASEAN has increased by a CAGR of 6.3 percent to US$ 91.5 billion in 2019 from US$ 52.6 billion in 2010, with exports growing by a CAGR of 4.5 percent and imports by 7.6 percent. Though most of India's exports to and imports from ASEAN countries have been directed to and from Singapore, Malaysia, Vietnam, Indonesia, and Thailand, growth of India's trade with CLMV countries was much faster than ASEAN as a group.

During the last decade, India's total trade with CLMV countries has increased by a CAGR of 12.7 percent from US$ 5.0 billion in 2010 to US$ 14.5 billion in 2019, largely dominated by exports except in 2019 **(Chart 3.1)**.

The share of CLMV in India's trade with ASEAN has increased significantly during 2010-2019. As regards exports, the share of CLMV in India's exports to ASEAN peaked at 27.4 percent in 2016, from 12.3 percent in 2010, before settling at 19.7 percent in 2019. The share of CLMV in India's imports from ASEAN, on the other hand, reached the peak of 13.6 percent in 2019 from 7.2 percent in 2010.

Chart 3.1: India's Trade with CLMV Countries



Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

While India continued to maintain trade surplus with Myanmar, Cambodia and Lao PDR, India's trade balance with CLMV has turned into a deficit of US$ 1.1 billion in 2019, from a surplus of US$ 674 million in 2010, due to increased imports of electrical machinery and equipment from Vietnam, along with sharp fall in marine product exports (frozen shrimps and prawns) to Vietnam. Vietnam remained the major trading partner for India from the CLMV region, accounting for 87.9 percent of India's total trade with the region, followed by Myanmar (10.1 percent), Cambodia (1.7 percent) and Lao PDR (0.2 percent).

Meat and edible meat offal, with a share of 21.6 percent in total exports, are the major export items from India to CLMV in 2019, followed by iron and steel (15.9 percent of exports to CLMV), pharmaceutical products (6 percent), vehicles other than railway or tramway (5.8 percent), fish and crustaceans (5.0 percent) and cotton (4.7 percent).

Electrical machinery and equipment accounted for over half of India's total imports from CLMV in 2019, which is almost entirely imported from Vietnam. Other major imports in the same year include copper and articles (6.3 percent of total imports from CLMV), inorganic chemicals (5.6 percent), edible vegetables and certain roots (4.3 percent), machinery (4.1 percent), rubber and articles (3.1 percent) and articles of iron or steel (2.9 percent).

Cambodia

India's trade with Cambodia has increased by a CAGR of 15.5 percent from US$ 68.7 million in 2010 to US$ 250.3 million in 2019. India's exports to Cambodia was valued at US$ 203.5 million in 2019, over three-fold increase from US$ 61.0

million recorded in 2010. Vehicles other than railway or tramway accounted for the major share of India's exports to Cambodia, followed by pharmaceutical products and man-made filaments **(Table 3.1)**. In fact, India was the largest exporter of pharmaceutical products to Cambodia in 2019, majorly exporting medicaments for therapeutic or prophylactic uses. India was also the eighth largest exporter of raw hides and skins to Cambodia, which are utilized for Cambodia's leather articles and footwear industry, and the ninth largest supplier of vehicles.

Table 3.1: India's Major Exports to Cambodia

(US$ million)

HS Code	Product	India's Exports to Cambodia		Cambodia's Imports from World		India's Exports to World	
		2010	2019	2010	2019	2010	2019
	All products	**61.0**	**203.5**	**4902.5**	**20279.5**	**220408.5**	**322786.4**
87	Vehicles other than railway or tramway rolling stock	0.8	59.2	353.4	2377.6	9285.9	17188.1
30	Pharmaceutical products	19.9	51.0	103.6	231.0	6096.1	16125.0
54	Man-made filaments	0.6	11.7	34.6	131.0	2183.9	2341.4
41	Raw hides and leather	3.9	9.8	39.1	306.7	789.8	562.7
85	Electrical machinery and equipment	2.3	7.4	220.6	1071.1	8706.5	14672.9
84	Machinery and mechanical appliances	1.3	7.2	420.0	1414.0	8149.8	21158.0
29	Organic chemicals	1.5	6.1	15.0	54.8	8592.7	18296.3
60	Knitted or crocheted fabrics	0.1	5.7	1001.4	2682.4	143.8	444.4
55	Man-made staple fibres	3.7	5.6	524.6	1009.9	1621.8	1764.9
52	Cotton	7.9	4.6	125.0	645.9	6889.9	6261.7

Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India's imports from Cambodia in 2019 were valued at US$ 46.8 million, over six-fold increase from US$ 7.6 million in 2010, and were mainly composed of articles of apparel and clothing, electrical machinery, footwear, and wood articles, among others **(Table 3.2)**. India was the second largest importer of rubber articles (HS-40) from Cambodia after Vietnam; products of the milling industry and starches after China; and animal and vegetable fat exports, majorly palm oil after Malaysia in 2019.

Table 3.2: India's Major Imports from Cambodia

(US$ million)

HS Code	Product	India's Imports from Cambodia		Cambodia's Exports to World		India's Imports from World	
		2010	2019	2010	2019	2010	2019
	All products	**7.6**	**46.8**	**5590.1**	**14824.7**	**350029.4**	**480003.0**
61	Articles of apparel and clothing accessories, knitted or crocheted	0.1	14.5	2945.0	6001.4	74.6	493.1
62	Articles of apparel and clothing accessories, not knitted or crocheted	0.02	7.1	88.3	2285.3	101.4	654.2
85	Electrical machinery and equipment	0.004	5.9	5.6	577.5	25547.2	50380.0
64	Footwear, gaiters and parts	0.1	5.2	177.1	1267.9	255.9	753.6
44	Wood and articles of wood	0.1	2.7	37.9	151.9	1697.6	2166.3
63	Other made-up textile articles	-	2.0	15.5	134.6	267.2	545.0
40	Rubber and articles	0.4	1.9	86.9	224.6	2712.6	3240.7
09	Coffee, tea and spices	-	1.5	0.1	11.0	316.9	690.4
08	Edible fruit and nuts	0.03	0.9	0.1	63.7	1316.0	2978.6
90	Optical, photographic, medical or surgical instruments	-	0.8	5.0	5.8	5286.2	9493.3

Note:"-" data not available
Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India continued to have a trade surplus with Cambodia over the last ten years majorly due to export of pharmaceutical products and vehicles other than railway or tramway.

Lao PDR

India's trade with Lao PDR increased more than nine-fold from US$ 28.3 million in 2010 to US$ 273.3 million in 2017, before settling at US$ 32.2 million in 2019. Exports to Lao PDR mainly composed of vehicles other than railway and tramway, electrical machinery and equipment, machinery and mechanical appliances and pharmaceutical products, among others **(Table 3.3)**. India was the second largest exporter of Lao PDR's pharmaceutical imports in 2019, majorly dominated by medicaments for therapeutic purposes. During the same year, India was also the fifth largest exporter of electrical machinery and equipment, majorly electric generating sets and rotary converters to Lao PDR.

Table 3.3: India's Major Exports to Lao PDR

(US$ million)

HS Code	Product	India's Exports to Lao PDR		Lao PDR's Imports from World		India's Exports to World	
		2010	2019	2010	2019	2010	2019
	All products	**8.2**	**30.5**	**1836.6**	**5797.4**	**220408.5**	**322786.4**
87	Vehicles other than railway or tramway	1.0	7.2	167.0	522.5	9285.9	17188.1
85	Electrical machinery and equipment	1.5	6.6	178.2	787.6	8706.5	14672.9
84	Machinery and mechanical appliances	0.2	5.4	210.4	517.9	8149.8	21158.0
30	Pharmaceutical products	1.4	5.0	14.8	31.8	6096.1	16125.0
23	Residues and waste from food industries, animal fodder	-	1.9	15.4	70.3	2066.6	1547.0
02	Meat and edible meat offal	-	1.4	1.0	8.8	1775.1	3467.2
73	Articles of iron or steel	1.7	0.9	92.2	369.9	6367.7	7246.9
54	Man-made filaments	-	0.4	0.9	11.8	2183.9	2341.4
90	Optical, photographic, medical or surgical instruments	0.1	0.3	12.6	50.0	1440.8	3366.4
41	Raw hides and leather	-	0.2	0.03	32.1	789.8	562.7

Note:"-" data not available
Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India's imports from Lao PDR decreased sharply after peaking at US$ 249.7 million in 2017, due to a major fall in imports of copper ores and concentrates, gold and veneer sheets from the country **(Table 3.4)**.

Table 3.4: India's Major Imports from Lao PDR

(US$ million)

HS Code	Product	India's Imports from Lao PDR		Lao PDR's Exports to World		India's Imports from World	
		2010	2019	2010	2019	2010	2019
	All products	**20.1**	**1.8**	**1908.7**	**5809.3**	**350029.4**	**480003.0**
44	Wood and articles of wood	0.1	0.6	40.9	52.3	1697.6	2166.3
85	Electrical machinery and equipment	-	0.3	17.7	403.7	25547.2	50380.0
81	Other base metals and articles	-	0.2	22.7	2.8	205.9	459.4
09	Coffee, tea and spices	-	0.2	26.0	69.5	316.9	690.4
55	Man-made staple fibres	-	0.1	0.6	5.7	370.1	941.0
13	Lac, gum, resins and other vegetable saps and extracts	0.1	0.1	0.5	2.0	117.5	283.6
26	Ores, slag and ash	19.8	-	488.2	654.1	5540.7	2825.3

Note:"-" data not available
Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India has maintained a trade deficit with Lao PDR till 2017, which turned into surplus since 2018. The deficit till 2017 was majorly owing to India's import of pearls, precious stones and metals (HS-71), ores slag and ash (HS-26) and wood articles (HS-44).

Myanmar

India shares a long land border of 1,643 km with Myanmar along the boundary of the North Eastern states of Arunachal Pradesh, Manipur, Mizoram and Nagaland. India's trade with Myanmar increased from US$ 1.4 billion in 2010 to US$ 1.5 billion in 2019. India's exports to Myanmar during 2019 was valued at US$ 978.9 million, accounting for 5.3 percent of Myanmar's global imports. The major items of exports were pharmaceutical products, mineral fuels, oils and product of distillation, and machinery **(Table 3.5)**. India was the largest exporter to Myanmar in 2019 in products such as pharmaceuticals, majorly medicaments for therapeutic use, and meat and edible meat offal. India was also the second largest exporter of cotton to Myanmar, after China, and the fifth largest exporter of mineral fuels to Myanmar, dominated by refined petroleum oil.

Table 3.5: India's Major Exports to Myanmar

(US$ million)

HS Code	Product	India's Exports to Myanmar		Myanmar's Imports from World		India's Exports to World	
		2010	2019	2010	2019	2010	2019
	All products	**272.6**	**978.9**	**4865.9**	**18577.9**	**220408.5**	**322786.4**
30	Pharmaceutical products	56.9	216.3	162.5	560.1	6096.1	16125.0
02	Meat and edible meat offal	65.6	116.3	0.03	7.7	1775.1	3467.2
84	Machinery and mechanical appliances	13.8	72.0	518.5	1734.3	8149.8	21158.0
85	Electrical machinery and equipment	16.6	66.8	215.7	1248.2	8706.5	14672.9
87	Vehicles other than railway or tramway	5.4	60.9	157.2	1135.1	9285.9	17188.1
27	Mineral fuels, oils and products of distillation	2.8	53.2	942.7	3686.3	37984.1	44081.1
52	Cotton	9.9	45.4	35.4	158.3	6889.9	6261.7
23	Residues and waste from food industries, animal fodder	10.3	42.8	2.5	274.8	2066.6	1547.0
72	Iron and steel	18.6	28.1	212.3	932.2	6996.2	9665.3
24	Tobacco and manufactured tobacco substitutes	0.1	18.5	1.1	67.8	878.7	964.2

Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India's imports from Myanmar in 2019 were valued at US$ 493.7 million decreasing from US$ 1.1 billion in 2010, mainly reflecting decline in imports of dried leguminous vegetables and pulses and wood articles. The major reason for the decline in imports from Myanmar has been the import restrictions on peas and lentils imposed by India. Moreover, imports of wood and articles were slowed down since Myanmar imposed ban on exports of logs in 2014. On the other hand, there has been a sharp increase in imports of other commodities such as unwrought zinc, natural rubber, frozen fish, maize and turmeric. The major items of imports from Myanmar during 2019 were edible vegetables and roots, wood articles, and zinc articles **(Table 3.6)**. India was the largest importer of edible vegetables and root and wood articles from Myanmar in 2019.

Table 3.6: India's Major Imports from Myanmar

(US$ million)

HS Code	Product	India's Imports from Myanmar		Myanmar's Exports to World		India's Imports from World	
		2010	2019	2010	2019	2010	2019
	All products	**1122.1**	**493.7**	**8873.4**	**17997.1**	**350029.4**	**480003.0**
07	Edible vegetables, roots and tubers	663.7	332.1	886.0	973.8	1874.6	1557.0
44	Wood and articles of wood	430.2	81.3	597.3	167.9	1697.6	2166.3
79	Zinc and articles	-	14.8	-	14.9	276.9	689.7
40	Rubber and articles	1.8	10.0	133.4	260.8	2712.6	3240.7
03	Fish, crustaceans and aquatic invertebrates	0.2	9.8	313.2	771.0	56.8	114.3
10	Cereals	0.0	8.3	160.9	1022.9	116.3	145.0
9	Coffee, tea and spices	3.1	7.3	10.6	62.5	316.9	690.4
12	Oil seeds and oleaginous fruits	0.5	6.5	52.2	400.3	158.1	674.7
78	Lead and articles	-	5.6	-	14.1	575.9	638.1
62	Articles of apparel and clothing accessories, not knitted or crocheted	-	2.1	335.5	3776.7	101.4	654.2

Note: "-" data not available
Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India has consistently maintained a trade deficit with Myanmar from 2010 to 2015 mainly due to import of products like edible vegetables and roots, wood articles, edible fruits and nuts, and coffee, tea and spices. With India's sugar exports to Myanmar more than doubled, India's trade deficit with Myanmar turned into a surplus in 2016 and the trend continued with India imposing quantitative restrictions on import of beans and pulses, classified under edible vegetables, certain roots and tubers. In 2017, India published a notification restricting the import of pulses through a quota for matpe, green gram and pigeon beans, which has been extended to March 2021[7]. As of 2019, India has a trade surplus of US$ 485.2 million with Myanmar owing to exports of pharmaceutical products, meat and edible meat offal and machinery.

[7] *DGFT*

Vietnam

The bilateral relations between India and Vietnam gained new heights in 2016 when it was elevated to "Comprehensive Strategic Partnership", a strategic relation that Vietnam shares with only China and Russia[8]. India's trade with Vietnam has increased by a CAGR of 15.6 percent from US$ 3.5 billion in 2010 to US$ 12.8 billion in 2019.

India's exports to Vietnam amounted to US$ 5.5 billion in 2019 increasing by a CAGR of 9.3 percent from US$ 2.5 billion in 2010. The major products exported by India to Vietnam during 2019 include meat and edible meat offal, iron and steel, fish and crustaceans, and cotton **(Table 3.7)**. India was the second largest exporter to Vietnam in 2019 of items such as meat and edible meat offal, after USA, and fish and crustaceans, after Norway. India was also the fourth largest exporter of cotton and the fifth largest exporter of coffee, tea and spices, mainly pepper, fennel and coriander to Vietnam during the same period.

Table 3.7: India's Major Exports to Vietnam

(US$ million)

HS Code	Product	India's Exports to Vietnam		Vietnam's Imports from World		India's Exports to World	
		2010	2019	2010	2019	2010	2019
	All products	**2475.6**	**5491.1**	**84838.6**	**253442.0**	**220408.5**	**322786.4**
02	Meat and edible meat offal	247.0	1325.4	104.5	788.9	1775.1	3467.2
72	Iron and steel	25.3	1039.1	7134.4	11333.9	6996.2	9665.3
03	Fish, molluscs and aquatic invertebrates	108.3	332.5	328.9	1572.1	2163.7	6143.3
52	Cotton	170.9	265.9	2054.0	4373.6	6889.9	6261.7
87	Vehicles other than railway or tramway	26.9	262.0	2304.4	6326.8	9285.9	17188.1
85	Electrical machinery and equipment	45.1	220.8	9993.4	77771.6	8706.5	14672.9
84	Machinery and mechanical appliances	118.3	184.4	11516.8	23438.2	8149.8	21158.0
12	Oil seeds and oleaginous fruits	57.5	170.0	175.6	1003.8	1084.4	1724.3
23	Residues and prepared animal fodder	422.9	161.7	2172.5	3637.1	2066.6	1547.0
39	Plastics and articles	58.5	138.6	5430.2	15872.9	3630.3	7425.3

Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

[8] *India - Vietnam Relations, February 2020, Ministry of External Affairs (MEA), GOI*

India's imports from Vietnam increased sharply by a CAGR of 24.8 percent to US$ 7.3 billion in 2019 increasing from US$ 993.5 million in 2010. The major products imported by India are electrical machinery and equipment, copper articles, inorganic chemicals, and machinery and mechanical appliances **(Table 3.8)**. Vietnam was the third largest supplier of electrical machinery and equipment to India in 2019, accounting for 7.8 percent of India's global imports. India also emerged as the largest importer of copper and articles and inorganic chemicals and third largest importer of rubber and articles from Vietnam during 2019.

Table 3.8: India's Major Imports from Vietnam

(US$ million)

HS Code	Product	India's Imports from Vietnam		Vietnam's Exports to World		India's Imports from World	
		2010	2019	2010	2019	2010	2019
	All products	**993.5**	**7288.3**	**72236.7**	**264610.3**	**350029.4**	**480003.0**
85	Electrical machinery and equipment	353.1	3935.8	7080.8	97158.1	25547.2	50380.0
74	Copper and articles	1.1	495.3	326.7	1216.2	1630.0	5186.4
28	Inorganic chemicals	36.1	436.2	113.8	1094.6	3665.2	6980.4
84	Machinery and mechanical appliances	72.0	321.5	3140.4	13092.7	27770.5	44058.9
40	Rubber and articles	64.4	232.4	2935.4	4263.3	2712.6	3240.7
73	Articles of iron or steel	2.0	227.0	832.9	3318.4	3071.3	5077.5
09	Coffee, tea and spices	76.0	206.0	2537.3	3402.3	316.9	690.4
64	Footwear, gaiters and parts	13.6	145.0	5229.8	18989.6	255.9	753.6
39	Plastics and articles	23.6	127.2	1371.3	4842.1	7327.2	14642.1
72	Iron and steel	27.5	111.3	1140.2	4296.5	10701.3	11574.1

Source: ITC Trademap, derived from UN Comtrade and India Exim Bank Analysis

India maintained a trade surplus with Vietnam from 2009 to 2017 with exports of products like meat and edible meat offal, fish and crustaceans, iron and steel and cotton. In 2018, however, India registered a trade deficit with Vietnam due to huge imports of electrical machinery and equipment, copper articles and inorganic chemicals, which widened further in 2019 to reach US$ 1.8 billion due to fall in exports of marine products (frozen shrimps and prawns) to Vietnam.

India's Investments Relations with CLMV

Alongside trade, India's investments in the CLMV region have also received a boost in recent years. The ASEAN-India Trade in Services and Investment Agreement, signed in November 2014 entered into force on July 1, 2015 for six ASEAN countries, Brunei Darussalam, Malaysia, Myanmar, Singapore, Thailand, and Vietnam, as well as India, Lao PDR in September 2015, and Philippines in December 2016. ASEAN and India have also signed ASEAN-India Investment Agreement (AIIA), which came into force with seven ASEAN countries excluding Cambodia, Indonesia and Lao PDR.

CLMV countries are receiving strong investment interest from India mainly due to their high-growth markets, low wage labour and natural resource reserves. During April 1996 to August 2020, India's approved direct investments in joint ventures (JVs) and wholly owned subsidiaries (WOS) in CLMV countries amounted to US$ 1.3 billion (1.5 percent of outward investments by India in ASEAN), with the bulk of flows directed towards Vietnam (56.4 percent of the total flows to CLMV) **(Table 3.9)**. During 2019-20, Indian investments in CLMV was US$ 153.4 million (3.3 percent of India's investments in ASEAN during the year).

During April 2010 to March 2020, major sectors in CLMV attracting Indian investments include manufacturing (including mining), followed by agriculture, hunting, forestry and fishing, and construction. India's manufacturing investments were mainly in Vietnam, while investments in agriculture, hunting, forestry and fishing were mainly in Myanmar.

Table 3.9: India's Approved Overseas Direct Investment in ASEAN Countries

(US$ million)

Country	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (Apr-Aug)	Apr 1996 to Aug 2020
Brunei	1.4	-	-	-	-	-	-	-	-	2.3
Cambodia	9.6	0.9	0.3	0.3	1.9	2.3	2.1	1.1	0.1	33.5
Indonesia	89.0	113.8	122.2	102.3	155.5	32.5	83.2	18.7	1.5	1356.5
Lao PDR	0.2	1.4	1.0	1.2	0.3	0.7	-	-	-	16.8
Malaysia	116.4	9.9	64.8	485.8	82.0	9.2	82.1	16.6	16.8	1508.0
Myanmar	3.2	16.2	4.0	1.4	29.0	54.7	83.9	98.3	43.7	511.2
Philippines	19.4	16.0	26.3	19.0	6.0	29.5	11.2	22.9	0.1	313.3
Singapore	4503.7	5057.9	7108.6	3751.6	6533.7	4589.1	3575.7	4394.3	842.9	79185.6
Thailand	22.5	55.4	80.7	13.9	11.9	16.2	31.0	29.0	0.2	647.1
Vietnam	2.4	22.5	20.9	9.4	33.5	73.9	53.8	53.9	15.3	726.1
CLMV	**15.4**	**40.9**	**26.3**	**12.3**	**64.7**	**131.5**	**139.9**	**153.4**	**59.1**	**1287.7**
ASEAN	**4767.6**	**5294.0**	**7428.8**	**4385.0**	**6853.9**	**4808.0**	**3923.0**	**4634.9**	**920.6**	**84806.0**
Share of CLMV in ASEAN (%)	**0.3**	**0.8**	**0.4**	**0.3**	**0.9**	**2.7**	**3.6**	**3.3**	**6.4**	**1.5**

Note: '-' not available/ negligible
Source: Ministry of Finance (MOF), Government of India; RBI and India Exim Bank Analysis

FDI inflows to India from CLMV countries stood at US$ 64.3 million during April 2000 and June 2020. These investments have been largely dominated by inflows from Cambodia (78 percent of total inflows) and Myanmar (13 percent) **(Table 3.10)**.

Table 3.10: FDI Equity Inflows to India from ASEAN Countries

(US$ million)

Country	April 2000 to June 2020
Brunei	0.5
Cambodia	50.2
Indonesia	638.2
Lao PDR	-
Malaysia	1040.6
Myanmar	9.0
Philippines	317.1
Singapore	99493.7
Thailand	557.2
Vietnam	5.2
CLMV	64.3
ASEAN	102111.6
Share of CLMV in ASEAN (%)	**0.1**

Source: Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India and India Exim Bank Analysis

4. INFRASTRUCTURE IN CLMV COUNTRIES

CLMV countries are among the fastest growing countries not only in the ASEAN region, but also globally. Given their level of developments vis-à-vis other ASEAN countries, the CLMV countries need to sustain this high growth pace, supported by infrastructure development, both in terms of new infrastructure and upgradation of existing infrastructure. Strengthening economic integration in the region, which is a major policy goal of all ASEAN economies, will significantly contribute towards driving economic development and growth in these countries. Improving physical connectivity in the region is a key requisite for greater economic integration. Moreover, the importance of physical infrastructure in fostering economic growth and poverty reduction is widely recognised.

CLMV countries hold a geographical advantage due to the presence of land routes connecting the two largest Asian economies, India and China. At the same time, there are plenty of ground works that need to be addressed to harness maximum potential and gain from its locational advantages. A study undertaken by the ADB has observed that there exists infrastructural constraints in CLMV countries. The road transport network is badly in need of upgradation, national rail networks are not connected, existence of large missing sections in rail roads, along with issues associated with gauge size and braking systems are some of the issues faced by infrastructure sector in the region. At present, sea transport remains the key transport facilitator of inter-regional trade in the region, although, potential exists to improve the land network by improved infrastructure and simplified and easier border crossing mechanisms.

INFRASTRUCTURE AND TRADE LINKAGES

As has been identified through various studies, the growing demand for new infrastructure and upgradation of existing infrastructure pose a great challenge for CLMV countries. The density and quality of infrastructure affects the level of regional integration and the competitiveness of goods and services in the global and regional trade markets. With the aim of economic integration of ASEAN countries as a single market and production base, a highly competitive region, with equitable economic development, and fully integrated into the global economy, ASEAN Economic Community (AEC) was established in 2015 and the AEC Blueprint 2025 was adopted providing broad directions through strategic measures for the AEC from 2016 to 2025. For the realization of AEC, a number of agreements has been signed to promote investment, enhancing trade, financial integration and enhanced movement of people and products. Some of the connectivity- related agreements include the ASEAN Framework Agreement on the Facilitation of Foods in Transit (AFAFGIT), ASEAN Framework Agreement on Multimodal Transport (AFAMT), ASEAN Multilateral Agreement on Air Services (AMAAS) and ASEAN Framework Agreement on Facilitation of Inter-State Transport (AFAFIST). Limited connectivity among ASEAN members, especially CLMV countries, remains a major hurdle in the realization of AEC.

Sustaining Business Reforms in ASEAN

Table 4.1 provides a broad overview of Doing Business rankings in ASEAN countries. According to the World Bank's Doing Business Report 2020, Singapore is ranked 2nd globally in the ease of doing business parameter. Among the CLMV countries, while Vietnam is ranked much higher than Indonesia and Philippines, Cambodia, Lao PDR and Myanmar are ranked below rest of ASEAN countries.

Table 4.1: Doing Business Rankings of ASEAN Countries in 2020

Country	Ease of Doing Business	Starting a Business	Registering Property	Trading across Borders	Enforcing Contracts	Resolving Insolvency
Singapore	2	4	21	47	1	27
Malaysia	12	126	33	49	35	40
Thailand	21	47	67	62	37	24
Brunei Darussalam	66	16	144	149	66	59
Vietnam	70	115	64	104	68	122
Indonesia	73	140	106	116	139	38
Philippines	95	171	120	113	152	65
Cambodia	144	187	129	118	182	82
Lao PDR	154	181	88	78	161	168
Myanmar	165	70	125	168	187	164

Source: Doing Business 2020, World Bank

As regards the time and cost associated with the logistical process of exporting and importing goods given in the Doing Business Report, border compliances for exports in Myanmar takes almost 15 times more than Lao PDR **(Table 4.2)**. On the other hand, cost of documentary compliance for exports from Lao PDR is much higher than the cost in other CLMV countries. Border management and logistics costs need to be substantially reduced for CLMV countries to bolster value chains in the ASEAN region. Similarly, as per the Global Competitiveness Index, Cambodia is the least efficient country among ASEAN in terms of border clearance. Border clearance efficiency indicator assesses the effectiveness and efficiency of the clearance process by customs and other border control agencies in the eight major trading partners of each country.

Table 4.2: Comparison of Time and Costs for Trading Across Borders in ASEAN Countries

(Cost in US$; Time in Hours; Efficiency 1-5)

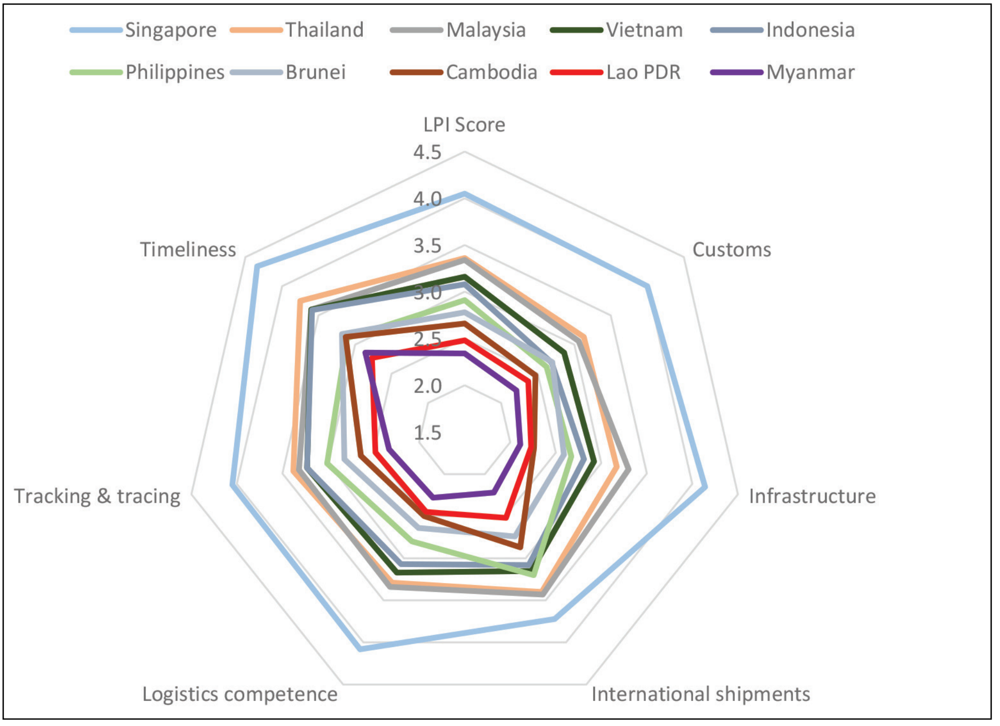
Country	Border Compliance				Documentary Compliance				Border Clearance Efficiency
	Time to Export	Cost to Export	Time to Import	Cost to Import	Time to Export	Cost to Export	Time to Import	Cost to Import	
Brunei Darussalam	117	340	48	395	155	90	132	50	2.6
Cambodia	48	375	8	240	132	100	132	120	2.4
Indonesia	56	211	99	383	61	139	106	164	2.7
Lao PDR	9	140	11	224	60	235	60	115	2.6
Malaysia	28	213	36	213	10	35	7	60	2.9
Myanmar	142	432	230	457	144	140	48	210	-
Philippines	42	456	120	690	36	53	96	68	2.5
Singapore	10	335	33	220	2	37	3	40	3.9
Thailand	44	223	50	233	11	97	4	43	3.1
Vietnam	55	290	56	373	50	139	76	183	3.0

Note: Doing Business measures the time and cost (excluding tariffs) associated with three sets of procedures—documentary compliance, border compliance and domestic transport—within the overall process of exporting or importing a shipment of goods; Border clearance efficiency: 1 = worst and 5 = best

Source: Doing Business 2020, World Bank and Global Competitiveness Index 4.0, 2019, World Economic Forum (WEF)

The Logistics Performance Index (LPI) which ranks countries on six dimensions of trade, including customs performance, infrastructure quality, and timeliness of shipments, also indicate the need for an upgrade in the logistics infrastructure of CLMV countries. During 2018, CLMV countries except for Vietnam ranked the lowest on the LPI, as also on the various determinants of the LPI— the efficiency of customs and border management clearance, transport infrastructure, the ease of arranging competitively priced shipments, the competence and quality of logistics services, the ability to track and trace consignments, and the frequency with which shipments reach consignees within scheduled or expected delivery times **(Chart 4.1)**.

Chart 4.1: Comparison of Logistics Performance Index in ASEAN Countries and its Determinants



Source: Logistics Performance Index 2018

It is clear from the above indicators that, CLMV countries need to catch up with other ASEAN countries to make the economic integration goal of AEC successful. Improving connectivity is the first and foremost factor involved in the economic integration process. Connectivity broadly covers road, rail, maritime, air and digital connectivity. The current status of infrastructure in CLMV countries is analysed below.

ROAD TRANSPORTATION

In order to maintain the growth momentum of CLMV countries, it is essential to strengthen the existing transport infrastructure facilities such as rail, roads, port and airport, which could connect domestic economy effectively and, thus, improving competitiveness and reduce trade and transaction costs.

Road length measures land connectivity. Total road length is defined as the total kilometer length of all roads in the country in a given year, including all existing road types, but excluding dedicated cycle paths. The road network and road length vary across countries in the region. As seen from **Table 4.3**, Cambodia and Vietnam have witnessed a rise in the share of paved roads in the last decade, though CLMV countries lag behind other ASEAN countries. Lao PDR has the lowest ratio of paved roads among CLMV countries, immediately after Cambodia and Myanmar.

Table 4.3: Road Infrastructure in ASEAN Countries

Country	Length of Paved Road (in km)		Total Road Length (in km)		Paved Roads (% of Total Road)	
	2009	2018	2009	2018	2009	2018
Brunei Darussalam	2,317.0	2,863.0	2,753.3	3,059.0	84.2	93.6
Cambodia	2,661.0	11,096.4	39,618.0	62,442.0	6.7	17.8
Indonesia	2,71,230.0	3,26,629.0	4,76,337.0	5,39,415.0	56.9	60.6
Lao PDR	5,434.0	9,251.0	39,547.0	59,870.0	13.7	15.5
Malaysia	98,368.0	1,81,518.5	1,23,021.0	2,37,022.4	80.0	76.6
Myanmar	26,333.0	53,418.3	1,27,900.0	1,62,766.2	20.6	32.8
Philippines	22,468.7	31,622.8	29,898.0	32,932.7	75.2	96.0
Singapore	3,356.0	3,515.0	3,360.0	3,515.0	99.9	100.0
Thailand	1,77,996.4	3,27,772.5	2,24,492.6	4,56,486.8	79.3	71.8
Vietnam	1,88,082.8	2,62,857.3	2,90,700.0	3,70,664.0	64.7	70.9

Note: Data for Indonesia and Malaysia are as of 2017
Source: ASEAN Secretariat and India Exim Bank Calculations

Road density is another important parameter for comparison and analysis of the progress of road development. Although CLMV countries made considerable progress in improving their respective road densities, these countries are still lagging behind other ASEAN countries **(Table 4.4)**. Looking at the situation of road network in CLMV, it can be said that economic integration of the region is being held back by dearth of transport infrastructure. CLMV countries require immense efforts and resources to match with the existing road network in other ASEAN countries.

Table 4.4: Road Density in ASEAN Countries

Country	Road Density (km of road/100 sq.km of land area)		Road Density (km of road/1000 person)	
	2009	2018	2009	2018
Brunei Darussalam	47.8	53.1	7.2	6.9
Cambodia	21.9	34.5	2.8	3.8
Indonesia	24.8	28.1	2.0	2.1
Lao PDR	16.7	25.3	6.4	8.5
Malaysia	37.1	71.5	4.4	7.4
Myanmar	18.9	24.1	2.6	3.1
Philippines	10.0	11.0	0.3	0.3
Singapore	466.7	488.3	0.7	0.6
Thailand	43.7	89.0	3.4	6.6
Vietnam	87.8	111.9	3.3	3.9

Note: Data for Indonesia and Malaysia are as of 2017

Source: India Exim Bank Calculations based on ASEAN Statistical Yearbook 2019 and WEO October 2020 database, IMF

Table 4.5: Connectivity and Quality of Road Infrastructure in ASEAN Countries

Country	Rural Accessibility	Road Connectivity	Quality of Road Infrastructure	Road Traffic Death Rate (by 100,000 population)
Brunei Darussalam	-	66.5	5.0	-
Cambodia	38.1	61.9	3.6	17.8
Indonesia	47.9	59.8	4.2	12.2
Lao PDR	31.5	51.5	3.7	16.6
Malaysia	50.1	40.0	5.3	23.6
Myanmar	38.3	-	-	19.9
Philippines	64.1	51.6	3.7	12.3
Singapore	-	-	6.5	2.8
Thailand	46.1	80.0	4.4	32.7
Vietnam	66.7	63.3	3.4	26.4

Note: Road Connectivity: 0 = extremely poor; 100= extremely good; Quality of road infrastructure: 1 = extremely poor, 7 = extremely good; "-" indicates unavailability of data

Source: Global Competitiveness Index 4.0 2019, WEF and World Bank

Rural Access Index of the World Bank is defined as the proportion of the rural population who live within 2 km of an all-season road. Road Connectivity Index measures average speed and straightness of a driving itinerary connecting the 10 or largest cities that together account for at least 15 percent of the economy's total population. Quality parameter measures the extensiveness and condition of road infrastructure.

According to the World Bank, Cambodia's roads generally have good or fair surface conditions, but the quality of road infrastructure is poor, with the major constraints being low connectivity and inefficiency. Moreover, only 38.1 percent of rural people in the country has access to an all-weather road. Lao PDR's roads remain vulnerable to natural calamities such as floods and landslides, resulting in huge expenditure being incurred on repair work and disaster recovery. The roads do not meet the weight standard. Only 31.5 percent of rural population has access to an all-weather road, the lowest amongst ASEAN countries, leading to severe restrictions in road access during rainy season. Transit traffic is on rise in the country due to its location in the hub of Greater Mekong Sub-region (GMS) countries, necessitating the need to have climate resilient roads and increase the regional connectivity in ASEAN **(Table 4.5)**.

Rural accessibility in Myanmar is low at 38.3 percent, indicting the limited access of rural population to an all-weather road. Moreover, traffic deaths are also high, indicating poor road conditions. As regards Vietnam, though rural accessibility and road connectivity is high, the road infrastructure quality remains the lowest among ASEAN countries.

RAIL TRANSPORTATION

Inefficiencies and an inadequate railroad network contribute to high costs of doing business in CLMV countries. Despite recent improvements in transport and logistics efficiency, these countries still face numerous challenges. For instance there has been constant complaints from freight shippers regarding Cambodia's rail network, as moving containers through rail in the country remains complicated, expensive and time-consuming. These challenges include high cost of transport, limited last-mile connectivity through rail, lack of punctuality, and a shortage of lorries for last-mile services. The Cambodian government initiated its Rehabilitation of the Railway project in 2007 in collaboration with the ADB and AusAID. Currently, Cambodia has two lines, a northern line, consisting of a 385 km from Phnom Penh to Poipet (Thai border), and a Southern line, consisting of 266 km from Phnom Penh to Sihanoukville Port. Both these lines are single track meter gauge of 1000 mm. Pre-feasibility studies for constructing several new railway lines are being conducted.

Table 4.6: Rail Infrastructure in ASEAN Countries

Country	Route Length (km)		Passengers Carried ('000)		Passenger- km (mn passenger km)		Freight-km (mn ton km)		Efficiency of Train Services
	2009	2018	2009	2018	2009	2018	2009	2018	
Brunei Darussalam	-	-	-	-	-	-	-	-	-
Cambodia	652.0	650.0	-	0.6	-	-	30.0	-	-
Indonesia	4,812.0	5,550.6	2,07,131.0	4,22,129.0	20.7	16.2	5.6	13.4	4.7
Lao PDR	3.5	3.5	120.0	320.0	0.4	0.1	-	-	-
Malaysia	1,665.0	1,833.0	4,267.0	3,527.0	1,522.0	178.0	1,384.0	1,315.0	5.1
Myanmar	5,301.3	6,112.3	72,300.0	43,611.0	5,296.4	3,073.0	1,020.7	728.7	-
Philippines	523.2	528.7	3,65,065.0	2,96,000.0	28,004.2	55,820.6	-	-	2.4
Singapore	-	-	-	-	-	-	-	-	5.8
Thailand	4,062.6	4,115.1	1,11,687.8	1,91,973.8	8,879.5	6,580.5	2,533.0	2,769.1	2.8
Vietnam	2,576.6	3,160.0	11,100.0	8,600.0	4,138.1	3,657.7	3,864.5	3989.0	3.6

Note: In case of unavailability of data in 2018, previous year's data is considered; Efficiency of train services: 1 = extremely poor, 7 = extremely good; "-" indicates unavailability of data
Source: ASEAN Secretariat; World Development Indicators (WDI), World Bank; Global Competitiveness Index 4.0 2019, WEF and India Exim Bank Calculations

Lao PDR, being the only landlocked ASEAN country, has only one railway operating from Thanaleng, Vientiane Capital, to Nongkhai Province in Thailand, for a total length of 3.5 km. Seven railways projects have been planned which will increase total length to around 1,590 km by 2030.

According to the UNESCAP, Myanmar has the longest transport rail network among ASEAN members. Rail network in Myanmar consists of a total route length of 6,112 km, comprising 5,406 km of single route and 706 km of double route, and total track length of 7,944.3 km. Around 422 trains are being operated daily. Vietnam has relatively good railway network, though the quality of infrastructure, rolling stock, signalling and telecom systems are not maintained since the annual funding for maintenance allocated by the Government can only satisfy about 30 percent of the total demand. Vietnam railway network consists of 7 main lines linking and passing through 35 provinces and cities with difficult terrains. Several feasibility studies are being undertaken for rail connections from the country to Cambodia and Lao PDR. A Revised Railway Law was approved by the National Assembly with many breakthrough mechanisms and policies. In terms of efficiency of train services, data is available only for Vietnam among CLMV countries, which show that Vietnam is the fourth most efficient among ASEAN countries **(Table 4.6)**.

MARITIME TRANSPORTATION

Maritime transportation is essential for economic integration of CLMV Countries. Various studies stress the importance of enhancing port efficiency and reducing port dwell time to reduce maritime transport costs, increase exports and enhancing trade competitiveness of a region. According to the UNCTAD, seaborne trade accounts for over 80 percent of world merchandise trade by volume and more than 70 percent of its value. Countries with well-developed maritime infrastructure and good ports will be among the most competitive economies globally, while also supporting domestic industrial development. Barring Lao PDR, all ASEAN countries have long coastline. As per Lloyd's List, only two ports – Ho Chi Minh City and Cai Mep in Vietnam, are ranked among the top hundred ports in 2019. Cambodia and Myanmar need to catch up with other ASEAN economies for a well-developed and connected maritime sector in the region.

As per the UNCTAD, although globally more than 70 percent of the fleet (in terms of tonnage) is registered under a foreign flag, in five countries in the ASEAN region, the number of vessels flying under the national flag represent more than half of their fleet. This includes Indonesia (93 percent), Vietnam (81 percent), Thailand (73 percent), Malaysia (72 percent), and Singapore (56 percent), and these countries are also among the leading 35 ship-owning countries globally. As seen from **Table 4.7**, while Vietnam features amongst the top performers in terms on domestic cargo volume, other CLMV countries, such as Myanmar and Cambodia, lag behind rest of the ASEAN economies.

Table 4.7: Domestic Maritime Infrastructure in ASEAN Countries

Country	No of Domestic Ports		Domestic Passengers Traffic ('000)		Domestic Cargo Throughput ('000 ton)	
	2009	2018	2009	2018	2009	2018
Brunei Darussalam	1	2	-	-	2.0	9.0
Cambodia	7	5	-	-	1,578.0	2,007.0
Indonesia	1906	639	7,665.8	3,359.0	2,86,367.0	9,65,126.0
Lao PDR	-	-	-	-	-	-
Malaysia	14	13	11,462.0	5,257.8	-	-
Myanmar	22	22	205.2	1.4	1,907.0	4,535.0
Philippines	395	597	56,885.6	98,278.2	71,936.0	1,46,903.0
Singapore	-	-	-	-	-	-
Thailand	212	382	12,055.7	35,258.9	29,311.4	63,227.1
Vietnam	-	-	303.3	-	60,227.0	1,75,132.0

Note: "-" indicates unavailability of data

Source: ASEAN Secretariat

In line with the increase of total sea-borne international trade of ASEAN countries from 1.8 billion tons in 2009 to 3.1 billion tons in 2018, CLMV's total international cargo throughput also increased from 0.2 billion tons to 0.3 billion tons during the same period. CLMV countries accounts for around 10.4 percent of total sea-borne trade of ASEAN **(Table 4.8)**.

Table 4.8: International Maritime Infrastructure in ASEAN Countries

Country	No. of International Ports		International Passengers Traffic ('000)		International Cargo Throughput ('000 ton)	
	2009	2018	2009	2018	2009	2018
Brunei Darussalam	1	1	239	210	927.0	1,350.0
Cambodia	2	3	20	41	1,874.1	5,328.0
Indonesia	141	85	1,815.0	1,490.0	5,50,955.0	11,72,091.0
Lao PDR	-	-	-	-	-	-
Malaysia	10	15	1,998.00	2,100.2	3,95,284.0	5,70,701.0
Myanmar	9	9	3.4	8.5	19,066.0	34,745.0
Philippines	171	205	5.1	482.0	77,958.0	1,69,966.0
Singapore	2	2	-	-	4,72,300.3	6,30,125.0
Thailand	7	7	347.8	644.0	1,31,528.9	2,28,760.3
Vietnam	242	163	-	-	1,70,802.0	2,81,486.0

Note: "-" indicates unavailability of data

Source: ASEAN Secretariat

As per the UNCTAD, while Singapore ranked 1st globally out of 132 countries in terms of median time spent in port by dry bulk carriers (0.12 days) during 2018, Myanmar ranked 129th with a median time of 9.07 days. Similarly, Myanmar ranked 147th out of 156 economies, in terms of median time spent in port by container ships (2.77 days) and ranked 168th out of 174 economies in terms of median time spent in port by break bulk vessels (4.63 days) during 2018.

Liner Shipping Connectivity Index assesses a country's connectivity to global shipping networks, with the index using an open scale, and the benchmark score of 100 corresponding to the most connected country in 2004. The index is based on five components of the maritime transport sector: the number of ships, their container-carrying capacity, the maximum vessel size, the number of services and the number of companies that deploy container ships in a country's ports. According to the UNCTAD, the shipping connectivity index of Hai Phong Port, Vietnam almost doubled between 2018 and 2019, as its new terminal became the first deep-water port in northern Vietnam. Cambodia with a score of 8 and Myanmar at 8.5 are among the least connected countries in the region **(Table 4.9)**.

Table 4.9: Liner Shipping Connectivity and Efficiency of Seaport Services in ASEAN Countries

Country	Liner Shipping Connectivity Index (maximum value in 2004 = 100)			Efficiency of Seaport Services
	2009	2018	2019	
Brunei Darussalam	3.7	5.4	7.7	4.1
Cambodia	4.7	8.4	8.0	3.6
Indonesia	35.0	45.7	44.4	4.3
Lao PDR	-	-	-	3.0
Malaysia	78.3	93.6	93.8	5.2
Myanmar	4.5	10.0	8.5	-
Philippines	19.6	29.3	30.6	3.7
Singapore	84.3	110.8	108.1	6.5
Thailand	34.6	45.1	52.9	4.1
Vietnam	24.3	60.4	66.5	3.8

Note: Efficiency of seaport services: 1 = extremely poor, 7 = extremely good; "-" indicates unavailability of data

Source: WDI, World Bank; UNCTAD and WEF's Global Competitiveness Report 4.0 2019.

AIR TRANSPORTATION

Access to the global air transport network is a necessary infrastructure asset for a country, having a positive influence on economic development and growth. The development of civil aviation sector in ASEAN countries could be understood through both domestic and international civil aviation development. As seen from **Table 4.10**, although there has not been broad based development in terms of number of domestic airports and domestic cargo traffic across CLMV countries, domestic passenger traffic has increased almost four-fold in these countries in the last decade.

Table 4.10: Domestic Civil Aviation in ASEAN Countries

Country	No of Domestic Airports		Domestic Passengers Traffic ('000)		Domestic Cargo Traffic ('000 ton)		No. of Aircraft Traffic ('000)	
	2009	2018	2009	2018	2009	2018	2009	2018
Brunei Darussalam	-	-	-	-	-	-	-	-
Cambodia	5	5	143.0	636.0	-	76.0	6.5	16.9
Indonesia	188	265	43808.0	96890.0	344.1	587.0	390.6	829.6
Lao PDR	9	9	243.0	1010.0	0.4	1.4	-	347.6
Malaysia	19	19	29235.0	50186.2	151.0	197.4	350.9	558.7
Myanmar	30	31	772.6	2823.0	3.4	1.4	21.8	53.6
Philippines	76	75	29181.0	41701.3	349.2	632.0	533.1	520.7
Singapore	-	-	-	-	-	-	-	-
Thailand	28	29	26492.2	78928.7	302.4	307.2	231.0	601.4
Vietnam	14	13	8585.5	31112.5	100.3	166.6	66.6	-

Note: "-" indicates unavailability of data

Source: ASEAN Secretariat

Statistics on international air passengers carried by registered air carriers indicate attractiveness of a country as an important international destination. Among CLMV countries, Vietnam has the highest number of international air passengers at 25.3 million in 2018, followed by Cambodia (9.4 million), Myanmar (4.5 million) and Lao PDR (2.3 million) **(Table 4.11)**. CLMV countries fell behind rest of ASEAN countries except Brunei in terms of international passenger traffic. At the same time, among all ASEAN countries, Lao PDR witnessed the maximum growth in international passenger traffic during the decade, indicating improvement in air transport infrastructure, along with other favourable factors in the country. There has also been an exponential growth in term of both international cargo loaded and unloaded in CLMV countries in the last decade.

Table 4.11: International Civil Aviation in ASEAN Countries

Country	No of International Airports		International Passengers Traffic ('000)		Cargo Loaded ('000 ton)		Cargo Unloaded ('000 ton)		No. of Aircraft Traffic ('000)	
	2009	2018	2009	2018	2009	2018	2009	2018	2009	2018
Brunei Darussalam	1.0	1.0	1528.0	1774.0	7.0	1.0	12.0	7.0	24.9	20.4
Cambodia	3.0	3.0	2524.0	9376.0	7.3	30.4	7.8	42.8	32.2	82.3
Indonesia	27.0	29.0	5004.0	31556.0	46.5	207.6	132.1	224.0	42.9	198.2
Lao PDR	4.0	4.0	337.2	2306.0	0.4	2.6	-	2.3	-	-
Malaysia	6.0	6.0	22881.0	52246.8	354.0	361.1	301.0	407.3	184.9	357.3
Myanmar	2.0	3.0	967.5	4465.8	7.2	25.0	6.3	29.6	7.9	40.6
Philippines	9.0	11.0	12762.1	28914.7	145.3	234.2	533.1	520.7	75.1	155.3
Singapore	2.0	2.0	36089.0	64889.0	787.1	990.1	847.0	1164.8	240.4	386.0
Thailand	7.0	7.0	31649.5	81332.7	611.3	862.5	400.0	686.2	202.4	478.0
Vietnam	6.0	8.0	8906.7	25330.2	129.3	421.9	122.8	-	67.4	-

Note: "-" indicates unavailability of data
Source: ASEAN Secretariat

IATA's Airport connectivity indicator measures the degree of integration of a country within the global air transport network. It is a measure of the number and economic importance of the destinations served from a country's major airports, the frequency of service to each destination and the number of onward connections available from each destination. Connectivity increases as the range of destinations increases, the frequency of service increases and or larger "hub" airport destinations are served. It can be seen from **Table 4.12** that Vietnam scores even higher than Singapore in terms of airport connectivity. On the other hand, Lao PDR and Cambodia are among the lowest in terms of the connectivity indicator. In terms of efficiency of air transport services, the low scores compared to other ASEAN countries indicate the necessity for improving efficiency of air transport services in CLMV countries.

Table 4.12: Air Connectivity and Transport Efficiency in ASEAN Countries, 2018

Country	Airport Connectivity (0-100)	Efficiency of Air Transport Services
Brunei Darussalam	33.8	4.8
Cambodia	53.9	3.7
Indonesia	100.0	4.9
Lao PDR	35.9	4.0
Malaysia	88.9	5.5
Myanmar	-	-
Philippines	82.6	4.1
Singapore	85.4	6.7
Thailand	98.9	5.0
Vietnam	86.0	4.0

Note: Airport Connectivity: 0 = No Connectivity, 100 = Fully Connected; Efficiency of Air Transport Services: 1 = extremely poor, 7 = extremely good; "-" indicates unavailability of data

Source: Global Competitiveness Report 4.0 2019, WEF based on IATA data

DIGITAL CONNECTIVITY INFRASTRUCTURE

Digital connectivity is essential for facilitation of e-commerce and overall economic development of a country. The importance of digital infrastructure was reinstated by the current COVID-19 pandemic and resulting lock down, leading to widespread work from home in almost all spheres of employment. Moreover, education has also became digital necessitating the need for a good broadband connectivity to connect schools with students. Digital connectivity is necessary to drive the global economic recovery in coming days.

While ASEAN's digital infrastructure looks satisfactory, the ICT infrastructure remains uneven across economies. As can be seen from **Table 4.13**, among ASEAN countries, Lao PDR has the lowest mobile cellular telephone subscriptions per 100 people. Moreover with 51.9 mobile cellular subscriptions per 100 people, it is more than half of the subscription in Philippines, which has the second lowest subscription. CLMV countries also lag behind other ASEAN countries in terms of mobile-broadband subscriptions per 100 people, broadband internet subscriptions per 100 people and fibre internet subscriptions per 100 people.

Internet penetration is also uneven among ASEAN economies, with CLMV countries having lowest network coverage. Only 23.6 percent of population in Myanmar and 25.5 percent of population in Lao PDR use internet, implying that majority of population in CLMV are without internet connectivity. As per Economic Research

Institute for ASEAN and East Asia (ERIA), the average internet connection speeds also varies widely in ASEAN with fixed-line connections in Singapore are on average 15 to 16 times faster than in Myanmar[9]. Development of 4G networks and access to electricity are still critical issues, especially with respect to Cambodia, Lao PDR, and Myanmar, given that these countries also lag behind in terms of e-commerce and e-government.

Table 4.13: Digital infrastructure in ASEAN Countries, 2018

Country	Mobile-cellular telephone subscriptions per 100 pop.	Mobile-broadband subscriptions per 100 pop.	Fixed-broadband Internet subscriptions per 100 pop.	Fibre internet subscriptions per 100 pop.	Internet users % of population	UNCTAD B2C E-commerce Index, 2019 (Ranking)
Brunei Darussalam	131.9	130.0	11.9	6.3	95.0	-
Cambodia	119.5	82.8	1.0	0.5	40.5	122
Indonesia	119.8	87.2	3.3	1.5	39.9	84
Lao PDR	51.9	42.0	0.6	0.4	25.5	113
Malaysia	134.5	116.7	8.6	4.6	81.2	34
Myanmar	113.8	-	0.2	-	23.6	126
Philippines	110.1	68.4	3.2	-	60.1	89
Singapore	145.7	145.7	25.9	22.3	88.2	3
Thailand	180.2	104.7	13.2	2.4	56.8	48
Vietnam	147.2	71.9	13.6	9.9	70.3	64

Note: "-" indicates unavailability of data

Source: Global Competitiveness Report 4.0 2019, UNCTAD, WEF and WDI, World Bank

E-commerce is a major component in the vision of ASEAN to create a single and integrated regional economy. It allows consumers to benefit from greater choices and lower prices. According to the UNCTAD's Global B2C E-commerce Index, which measures the preparedness to support online commerce among 152 countries, except for Vietnam CLMV countries ranked behind other ASEAN economies in 2019. CLMV countries need to increase their capacity to participate effectively in e-commerce by assessing critical readiness gaps and addressing these gaps through collaborative public and private partnerships[10].

UTILITY INFRASTRUCTURE

Access to clean affordable energy is a priority for human and economic development. According to Energy for Growth Hub, ASEAN countries are diverse with different energy challenges. While few countries including Brunei, Malaysia, Singapore, Thailand and Vietnam are high electricity consumers, with universal access to

[9] *Improving Digital Connectivity: Policy Priority for ASEAN Digital Transformation, Lurong Chen and Lydia Ruddy, ERIA, July 2020*

[10] *UNCTAD B2C E-COMMERCE INDEX 2019*

electricity, Myanmar and Cambodia are yet to deliver universal access **(Table 4.14)**. The access to electricity in these countries is limited by challenges related to distribution and transmission networks, particularly in rural areas. According to the 5th ASEAN Energy Outlook (AEO5), fossil fuels account for over 80 percent of ASEAN's current electricity production, making the region a major contributor to global warming. This is, however, low for CLMV countries and as per the latest available World Bank statistics, renewables accounted for 46.4 percent of total energy consumption in Cambodia, 58.9 percent in Myanmar and 36.7 percent in Vietnam. Lao PDR has the maximum energy production from renewable energy sources at 81 percent.

Table 4.14: Access to Electricity in ASEAN Countries

Country	Access to Electricity (% of population)		Access to Electricity, Rural (% of rural population)		Access to Electricity, Urban (% of urban population)		Electricity Supply Quality % of Output, 2018	Average Time for Businesses to Connect Electricity Services (Number of Days)
	2009	2018	2009	2018	2009	2018		
Brunei Darussalam	100.0	100.0	100.0	100.0	99.9	100.0	5.7	25
Cambodia	41.5	91.6	31.1	89.0	83.2	100.0	13.0	179
Indonesia	93.6	98.5	88.4	96.8	98.9	99.9	9.1	32
Lao PDR	67.8	97.9	55.7	97.1	96.9	99.5	-	87
Malaysia	99.3	100.0	97.9	100.0	99.9	100.0	6.9	24
Myanmar	51.6	66.3	37.4	54.8	86.9	92.2	-	70
Philippines	84.1	94.9	76.4	92.5	93.4	97.5	9.1	37
Singapore	100.0	100.0	100.0	100.0	99.9	100.0	1.9	26
Thailand	99.0	100.0	98.9	100.0	99.0	100.0	5.8	30
Vietnam	96.1	100.0	94.6	100.0	99.6	100.0	10.2	31

Note: "-" indicates unavailability of data

Source: Global Competitiveness Report 4.0 2019, WEF; WDI and Doing Business 2020, World Bank

Electricity supply quality which measures electric power transmission and distribution losses as a percentage of domestic supply indicates that 13.0 percent and 10.2 percent of total electricity supplied in Cambodia and Vietnam, respectively, is lost between sources of supply and points of distribution and in the distribution to consumers. This is high compared to other ASEAN countries and indicating the low technical quality of the network and the inefficiency of the distribution system.

According to the World Bank, Cambodia's electricity sector faces challenges with respect to access, quality, and tariffs. Underinvestment in the sector plays a major role in low electricity access in rural areas (89 percent). The system average power interruption duration in the country stood at 20.8 hours per year, with system average interruption frequency at 15.4 per year. These huge energy loss and frequent electricity interruptions in the country, along with high dependencies on imported oil, lead to high electricity costs. The average electricity tariff in the country is around US$ 0.19/KWh, with an average operational cost of generation of US$0.08/ KWh.

There has been a significant improvement in access to electricity in Lao PDR in recent years due to rapid increase in power generation capacity increases, though the country is yet to deliver universal access. There has been improvements in interruption duration and frequency, though problems persist due to natural disasters and poor electricity equipment quality. The system average power interruption duration in the country stood at 4 hours per year, with system average interruption frequency at 22.7 per year. The average electricity tariff in the country is around US$ 0.08/KWh with an average operational cost of generation of US$ 0.09/ KWh.

Despite recent improvements, Myanmar's access to electricity remains much lower compared to other ASEAN countries. Only 54.8 percent of rural population in the country currently has access to electricity. Supported by abundant natural resources and focussed government policy actions, over half of energy is derived from renewable sources. The system average power interruption duration in the country stood at 30.3 hours per year, with system average interruption frequency at 26.4 times per year. The average electricity tariff in the country is low at around US$ 0.06/ KWh with an average operational cost of generation of US$ 0.07/ KWh due to high electricity subsidies.

Vietnam has attained universal access to electricity, though rapid growth in demand in the country is putting severe pressure on increasing capacity, quality, and efficiency of the electricity infrastructure. Fossil fuels account for maximum energy mix in the country, with the share of renewables stood at 36.7 percent. The average tariff rates at US$ 0.08/KWh though comparable to CLM countries, remain higher than many other ASEAN countries, necessitating the need for continuous tariff reforms to attract investments. The system average power interruption duration in the country stood at 2.1 hours per year, with system average interruption frequency at 1.6 times per year.

The Doing Business 2020 report records the average number of days required to connect a newly constructed warehouse to permanent electricity services. It takes 179 days for a new warehouse to get electricity services in Cambodia, while it takes 87 days in Lao PDR and 70 days in Myanmar, largely due to complicated and inefficient administration processes affecting business environment in these countries.

Table 4.15: Access to Water Supply in ASEAN Countries

Country	% of Population Using atleast Basic Drinking Water Services, 2017			% of Population Using Improved Piped Water Supply, 2017			Exposure to Unsafe Drinking Water % of Population	Reliability of Water Supply
	Total	Rural	Urban	Total	Rural	Urban		
Brunei Darussalam	99.9	-	-	>99.0	-	-	-	5.3
Cambodia	78.5	72.9	97.3	26.1	10.9	77.3	40.5	4.5
Indonesia	89.3	82.0	95.5	18.3	13.0	22.7	35.8	4.8
Lao PDR	82.1	75.6	94.4	49.5	32.3	82.3	53.7	4.4
Malaysia	96.7	89.3	99.1	94.5	81.2	98.9	12.0	5.4
Myanmar	81.8	76.9	93.0	24.6	10.5	56.8	-	-
Philippines	93.6	90.0	97.7	40.1	34.3	46.8	49.0	4.7
Singapore	100.0	-	100.0	>99.0	-	>99.0	1.7	6.8
Thailand	99.9	100.0	99.9	70.3	54.3	86.8	52.7	5.2
Vietnam	94.7	92.6	98.6	42.9	22.1	81.0	34.3	4.6

Note: Reliability of water supply: 1 = extremely poor, 7 = extremely good; "-" indicates unavailability of data

Source: Global Competitiveness Report 4.0 2019, WEF; WDI, World Bank and WHO

As seen from **Table 4.15**, the percent of population using at least basic drinking water services remain relatively low for Cambodia, Lao PDR and Myanmar compared to other ASEAN countries, while the ratio is much lower in case of availability of improved piped water supply. There is also significant disparity between access rates in urban and rural areas. Water tariffs at the capital cities of CLMV countries except Vietnam (US$ 0.24 per M^3) remain low, at US$ 0.15 per M^3 in Cambodia, US$ 0.19 per M^3 in Lao PDR and US$ 0.02 per M^3 in Myanmar. Operational expenditure of water supply stood at US$ 0.12/ M^3 of water sold in Cambodia and US$ 0.23/ M^3 of water sold in Vietnam. Operational cost coverage ratio, i.e., ratio of total annual operational revenues to total annual operational expenditure was 2.57 in Cambodia, 0.87 in Lao PDR and 1.55 in Vietnam, indicating that revenues exceed operational expenditures.

Table 4.16: Quality of Sanitation and Wastewater Treatment in ASEAN Countries

Country	% of Population Using Improved Sanitation Facilities (including shared), 2017			% of Population Using Improved Sanitation Facilities (including shared) with Piped Sewer Connection, 2017			Wastewater Treatment Rate (% of Treated)	Wastewater Connection Rate (% of Households Connected)
	Total	Rural	Urban	Total	Rural	Urban		
Brunei Darussalam	96.3	97.3	96.0	95.3	95.6	95.2	-	44.0
Cambodia	65.7	55.5	>99.0	14.3	3.4	50.8	<1.0	10.0
Indonesia	85.4	76.8	92.5	11.3	13.5	9.5	1.0	2.5
Lao PDR	77.2	66.4	98.0	1.1	<1.0	1.9	<1.0	<1.0
Malaysia	>99.0	>99.0	>99.0	79.2	-	-	61.6	31.8
Myanmar	73.7	67.6	87.6	<1.0	<1.0	<1.0	<1.0	<1.0
Philippines	91.4	88.3	95.0	4.3	3.0	5.7	63.0	4.1
Singapore	>99.0	-	>99.0	>99.0	-	>99.0	100.0	100.0
Thailand	>99.0	>99.0	>99.0	8.6	5.4	11.9	<1.0	<1.0
Vietnam	87.3	82.1	96.9	<1.0	<1.0	1.7	10.0	2.0

Note: "-" indicates unavailability of data
Source: World Bank and WHO

While percentage of population having improved sanitation facilities (piped and non-piped) in CLMV countries remain lower than most ASEAN countries, the ratio is much worse in case of piped sewer connection **(Table 4.16)**. Piped Sewage facility is only available for less than 1 percent of population in Myanmar and Vietnam, 1.1 percent of population in Lao PDR, while it is relatively higher at 14.3 percent in the case of Cambodia. CLMV countries face an inadequate sewerage system, capacity shortages and poor waste water treatment facilities, necessitating the need to improve wastewater treatment quality.

INFRASTRUCTURE FINANCING IN CLMV

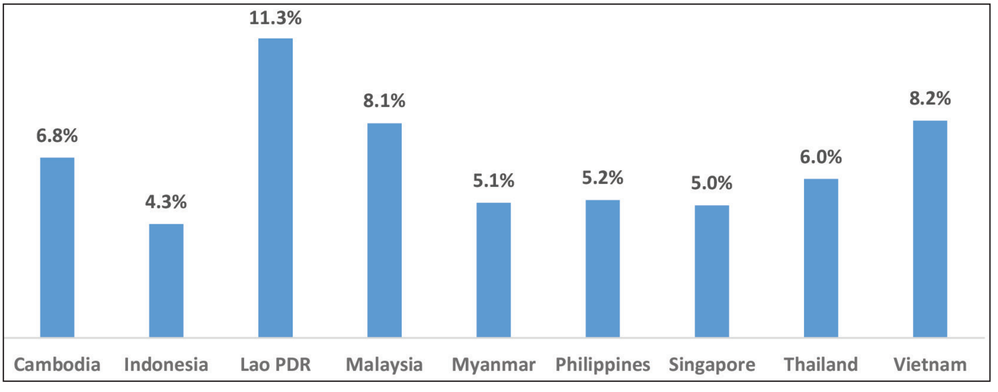
As reiterated earlier, infrastructure plays a key role in the region's economic, social and environmental development. While improved connectivity through investment in transport infrastructure enhances logistical efficiency and supports the growth of investment, trade and commerce; investment in power increases energy security, improved electricity supply to rural industrial units and supports in achieving universal access of electricity. Similarly, ICT infrastructure supports e-commerce activities and improve regional and global connectivity. Infrastructure investments have a powerful multiplier effect, by enhancing accessibility and facilitate trade, improve mobility, generate greater employment opportunities, and boost overall economic productivity. Infrastructure development also plays a major role in reduction in transaction costs.

The CLMV countries are attracting increased attention from foreign investors, especially with the formal establishment of the ASEAN Economic Community in 2015. Although CLMV countries have made increasing investments in infrastructure development, there is a need to boost further investments in infrastructure, through appropriate funding mechanisms, to achieve their development goals and to strengthen regional integration.

Infrastructure Financing Gap in CLMV

Economic infrastructure continues to represent a significant challenge for CLMV countries. Good quality infrastructure and efficient infrastructure services, especially roads, electricity, and telecommunication systems, help raise productivity, improve industry competitiveness, and sustain growth over the medium to long term. As per the World Bank estimates, even if countries spent 1 percent of their GDP annually on the upgrade of rural roads, even under optimistic assumptions on growth of GDP, rural accessibility would only increase from 39 percent to 52 percent by 2030 across all developing countries. This necessitates the need to implement alternative solutions to rural integration in the short run until countries could be able to afford to increase significantly access to all-weather roads. As seen from the previous Chapter, quantity and quality of overall infrastructure in CLMV countries remain below satisfactory in comparison to ASEAN average. Hence, Infrastructure investment needs to be scaled up to bring development of CLMV countries in alignment with rest of the region. Among ASEAN countries, Lao PDR has the maximum infrastructure investment as a percentage of GDP in 2017 mainly due to large hydroelectric projects, followed by Vietnam, Malaysia and Cambodia **(Chart 4.2)**.

Chart 4.2: Infrastructure Investment as Percentage of GDP, 2017



Note: Infrastructure investment is calculated as sum of General government investment (gross capital formation) and Public-private partnership (PPP) investment

Source: Investment and Capital Stock Dataset, IMF, August 2019 and Asian Infrastructure Investment Bank

Multilateral development banks like the World Bank and the ADB plays an important role in public and private sector infrastructure financing in the region. ADB provides loans, grants and technical assistance to its developing member countries, to the private sector and through public-private partnerships (PPPs) to support the building and maintenance of infrastructure. The majority assistance is in water, energy, transport, urban development, and information and communications technology (ICT).

Realizing the need for increased financing in the sector, ASEAN and the ADB set up the ASEAN Infrastructure Fund (AIF), a regional infrastructure financing institution in 2011. During the period 2013 to 2018, out of total AIF commitments, 67 percent went towards energy sector, water (8 percent), transport (4 percent), and urban sector (2 percent). 75 percent of commitments went to Indonesia, 19 percent to Vietnam, 4 percent to Myanmar and 2 percent went to Lao PDR.

Irrespective of such spending, according to the ADB, the infrastructure gap in the ASEAN region, including CLMV countries from 2016 through 2030 is approximately US$ 2.8 trillion, or US$ 184 billion annually. Similarly, as per G20 Global Investment Hub, CLMV countries excluding Lao PDR has an infrastructure investment gap (the difference in required infrastructure spending and actual investment spending) of US$ 242 billion (Cambodia – US$ 28 billion, Myanmar – US$ 112 billion and Vietnam – US$ 102 billion) up to 2040. This infrastructure gap is driven by factors such as rapid economic growth, urbanization, population growth, communication needs, as well as various other factors such as trade and environment sustainability etc.

Bridging Infrastructural Investment Gap

Individual countries in the region mostly mobilize domestic resources for infrastructure development. However, due to budgetary constraints, domestic resources alone are not sufficient to meet the infrastructural funding requirements existing in these countries. Hence, low and middle income countries depend on regional and international capital markets and donors for additional financing, particularly concessional financing. PPPs are a mechanism for governments to procure and implement public infrastructure and/or services using the resources of private sector without incurring any borrowings for project implementation, while also bringing in the expertise and efficiencies associated with the private sector. The implicit Government support in these projects provides lower risk perception, making the projects more attractive to institutional investors. PPPs can be an effective financing method in connectivity projects to build and implement new infrastructure or to renovate, operate, maintain or manage existing transport infrastructure facilities.

There is also a great need and opportunity for private investment in infrastructure sector in CLMV. As noted by the ADB, Asia's limited innovative financing products hinders private investment in the region, which holds true for CLMV countries[11]. Infrastructure bonds, especially socially responsible bonds and green bonds are some of the innovative methods of financing projects in infrastructure related industries. Sovereign Wealth Funds (SWFs) have large resources which allow them to invest in large scale infrastructure projects. They are suited for infrastructure investment on account of their ability to withstand illiquidity. These kind of innovative mechanisms could go hand in hand with existing financing mechanisms such co-financing with other development financial institutions.

In order to attract increased investment in the CLMV region from private sector, the first step is to ensure that projects are bankable, commercially viable and profitable. This requires more project preparation facilities from the initial stage of project design to the completion of project.

Better performance by the existing participants with an improved regulatory environment is necessary for CLMV countries to overcome this demand-supply gap. Thus, investment in infrastructure is a major solution, but it should go hand in hand with proper implementation. This requires alternative financing mechanisms, especially through new investment platforms, and regulatory and operational alterations should improve overall market efficiency. CLMV countries also need to strengthen PPPs by putting in place PPP laws and implement transparent bidding and contracting models.

Need for Improving Business Environment

According to the Logistics Performance Index (LPI), an interactive benchmarking tool created by the World Bank to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance, improvement in the LPI score by one position in a country increases its trade by 16 percent. Logistics sector plays a major role in connectivity, which in turns governs the trade costs incurred by a country. The LPI ranking takes into consideration parameters like customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing and timeliness. In the 2018 ranking, Vietnam ranked 39th, followed by Lao PDR (82), Cambodia (98) and Myanmar (137) among 160 economies, while India ranked 44th.

In Doing Business 2020 survey conducted by the World Bank, 190 economies across the world are ranked on their ease of doing business, from 1 to 190. A high ranking on the ease of doing business index means the regulatory environment is

[11] *How to bridge the financing gap in Asian Infrastructure, ADB, October 2018*

more conducive to the starting and operation of a local firm. This index averages the country's percentile rankings on 10 topics, made up of a variety of indicators, giving equal weight to each topic. In terms of ease of doing business, Vietnam ranked 70th among 190 economies, followed by Cambodia, Lao PDR and Myanmar, which were ranked 144th, 154th and 165th, respectively.

To tackle the severe impact of the pandemic, India and CLMV countries have come out with various investment policy measures, with the specific purpose of liberalising the existing FDI policies. An improvement in LPI and Doing Business rankings, along with incorporating measures to simplify and streamline the investment regimes and processes, would not only lower the cost of doing business in CLMV countries, but also would improve their investment attractiveness.

5. INDIA AND CLMV COOPERATION IN INFRASTRUCTURE SECTOR

CLMV forms an important sub-region for India. Despite high economic growth witnessed by member countries, CLMV region lagged behind other ASEAN countries in terms of economic development, reflecting the immense potential for rapid development offering huge opportunities for Indian investors. The geographical proximity of CLMV countries to India ensures that implementation of physical connectivity projects would facilitate trade by reduction in transportation time and lower transportation costs. This will also ensures efficient supply chain management by companies across the value chains and promotes development of industry clusters.

Reduction of transaction costs is essential in promoting economic relation between India and CLMV. Poor infrastructure/logistics and high tariffs are the major constraints behind high transaction costs. Connectivity became an important issue of convergence between CLMV countries and India, and is a priority for both India and CLMV countries. India and CLMV countries need to focus on cooperation in enhancing connectivity through land, sea and air. In 2013, India became the third dialogue partner of ASEAN to initiate India-ASEAN Connectivity Coordinating Committee Meeting. India has been instrumental in developing various corridor connectivity projects in the region to provide cost effective logistic services. In August 2019, India adopted the new Mekong Ganga Cooperation (MGC) Plan of Action (2019-2022) that envisages project-based cooperation in the seven areas - tourism and culture, education, public health and traditional medicine, agriculture and allied sectors, transport and communication, MSMEs as well as three new areas of cooperation, i.e. water resources management, science and technology, and skill development and capacity building. Under the cooperation in transport and communication, the MGC Plan of Action envisages to examine the feasibility of extending the India-Myanmar-Thailand Trilateral Highway to Cambodia, Lao PDR, Vietnam and developing it as an economic growth corridor.

Role of North East Region in Enhancing Connectivity with CLMV

The North East region (NER) plays a strategic role for India as it acts as a gateway to Southeast and East Asia. The natural resources potential in NER and CLMV countries serves as a tool for encouraging investment and industrial development in the region. The NER acts as the land bridge as it shares international borders with Myanmar and China, apart from South Asian neighbors such as Bangladesh, Bhutan and Nepal. Therefore, increasing transport connectivity through this region can increase trade, socio-economic development and also people to people contacts. Border infrastructure needs to be upgraded to facilitate connectivity between India and Myanmar which acts as the gateway to the CLMV region.

The study conducted by India Exim Bank on border infrastructure, titled 'Act East: Enhancing India's Trade with Bangladesh and Myanmar Across Border' highlighted various issues and challenges with regards to border trading infrastructure, which require urgent attention. Absence of all-weather road connectivity, lack of storage and warehouse facilities, poor ICT and banking infrastructure, irregular electricity and water supply issues, absence of quality testing laboratories for imported food items, need for country of origin certificate for manufactured items, among others, are some of the major challenges leading to hindrance in border trade between India and Myanmar.

According to a study by the Research and Information System for Developing Countries (RIS)[12], the North Eastern states are likely to gain more in terms of economic growth with higher movement of freight from Kaladan Corridor, Trilateral Highway and the Myanmar–India Corridor which would be part of the Bangladesh–China–India–Myanmar Economic Corridor (BCIM – EC).

Connectivity Projects

In order to provide a boost to the 'Act East Policy' and to link to Southeast Asian markets, the Indian Government has multiple connectivity projects, through land, water and air, along with digital connectivity projects.

1. Land Connectivity Projects

Kaladan Multi-Modal Transit Transport Project

The Kaladan Multi-Modal Transit Transport Project (KMMTTP), jointly identified by India and Myanmar to develop physical connectivity through land and water, is of great political and strategic significance to India and Myanmar. It is expected to be an alternative route through Myanmar for the transportation of goods to the NER. The project was initiated by the Indian government in 2008, envisaging creation of a multi-modal mode of transport for shipment of cargo from the eastern ports of India to

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[12] *Assessing Economic Impacts of Connectivity Corridors: An Empirical Investigation, Prabir De, Sunetra Ghatak, Durairaj Kumarasamy, RIS, 2018*

Myanmar as well as to the North Eastern part of India through Myanmar. The project has three different stretches involving shipping, inland water and road transport stretches. This project will connect Kolkata seaport with Sittwe seaport in Rakhine State, Myanmar by sea (an economic corridor of 539 km). In Myanmar, it will then link Sittwe seaport to Paletwa, Chin State, Myanmar through the Kaladan river boat route (158 km), and then from Paletwa by road to Zorinpui, Mizoram in NER (210 km). It thus uses sea, river and road transport modes to facilitate a development corridor in Myanmar and also movement of cargo between Indian mainland and the NER.

KMMTTP is expected to contribute to the economic development of the NER by allowing goods from Kolkata port to reach India's North East states more economically, and thereby reducing pressure on the Siliguri Corridor. In the absence of an alternate route, the development of this project not only serves the economic, commercial and strategic interests of India, but also contributes to the development of Myanmar as well, supporting its economic integration with India.

India and Myanmar are currently working towards operationalization of Sittwe Port in the Rakhine State by 2021.

India-Myanmar-Thailand Trilateral Highway

The India-Myanmar-Thailand (IMT) Trilateral Highway is a 1,360 km long flagship land connectivity project between India and ASEAN, announced in 2002. The Trilateral Highway connects India, Myanmar and Thailand through Moreh (India), Bagan (Myanmar) and Mae Sot (Thailand), respectively. After a decade, in 2012 it was decided to extend to Cambodia and Vietnam, at the Commemorative Summit between ASEAN and India. India is undertaking construction of two sections of the IMT Trilateral Highway in Myanmar namely, 120.74 km Kalewa-Yagyi road section; and 69 bridges along with the approach road on the 149.70 km Tamu-Kyigone-Kalewa (TKK) road section.

The work on both sections were awarded on Engineering, Procurement and Construction (EPC) mode in November 2017 for the TKK section and in May 2018 for Kalewa-Yagyi section. The project is being funded by Government of India under grant assistance to the Government of Myanmar[13].

India has also announced a grant of US$ 2 million for the construction of the border haat bridge at Byanyu/Sarsichauk in Chin State that is expected to provide increased economic connectivity between Mizoram and Myanmar.

[13] *'India-Myanmar-Thailand Trilateral Highway', PIB, January 3, 2019*

2. Maritime Connectivity

Sea route accounts for the bulk of India-ASEAN trade and a key instrument to integrate regional economic connectivity. Maximizing the trade potential of India with CLMV countries require development of a well-developed maritime infrastructure and appropriate policies. The ASEAN-India maritime transport cooperation agreement has been proposed by India to expand its maritime connectivity with the ASEAN. Recognizing the importance of maritime sector in its development, ASEAN has adopted the 'ASEAN Outlook on the Indo-Pacific' in 2019, which complements India's vision of the Indo-Pacific. India is also looking to set up a maritime transport working group of Myanmar, Thailand, Cambodia and Vietnam to explore the feasibility of shipping networks. Plans to interlink islands in India and ASEAN countries for improving maritime connectivity are also under consideration[14].

3. Air Connectivity

Increased demand for air cargo services, ease of doing business and tourism are the major drivers of air connectivity between India and ASEAN countries. However, among CLMV countries, India has direct flights only to Myanmar. The majority of air traffic is concentrated in countries like Singapore, Malaysia and Thailand as the airport hubs at Singapore, Kuala Lumpur and Bangkok have passenger as well as cargo handling facilities and infrastructure. Direct flight services to and from Vietnam by Vietjet and Indigo are expected to commence, which might facilitate further trade and investment activities.

4. Digital Connectivity

In addition to physical connectivity, digital connectivity is equally important to improve India-CLMV trade and investment relations, especially in the background of current COVID-19 pandemic. Infrastructural access is a precondition for the dimensions of digital connectivity within CLMV and ASEAN, and between India and ASEAN in general and CLMV in particular. Digital connection could benefit from transportation and infrastructural projects, which will include laying fibre optics cables along railroads and energy pipelines.

In order to improve communication services, Myanmar has set up cross-border fibre optic networks with several countries including India, providing end-to-end connectivity solutions in the country. The first cross-border fibre optic link between India and Myanmar was set up in February 2009. The optic link is a high-speed broadband link for voice and data transmission, connecting Mandalay in Myanmar

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[14] *ASEAN-India Connectivity: Mapping Pathways of Shared Prosperity, MEA Blog, 2019*

(second largest city of Myanmar), and India's border town of Moreh in Manipur which are separated by a distance of 500 kilometers. The 640-km long Myanmar-India optical fiber link passes through 6 cities of Tamu, Kampatwa, Kyi Gone, Shwebo, Monywa and Sagaing.

India has announced US$ 1 billion Lines of Credit to ASEAN countries (including CLMV) in November 2015 to promote projects that support physical and digital connectivity, and later a grant of US$ 40 million was offered to CLMV countries to kick start digital connectivity projects in the sub-region. A Project Development Fund (PDF) with a corpus of US$ 77 million to develop manufacturing hubs in CLMV countries, which can be utilized to strengthen digital connectivity between India and ASEAN was also announced. This has aligned India with the Master Plan on ASEAN Connectivity 2025 (MPAC) and is expected to facilitate sustainable infrastructure, digital innovation, seamless logistics and mobility of people[15].

Ongoing digital connectivity projects include the setting up of Information Technology Resource-cum-Study Centre for ASEAN countries at C-DAC, Noida and assistance in IT curriculum development, teachers' training, provision of scholarships for ASEAN students, joint training programmes and courses, e-learning, seminars, workshops as well as exchange of visits of IT experts. Another important project is the 'Implementation Study and Pilot Deployment of Gigabit Passive Optical Network (GPON) Technology in CLMV countries and Indonesia' with an aim to assess the feasibility of upgrading the existing broadband infrastructure with GPON technology, identify the GPON deployment scenario, and implement a pilot deployment of GPON technology in CLMV countries and Indonesia.

India has also supported setting up of Centre of Excellence in Software Development and Training (CESDT) in Myitkyina, Myanmar, which was virtually inaugurated in October 2020. The project is expected to set sustainable IT infrastructure for advanced training using conventional and virtual classrooms and would be imparting intensive teachers training and extending support for ICT curriculum development. The project was set up with financial support from the ASEAN-India Cooperation Fund.

India is also planning to set up Digital Village Concept in CLMV countries, which involves provision of internet and mobile services using sustainable technologies and renewable energy sources. There is ample scope to promote digital connectivity between India and ASEAN countries, particularly in the areas of Industry 4.0.

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[15] *ibid*

India-CLMV Cooperation in Utility Infrastructure

India, through its various Lines of Credits, support CLMV countries in electricity access and water management. India is the world's third-largest consumer of oil and the fourth-largest oil refiner, and a net exporter of refined products. The country's growth is heavily dependent on sustained supply of energy resources. To improve energy security, the Government of India is diversifying its sources of supply, while increasing Indian investments in energy rich countries. CLMV countries could potentially contribute to India's energy security. According to NITI Aayog, India became a net exporter of electricity in 2017, and has increased international power trade with neighbouring countries such as Myanmar. Further, India has started exporting high-speed diesel (HSD) to Myanmar through land border since 2017-18. Myanmar has an estimated hydropower potential of 39,720 MW, of which only a marginal 2 percent has been utilised, while Lao PDR has an estimated hydropower potential of 23,000 MW[16]. India and Myanmar have agreements for the development of the Sedawyagi and Yeywa hydropower projects.

India is in discussions with Myanmar to establish a High Capacity High Voltage Grid Interconnection between the Indian power grid and the Myanmar grid. India has recently proposed to construct a US$ 6 billion petroleum refinery in Thanlyn region near Yangon, Myanmar[17]. Additionally, as part of establishing a regional power grid in BIMSTEC, a 3,000 km-long power grid is being planned from Myanmar-Thailand to India. CLMV countries, being part of ASEAN Plan of Action of Energy Cooperation (APAEC) (2016-2025) require huge infrastructure to bring about regional energy connectivity and integration. Moreover, to reduce dependence on fossil fuels and to achieve Sustainable Development Goal (SDG) of universal access to electricity, India and CLMV countries are trying to develop alternative energy sources. Though Lao PDR and Myanmar have huge hydropower potential, these countries still face challenges in meeting rapid increase in domestic energy demand. Cambodia and Myanmar are members of the International Solar Alliance (ISA), an initiative in which India played a key role since its inception, which aims to mobilize US$ 1 trillion in the exploration of solar energy.

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[16] *ADB (2019), Lao PDR Energy Sector Assessment, Strategy and Road Map, Asian Development Bank, November 2019*

[17] *India, Myanmar achieve concrete outcomes in energy, security, connectivity and health sectors, Sourced from The Economic Times dated October 05, 2020 (https://economictimes.indiatimes.com/news/politics-and-nation/india-myanmar-achieve-concrete-outcomes-in-energy-security-connectivity-and-health-sectors/articleshow/78497185.cms?from=mdr)*

EXPORT-IMPORT BANK OF INDIA IN CLMV COUNTRIES

As the apex financial institution in India for financing, promoting and facilitating India's international trade and investments, Export-Import Bank of India (India Exim Bank), since its inception in 1982, has focused on promoting and supporting south-south cooperation, trade and investment. As a partner institution to promote economic development in developing and least developed countries, the commitment towards building relationships and fostering cooperation among southern countries is reflected in the various activities and programmes, which India Exim Bank has set in place. India Exim Bank operates a comprehensive range of financing, advisory and support programmes to promote and facilitate India's trade and investment.

Accordingly, the Southeast Asia region has been a focus region for India Exim Bank, and thus form a critical component of the Bank's strategy to promote and support two-way trade and investment.

Lines of Credit

To promote bilateral and regional commercial relations, India Exim Bank extends GOI-supported Lines of Credit (LOCs) to governments, parastatal organizations, financial institutions, commercial banks and regional development banks to support export of eligible goods on deferred payment terms. Operative LOCs covering the CLMV region extended by India Exim Bank, at the behest of Government of India are given in **Table 5.1**.

Table 5.1: India Exim Bank's Operative Lines of Credit in CLMV Countries

(As on September 30, 2020)

Country (No. of LOCs)	Amount of Credit (US$ mn)	Key Sectors/Projects Covered
Cambodia (4)	102.1	Electricity Transmission Line; Water Development Projects
Lao PDR (4)	153.8	Electricity Transmission Line project; Irrigation Project; Hydropower Projects
Myanmar (9)	531.9	Railway Projects; Refinery Projects; Manufacturing Plant Projects; Transmission Lines; Irrigation System; Petrochemicals; Microwave Radio Link Project
Vietnam (4)	191.5	Hydro Power Project; Exports of Textile Machinery and Equipment

These LOCs have, inter alia, resulted in strengthening of infrastructure in the region and improved livelihoods of local population through providing:

- Access to affordable Electricity through increased electricity generation and strengthening the capacity of transmission lines
- Access to Water through various irrigation projects
- Access to Healthcare
- Improved skill sets through various Vocational Training centres, IT centres, etc
- Improved crop productivity through mechanization, irrigation, training etc.
- Improved realisations through better connectivity with markets (Roads/Railways)
- Employment Opportunities, especially to women through various Industrial Projects

Supporting Project Exports

India Exim Bank extends both funded and non-funded facilities for overseas turnkey projects, civil construction, supplies as well as technical and consultancy service contracts across various sectors of the economy. India Exim Bank has financed several Indian project exporters in the region in various infrastructure related sectors including, among others, water resources development, power projects, irrigation, gas pipeline and hydropower projects. Such projects executed by assistance received from India Exim Bank, have contributed to the host country's developmental endeavours and have assisted in narrowing developmental gaps in such countries.

Buyer's Credit under National Export Insurance Account

The Buyer's Credit under National Export Insurance Account (BC-NEIA), introduced in April 2011, provides further impetus to project exports from India on medium- or long-term basis, especially in the infrastructure sector. Under this programme, India Exim Bank facilitates project exports from India by way of extending credit facility to overseas sovereign governments and government-owned entities for import of goods and services from India on deferred credit terms. Indian exporters can obtain payment of eligible value from India Exim Bank, without recourse to them, against negotiation of shipping documents. NEIA is a Trust, set up by Ministry of Commerce and Industry and administered by ECGC. All the CLMV countries featured among the positive list of 91 countries identified by ECGC for which Indian exporters can avail BC-NEIA.

Finance for Joint Ventures

With a view to support Indian companies in their endeavour to globalise their operations, India Exim Bank operates a programme to support overseas investments by Indian companies through JVs/ WOSs. Such supports include loans and guarantees, equity finance and in select cases direct participation in equity along with Indian promoter, to set up such ventures overseas. As on September 30, 2020, India Exim Bank has sanctioned ₹ 295.9 crore to ten Indian companies for setting up ventures in Myanmar and Vietnam in sectors including agriculture and food processing including spices, capital goods and engineered goods, consumer goods, plastics and packaging, and wood and wood-based products.

Project Development Fund for CLMV Countries

Ministry of Commerce and Industry (MOCI), Government of India, engaged India Exim Bank for conducting a study for developing a framework to identify opportunities for India in trade and investments in CLMV countries. For this Study, India Exim Bank mounted a Mission to CLMV countries to gather inputs from all stakeholders in those countries and submitted the final report to MOCI. Subsequently, the Union Finance Minister in his Budget Speech for 2015-16 announced in the parliament that “in order to catalyze investments from the Indian private sector in this region, a Project Development Company will, through separate Special Purpose Vehicles (SPVs), set up manufacturing hubs in CLMV countries, namely, Cambodia, Lao PDR, Myanmar and Vietnam”.

In compliance with the then Finance Minister’s announcement and to catalyse Indian private sector investments in CLMV countries, under the ‘Act East Policy' of the Government of India, a Project Development Fund (PDF) with a corpus of ₹ 500 crore has been created in August 2016. The PDF, housed in Department of Commerce, will be operated through the India Exim Bank, which will act as the Empowered Institution under the Initiative. The PDF shall be governed by an Inter-Ministerial Committee under the chairpersonship of the Commerce Secretary. The primary objective of the PDF is to facilitate Indian investments and broaden the manufacturing base of Indian companies in CLMV countries. The PDF will be used to identify projects, which support Regional Value Chain (RVC) and help integrate Indian companies into the RVC. The projects identified under the initiative, if found feasible/ viable, will be incorporated/ implemented through Special Purpose Vehicles (SPVs) in CLMV countries.

Under this initiative, four projects, in sectors such as healthcare in Cambodia and Myanmar, education in Myanmar and pharmaceuticals in Vietnam, have been identified for preparation of DPRs, which have since been finalised. India Exim Bank is now in the process of implementing projects in the region based on the findings of the DPRs.

India Exim Bank as International Consultant

India Exim Bank is well positioned to share its experience and expertise in the fields of capacity creation, institutional strengthening, export development and export capability creation. The Bank is thus well placed to provide a range of technical assistance in these fields. India Exim Bank has rendered consultancy services to a number of institutions in Southeast Asia region such as:

- Study on Regional Cooperation in Export Finance and Export Credit Guarantees for the Economic and Social Commission for Asia and Pacific (ESCAP) (includes CLMV countries);
- Expertise provided on developing a National Export Strategy of Myanmar; and
- Designing Export Marketing Seminars for SMEs in Vietnam.

Institutional Linkages

India Exim Bank has a wide network of alliances with financial institutions and investment promotion agencies, market promotion boards and service providers across the globe for assisting externally oriented Indian companies in their quest for excellence and globalization. In the CLMV region, India Exim Bank has entered into an MOU with the Investment and Trade Promotion Centre, Vietnam to promote bilateral trade and investments between the two countries.

Asian Exim Banks Forum

With a view to enhance cooperation and forge a stronger linkages among its member institutions, the Asian Exim Banks Forum (AEBF), a grouping of Asian Exim Banks, was conceived and initiated by India Exim Bank in 1996. Since 1996, the Forum meets every year at an Annual event hosted by Export Credit Agencies (ECA), in rotation. Members comprise ECAs from Australia, China, India, Indonesia, Japan, South Korea, Malaysia, Philippines, Thailand, Turkey and Vietnam. Asian Development Bank is a Permanent Observer.

The task of Asian ECA Forum is to enhance cooperation and forge a stronger bond between its member institutions, thereby fostering a long-term relationship with the Asian ECA community. The Annual meetings serve as a forum for discussing a wide range of issues focused on fostering common understanding as well as exchanging and sharing information. Together, the endeavour is to meet the challenges faced as an ECA in Asia and explore possible areas for further regional cooperation. Myanma

Foreign Trade Bank has attended meetings of the AEBF as an Observer. A new website for AEBF, developed in-house by India Exim Bank, was launched during the 24th annual meeting of the AEBF at Phuket, Thailand in November, 2018.

Research Studies

India Exim Bank carries out research on areas related to bilateral trade and investment, sector/product/country and regional studies, as also policy issues related to the external sector with a view to enhancing competitiveness of Indian exporters. Some of the published research studies related to CLMV include:

- Enhancing India's Engagement in Healthcare Sector of CLMV Countries;
- Act East: Enhancing India's Trade with Bangladesh and Myanmar Across Border;
- India's Engagements With CLMV: Gateway To ASEAN Markets;
- Act East: Enhancing India's Engagements with Cambodia, Lao PDR, Myanmar, Vietnam (CLMV);
- Enhancing India's Bilateral Ties with Cambodia, Lao PDR, Myanmar, Vietnam: A Brief Analysis;
- India's Trade and Investment Relations with Cambodia, Lao PDR, Myanmar, Vietnam (CLMV): Enhancing Economic Cooperation;
- Enhancing India-Myanmar Trade and Investment Relations: A Brief Analysis;
- ASEAN Countries: A Study of India's Trade and Investment Potential; and
- BIMSTEC Initiative: A Study of India's Trade and Investment Potential with Select Asian Countries.

Representative Offices

India Exim Bank has two representative offices in the ASEAN region - Singapore and Yangon. These offices seek to establish and maintain relationships with multilateral agencies, regional development institutions, trade and investment promotion bodies, international banks, chambers of commerce, government departments and institutions in various Southeast Asian countries, including CLMV countries, and identify areas of cooperation. The representative offices play a key role in facilitating India's economic cooperation with ASEAN countries (including CLMV), while keeping close coordination with Indian Missions in the region. The offices project Bank's capabilities in financing India's international trade and investment, as also keeps the Bank abreast of the developments in the economic and banking/financial sectors of the Southeast Asian region, including CLMV countries.

India Exim Bank in East and North East Region

With a view to assist entrepreneurs in harnessing the tremendous export potential of the East and the NER, India Exim Bank has its representative offices at Kolkata and Guwahati. While the Kolkata Regional Office covers India Exim Bank's activities in the states of Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal, the Guwahati Office covers the Bank's activities in the eight states of the NER, namely, Assam, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Nagaland, Sikkim and Tripura. These two offices are strategically placed to play vital roles in promoting exports from the Eastern and the North Eastern regions, ranging from creating awareness of export potentials of the regions and capacity building, to financing of exports and export oriented units. In order to enhance export potential of MSMEs in industrial clusters in the NER, India Exim Bank has also collaborated with the United Nations Development Programme (UNDP). The India Exim Bank-UNDP programme for the NER seeks to develop, among others, bankable export clusters in the NER, based on local resource availability and comparative advantage of the identified clusters.

In sum, India Exim Bank, with its comprehensive range of financing, advisory and support services, seeks to create an enabling environment for enhancing two-way flow of trade, investment and technology between India and the CLMV region. While promoting infrastructure development and facilitating private sector development in host countries, the various efforts of India Exim Bank, ensconced in its range of activities, also contribute towards institutional building in the CLMV region.

6. INDIA AND CLMV: NEW ARENAS OF COOPERATION IN INFRASTRUCTURE

Today the world is facing severe uncertainties arising from the unprecedented COVID-19 pandemic, severely impacting growth, trade and investment, and ultimately affecting the lives and livelihoods of global population. The pandemic revealed the necessity for greater cooperation among countries to bring back the global economy into a growth path. There is a sustained greater need than ever before for strengthening cooperation among India and CLMV countries, particularly in the current global situation.

ASEAN-India FTA in goods, though has significantly facilitated the trade between both regions, has resulted in India experiencing a trade deficit with ASEAN. This has resulted in lower utilization of FTA, thus necessitating the FTA to be reviewed especially in the context of recent signing of the regional comprehensive economic partnership (RCEP) in November 2020. Reinforcing cooperation and collaboration should be the new watchword in this growing partnership.

Moreover, due to various events in the recent times, including the ongoing pandemic, US-China trade issues, global recession and associated uncertainties, several investors from China and other countries are shifting abroad, mostly to other Asian economies, with the purpose of reducing operation costs, market diversification and search for new markets, and reduce the effect of future business uncertainties. Both CLMV countries and India have been identified as attractive alternative destinations for these investments. To leverage on these opportunities, India and CLMV countries need to upgrade their existing infrastructure especially connectivity infrastructure and logistics services, along with skill upgradation of its citizens. A collaboration between India and CLMV countries in these areas will be beneficial for both regions. India could play a major role in infrastructure development activities, including trade related infrastructure in the CLMV region, given its close linkages and common borders.

Cooperation in Energy Sector and Water Management

Investment in clean energy and power generation from renewable sources have been on a rise in India, largely at the back of energy security concerns, government support, initiatives taken on account of climate change, increasing cost competitiveness of renewable energy technology and favorable foreign investment policy. India's experience in the renewable energy sector can be of immense benefit to CLMV countries in their efforts towards sustainable development.

The huge energy demand in CLMV countries and existing demand and supply gap offer great opportunities for Indian investors. For instance, Vietnam's energy demand is surging heavily with forecast indicating that by 2035 the total energy demand will be nearly 2.5 times higher than in 2015. The revised National Power Development Master Plan VII (PDP 7) of the country aims to nearly quadruple the installed capacity for renewable energy as a percentage of total installed capacity of power to 21 percent of 2030, up from 5.4 percent in 2015. The geographies of CLMV countries are suitable for renewable energy generation in terms of quantity and stability. Further the governments of CLMV countries have adopted pro-renewable stance by issuing a number of investment incentives. For instance, Vietnam has introduced the feed-in-tariff (FIT) scheme for solar and wind power and has permitted 100 percent foreign ownership of Vietnamese energy companies.

According to the 5th ASEAN Energy Outlook (AEO5), fast economic growth and aggressive electrification efforts are expected to result in higher energy demand in ASEAN which is expected to more than double electricity consumption by 2040. CLMV countries are rich in renewable energy, particularly solar, wind, hydro and geothermal, although they are unevenly distributed across the region. With its abundant hydro resource, Lao PDR aims to be the battery of Southeast Asia. There is abundant potential for utility scale, land-based wind and solar PV development in Vietnam.

Important public infrastructure and power projects in CLMV, funded totally or in part by India's LOCs have made it possible for Indian companies to extend their footprint in these economies. India is engaged with CLMV countries in energy infrastructure development through building hydropower projects, power transmission lines, and substations and oil and gas pipelines, etc. With ASEAN having a comprehensive regional energy cooperation programme, along with plans for developing a region-wide grid of natural gas pipelines and electricity transmission lines, this opens opportunity for India to increase its engagements with CLMV countries. There also exist scope for further alliance between India and the region on solar energy under the aegis of ISA, supported by the strong focus of the governments in the region on rural electrification and regional grid connectivity, which renders cooperation on specialized solar power an attractive proposition.

Thus, India and CLMV countries could collaborate in the renewable energy sector, which is both technology and capital intensive, by promoting knowledge and information sharing, technology transfer, and joint ventures. This, would ensure better capacity utilization by complementing India and CLMV countries demand and supply situation, developing production capabilities in the respective sector where these countries are having comparative advantage, benefitting the two regions from cheaper and uninterrupted power supply. More Indian companies could engage in development of renewable energy sources in CLMV for the mutual benefit of both parties by leveraging on this demand and supply gap existing in the power sector.

Water management is a priority area for India, as the country is one of the major water users globally, in terms of volume. India has more than 18 percent of the world's population, but only 4 percent of the world's renewable water resources. Similarly, India and CLMV countries could cooperate in water resource development and water management to ensure universal supply of clean drinking water. This cooperation could cover areas such as water supply, irrigation, storm water management, floods management, water pollution management, and sanitation management. This could go a long way towards integrated water resource management in the region and strengthening capacity for future integration, and contribute towards sustainable development of the region.

Box 6.1: Hydropower Potential in Lao PDR

The rapid economic growth over the last decade in Lao PDR was driven by exploitation of natural resources and development of hydropower, with both the sectors receiving large foreign investments, especially for developing energy resources and related electrical transmission capacity to export to neighboring countries.

Lao PDR has abundant hydro resources with an estimated exploitable potential of around 23 GW, including its share of Mekong River. Lao PDR is a major exporter of electrical energy (HS-2716), in fact, the country is the 10th largest global exporter of electrical energy globally, while only a small percentage (around 5 percent) is being supplied domestically. To enhance cross-border exports, Lao PDR plans to increase the number of hydropower projects. In fact, the country's central location within the Greater Mekong Sub-region allows it to supply electricity to neighboring markets. The entire electrical energy exports currently are being directed toward ASEAN countries, such as Thailand, Vietnam, Cambodia, Malaysia and Myanmar. Thailand accounted for 94.3 percent share of Lao PDR's exports of electrical energy in 2019, followed by Vietnam and Cambodia together accounting for 5.7 percent for electrical energy exports.

Lao PDR has large hydropower potential and aims to become the center for a regional electricity transmission system by 2025[18]. The country also has significant resource potential for non-hydro renewables that includes solar, biomass, small or mini-hydro, and wind. Solar potential of Lao PDR is estimated to be 4.4 kWh/ square meter/day, within a range of 3.6–5.5 kWh/square meter/day and equating

[18]ADB (2019), Lao PDR Energy Sector Assessment, Strategy and Road Map, Asian Development Bank, November 2019

to 1,800–2,000 hours of sunlight per year. While the country has remarkable solar power potential, high production cost is restricting financially feasible solar power production. Through its Renewable Energy Development Strategy, Lao PDR seeks to promote non-large hydropower renewable resources to reach a 30 percent share of the country's total energy demand by 2025.

Lao PDR has also signed several agreements with ASEAN countries for energy purchase. The Ministry of Energy and Mines, Lao PDR, has signed an MOU with Myanmar's Ministry of Electricity and Energy with a view to securing exports for 300–500 MW in 2018. In September 2017, the Lao PDR signed an energy purchase and wheeling agreement with Malaysia and Thailand, representing the first multilateral energy exchange or trade in ASEAN and facilitating multilateral cross-border power trade beyond the Lao PDR's immediate neighbors. Under the 2-year agreement, Lao PDR is to sell up to 100 MW of electricity to Malaysia via Thailand's power transmission grid, beginning on 1 January 2018[19]. In order to facilitate the growth of solar power, the government of Lao PDR has listed solar power as an important component for developing off-grid electrification. In addition, the country also witnessed rapid increase in domestic electricity demand in recent years, experiencing a CAGR of close to 9.5 percent during 2007-2017, though the ability of domestic generation supply is unable to meet this growing demand, resulting in huge imports from neighboring countries.

The country has comprehensive plan for development of transmission infrastructure, with the aim of facilitating growth and improving resiliency in domestic supply and consumption and to enable increased cross-border exports. Lao PDR plans to install 25 more transmission lines and associated substations by 2025, which include nine new cross-border high-voltage lines, six of which will be owned by Électricité du Laos (EDL), including the first high-voltage transmission line for export to Myanmar.

With the Government of Lao PDR encouraging both the public and the private sectors to develop small hydropower (SHP) with capacities of up to 15 MW, which are typically run-of-river schemes without reservoirs, for the economic development of rural areas, investment opportunities are huge in the sector in addition to construction of large hydropower projects. As the energy sector is largely based on exports, investments in projects for improving connectivity with the energy markets of China, Vietnam and Thailand is another prospective area of investment[20]. Infrastructure connectivity is crucial for Lao PDR's economic development. Investment in ICT and transport networks are therefore essential which could be explored through PPP model[21].

Source: ADB, ASEAN Briefing and India Exim Bank Research

[19] *ibid*

[20] *Lao PDR Investment Outlook 2019, ASEAN Briefing*

[21] *ibid*

Cooperation in E-Commerce and Digital Connectivity

In this era of Industry 4.0, technological knowledge and digital skills are vital for unlocking the full potential of countries. The current pandemic has enhanced the use of digital technologies across sectors, successfully preventing the global economies from reaching a standstill in terms of production, supply chain management, and services. With the large number of internet users both in India and CLMV, there exists huge opportunity for Indian investment in IT and ITeS in areas such as e-commerce, e-learning, Business Process Outsourcing (BPO), tele-medicine, financial services, telecommunications, consultancies and media and entertainment services.[22] India is among the fastest growing B2C e-commerce markets today. The CLMV countries and India could also collaborate in strengthening digital connectivity by investing in digital infrastructure, especially internet coverage and broadband connectivity.

According to the OECD, for technology diffusion to lead to productivity gains, firms must integrate the technology into their business processes and make complementary investments in skills and business models. This requires higher degree of digital-tool adaption. Digitalization will promote global participation of companies regardless of their size, allowing small and medium sized firms to compete with larger firms. With acceleration of digital transformation, the e-commerce landscape of CLMV countries would become more dynamic. It would also offers opportunities for the development of new business models and removes many of the obstacles to the creation or growth of new businesses. Developing an integrated e-commerce platform which provides information and go-to-market strategy for businesses, especially to SMEs through ASEAN - India collaboration is a potential area for cooperation[23]. Development of an integrated logistics across countries which would help in development of e-commerce is another area of cooperation.

Cooperation in Physical Connectivity Network Development

Lack of adequate access to electricity, transport and communication is a major challenge to the industrial growth of CLMV countries. Connectivity with CLMV countries is a strategic priority for India as improving connectivity by air, sea and road is key to strengthening trade ties between India and the CLMV region. All infrastructure sectors like roads, railways, ports (sea) and airports require massive investments where international developers can get involved with joint venture operations or as a supplier. While India has made considerable progress in implementing IMT Trilateral Highway and the KMMTTP, issues related to increasing

[22] *ASEAN-India Development Cooperation Report 2021: Avenues for Cooperation in Indo-Pacific, RIS*

[23] *E-commerce and Digital Connectivity: Unleashing the Potential for Greater India–ASEAN Integration; Shouvik Kishore Majumdar, Angana Parashar Sarma, Srishti Majumdar, Journal of Asian Economic Integration, April 2020*

the maritime and air connectivity between CLMV and India and transforming the corridors of connectivity into economic corridors are under discussion. The problems associated with existing projects need to be solved on an urgent basis. IMT Trilateral Highway construction and KMMTTP, earlier expected to be completed by 2020-21, are expecting some delays due to the current pandemic, which once implemented will enhance connectivity between India and the region. A possible extension to IMT Trilateral Highway to Cambodia, Lao PDR and Vietnam, which is under consideration could also be beneficial for both regions. A consensus on finalizing the proposed protocol of the India-Myanmar-Thailand Motor Vehicle Agreement (IMT MVA) has been reached, which will have a critical role in realizing seamless movement of passenger, personal and cargo vehicles along roads linking India, Myanmar and Thailand.

India has also launched several Quick Impact Projects (QIP) in CLMV countries. The QIP are short gestation projects aimed to directly benefit locals, with immediate and visible results and mostly covering upgradation of physical infrastructure such as roads, local community centres, social infrastructure such as in the education, health, sanitation or community development sectors. Under the Mekong Ganga Cooperation (MGC) initiative, consisting of India, CLMV countries and Thailand, India is offering grant assistance for implementation of small projects with capital cost of US$ 50,000 (about ₹ 34 lakhs) under the QIP. Since its inception in 2016, 24 QIP have been completed, in addition to 18 projects committed by India in 2019 at a cost of US$ 900,000 in the fields of agriculture, health, women empowerment, capacity building, sanitation and environment and so on.

In addition, under the MOU on India-Myanmar Border Area Development signed in 2012 where India would grant US$ 5 million per annum for the basic infrastructure and livelihood development of the Chin State and Naga Self-Administered Zone, around 43 schools, 18 health centres and 51 bridges and roads have been constructed over the last three years[24]. 29 additional projects under the 4th year's tranche of assistance of US$ 5 million is expected to be implemented in 2020-21. More such connectivity projects could be explored between India, CLMV and other ASEAN countries.

India joined Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) as a Development Partner in July 2019, focusing particularly on projects that can also complement joint projects already being undertaken by India with the ACMECS countries, both under bilateral and other multilateral frameworks such as the MGC, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and ASEAN-India Dialogue Relations. Joint development of infrastructure such as transport networks, ports, shipping and air connectivity

[24] *India-Myanmar Joint Statement during the State Visit of the President of Myanmar to India (February 26-29, 2020), PIB, February 27, 2020 (https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1604592)*

would enhance greater regional economic integration. Establishing cross-border logistics hubs, building high quality road and railway connectivity networks within the countries and across borders could go a long way towards regional integration of CLMV countries. There also exists need for more multi-modal freight transfer facilities to ensure efficient transport connectivity among CLMV countries and with India to harness the benefits of geographical proximity.

Promoting integration and collaboration among India and CLMV countries is essential for successful implementation of various projects between the countries. Effective utilization of project development fund signed between India and CLMV countries could further facilitate Indian investments in the region. Moreover, facilitation of more B2B interactions would be able to address the existing information gap and asymmetry about projects related information existing between India and CLMV countries.

For India, additionally, there exists strategic interests in developing the cross-border infrastructure. To harness maximum benefit, there is an urgent need to improve the necessary border infrastructure at various trading points to facilitate cross-border movement of goods between India and Myanmar. While the Government of India is in the process of upgrading the Land Custom Station (LCS) at Moreh into an Integrated Check Post (ICP), several trade related infrastructure needs to be strengthened to promote trade facilitation across the border. Some of the major infrastructure facilities that needs to be in place or strengthened for development of land ports in the region would include, among others, modern warehousing facility, food testing facility, seamless IT and telecom support, foreign exchange facilities, regular power supply, weighbridge, and development of the connecting roads and bridges. Further, implementation of Country of Origin (COO) is critical to ensure that goods are originated from trade partners.

As GOI aims for a self-reliant India, by promoting domestic manufacturing through "Make in India" campaign, setting up of manufacturing infrastructure in CLMV countries would supplement the Atmanirbhar Bharat Abhiyan. Indian companies today are increasingly bidding for projects funded by Multilateral Development Banks (MDBs). Due to their technical expertise and relevant experience in various infrastructure sectors, Indian companies are often well placed to secure contracts in projects funded by MDBs, and could utilize this experience to undertake projects in the CLMV region. Indian companies would be able to benefit from proximity, integrated supply chains, and cheaper labor costs in the region. The existence of foreign firms providing competition would help in improving competitiveness of Indian companies, enhancing technological and production efficiencies of these companies. Thus, adopting a collaborative, partnership approach with CLMV countries by leveraging on each other's strengths is critical for achieving self-reliant India, which would further support each other's endeavour to integrate more into global value chains.

ANNEXURE 1

GOI-supported LOCs Extended by India Exim Bank in CLMV Countries

(As on September 30, 2020)

Sr. No	Country	Borrower	Amount of Credit (US$ mn)	Purpose
1	Cambodia	Government of Cambodia	35.20	Stung Tasal development project by WAPCOS, purchase of water pumps, construction of electricity transmission line between Kratie and Stung Treng by WAPCOS
2	Cambodia	Government of Cambodia	15.00	Strengthening the capacity of transmission line project between Kratie and Stung Treng
3	Cambodia	Government of Cambodia	15.00	Completion of Stung Tasal Water Development Project
4	Cambodia	Government of Cambodia	36.92	Stung Sva Hab/Slab Water Resources Development Project
5	Lao PDR	Government of Lao PDR	17.34	Development of Irrigation schemes in the Champassack Province
6	Lao PDR	Government of Lao PDR	33.00	Paksong S/S – Jiangxai 115 KV, double circuit Transmission Line Project , Nam Song 7.5 MW hydropower project and Equipment for Rural electrification Phase 2 Project
7	Lao PDR	Government of Lao PDR	72.55	(i) 230 kV Double Circuit Transmission Line from Nabong to Thabok and substations (USD 37.30 million), (ii) Improvement and Expansion of 22kV distribution line in Vientiane capital city branches project [USD 35.25 million] in Lao PDR
8	Lao PDR	Government of Lao PDR	30.94	Construction of Storage Dams & Development of Irrigation Systems in four major provinces in Lao PDR

Sr. No	Country	Borrower	Amount of Credit (US$ mn)	Purpose
9	Myanmar	Myanma Foreign Trade Bank, Myanmar	56.36	Railway rehabilitation
10	Myanmar	Myanma Foreign Trade Bank, Myanmar	20.00	Renovation of Thanlyin Refinery
11	Myanmar	Myanma Foreign Trade Bank, Myanmar	60.00	Railway projects by RITES Ltd.
12	Myanmar	Myanma Foreign Trade Bank, Myanmar	20.00	Setting up an assembly/manufacturing plant for assembly and manufacturing of Tata vehicles
13	Myanmar	Myanma Foreign Trade Bank, Myanmar	64.07	(i) Oakshitpin – Thahtay Chaung – Taungup 230 kV Transmission Line and Substation Project; (ii) Taungup – Maei – Ann – Mann 230 kV Transmission Line and Substation project; and (iii) Maei – Kyaukpyu 230 kV Transmission Line and Substation project
14	Myanmar	Myanma Foreign Trade Bank, Myanmar	20.00	Upgradation of Thanbayakan Petrochemical Complex
15	Myanmar	Myanma Foreign Trade Bank, Myanmar	198.96	16 ongoing irrigation schemes and 2 rehabilitation schemes in the irrigation project in Myanmar
16	Myanmar	Myanma Foreign Trade Bank, Myanmar	86.31	Procurement of rolling stock, equipment and up-gradation of three major Railway Workshops by procurement of machinery
17	Myanmar	Myanma Foreign Trade Bank, Myanmar	6.20	Implementation of a Microwave Radio Link on the Rhi-Mindat route in Myanmar
18	Vietnam	Government of Vietnam	27.00	General purpose - Contracts approved include export of textile machinery, equipment and services for hydro power projects
19	Vietnam	Government of Vietnam	45.00	NAM Chien Hydropower Project (200 MW) at Son La Province
20	Vietnam	Government of Vietnam	19.50	Two projects
21	Vietnam	Government of Vietnam	100.00	Purchase of equipment / supplies
Total			**979.35**	

REFERENCES

Asian Development Bank (2018). *How to bridge the financing gap in Asian infrastructure.* Manila

Asian Development Bank (2019). *Lao PDR Energy Sector Assessment, Strategy and Road Map.* Manila

AIC-RIS (2020). *ASEAN-India Development and Cooperation Report 2021: Avenues for Cooperation in Indo-Pacific.* ASEAN-India Centre (AIC) - Research and Information System for Developing Countries (RIS). New Delhi

ASEAN (2019). *ASEAN Investment Report 2019*. FDI in Services: Focus on Health Care. Jakarta

Chen, Lurong and Lydia Ruddy (2020). *Improving Digital Connectivity: Policy Priority for ASEAN Digital Transformation*. ERIA. Jakarta

De, Prabir and Durairaj Kumarasamy (2020). *ASEAN-India Energy Cooperation: Current Status and Future Scope of Cooperation*. RIS. New Delhi

De, Prabir, Sunetra Ghatak and Durairaj Kumarasamy (2018). *Assessing Economic Impacts of Connectivity Corridors: An Empirical Investigation*. RIS. New Delhi

Majumdar, Shouvik Kishore, Angana Parashar Sarma and Srishti Majumdar (2020). *E-commerce and Digital Connectivity: Unleashing the Potential for Greater India–ASEAN Integration*. Journal of Asian Economic Integration

OECD-UNIDO (2019). *Integrating Southeast Asian SMEs in Global Value Chains: Enabling Linkages with Foreign Investors*. Paris

MEA, GOI (2019). *ASEAN-India Connectivity: Mapping Pathways of Shared Prosperity*. New Delhi

Sinate, David, Vanlalruata Fanai and Snehal Bangera (2019). *India-Myanmar Trade and Investment: Prospects and Way Forward.* Working Paper 90. Export-Import Bank of India. Mumbai

Sinate, David, Vanlalruata Fanai and Sara Joy (2018). *Act East: Enhancing India's Trade with Bangladesh and Myanmar Across Border.* Working Paper 77. Export-Import Bank of India. Mumbai

United Nations (2020). *Covid-19 and Graduation from the LDC category*. Committee for Development Policy

World Bank (2019). *Assessing Rural Accessibility and Rural Roads Investment Needs Using Open Source Data*. Washington DC

World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) (2019). *Progress on Household Drinking Water, Sanitation and Hygiene 2000-2017. Special Focus on Inequalities*. New York

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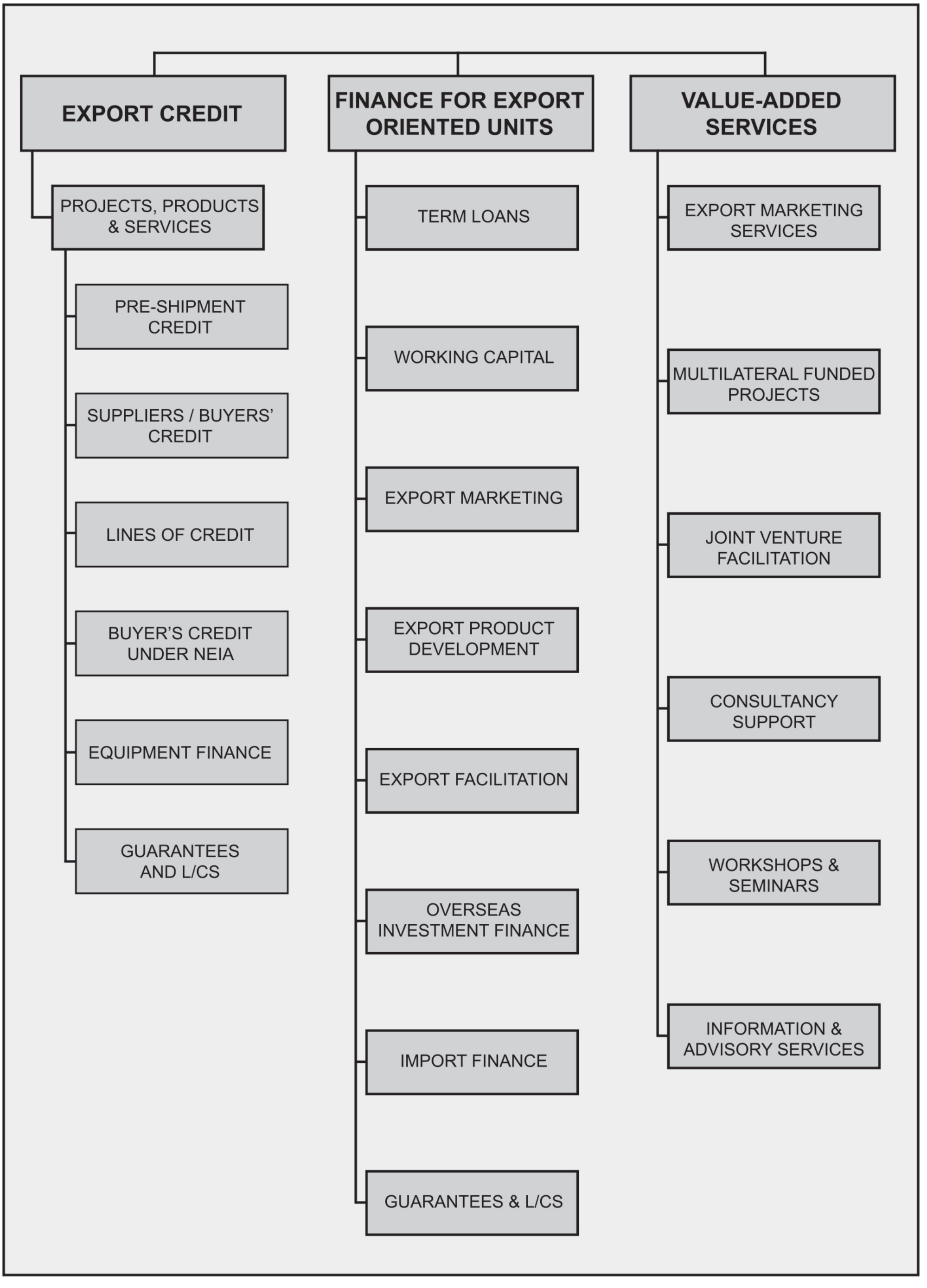

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E-mail : ccg@eximbankindia.in Website: www.eximbankindia.in

LONDON BRANCH

5th Floor, 35 King Street, London EC2V 8BB United Kingdom
Phone : (0044) 20 77969040 Fax : (0044) 20 76000936 E-Mail :eximlondon@eximbankindia.in

DOMESTIC OFFICES

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Ellisbridge P. O.,
Ahmedabad 380 006
Phone : (91 79) 26576843
Fax : (91 79) 26578271
E-mail : eximahro@eximbankindia.in

Bangalore

Ramanashree Arcade, 4th Floor,
18, M. G. Road,
Bangalore 560 001
Phone : (91 80) 25585755
Fax : (91 80) 25589107
E-mail : eximbro@eximbankindia.in

Chandigarh

C- 213, Elante offices, Plot No. 178-178A,
Industrial Area phase 1,
Chandigarh 160 002
Phone : (91 172) 2641910
Fax : (91 172) 2641915
E-mail : eximcro@eximbankindia.in

Chennai

Overseas Towers,
4th and 5th Floor,
756-L, Anna Salai,
Chennai 600 002
Phone : (91 44) 28522830/31
Fax : (91 44) 25224082
E-mail : eximchro@eximbankindia.in

Guwahati

NEDFi House, 4th Floor, GS Road,
Dispur, Guwahati 781 006
Phone : (91 361) 2237607/609
Fax : (91 361) 2237701
E-mail : eximgro@eximbankindia.in

Hyderabad

Golden Edifice, 2nd Floor,
6-3-639/640, Raj Bhavan Road,
Khairatabad Circle,
Hyderabad 500 004
Phone : (91 40) 23379060
Fax : (91 40) 23317843
E-mail : eximhro@eximbankindia.in

Kolkata

Vanijya Bhawan, 4th Floor,
(International Trade Facilitation Centre),
1/1 Wood Street,
Kolkata 700 016
Phone : (91 33) 22891728/29/30
Fax : (91 33) 22891727
E-mail : eximkro@eximbankindia.in

New Delhi

Office Block, Tower 1, 7th Floor, Adjacent Ring Road, Kidwai Nagar (E) New Delhi - 110 023
Ph.: +91 11 61242600 / 24607700
Fax: +91 11 20815029
E-mail: eximndo@eximbankindia.in

Pune

No.402 & 402(B) 4th floor Signature Building
C.T.S.No. 853, Plot No. 195, Bhamburda,
Bhandarkar Road, Shivajinagar,
Pune, Maharashtra 411004
Phone : 020-25648856
Fax : 020-25648846

OVERSEAS OFFICES

Abidjan

5th Floor,
Azur Building,
18-Docteur Crozet Road,
Plateau,
Abidjan,
Côte d'Ivoire
Phone : (225) 20 24 29 51
Mobile : (225) 79707149
Fax : (225) 20 24 29 50
Email : eximabidjan@eximbankindia.in

Addis Ababa

House No. 46,
JakRose Estate Compound,
Woreda 07,
Bole Sub-city,
Addis Ababa,
Ethiopia.
Phone : (251 116) 630079
Fax : (251 116) 610170
E-mail : aaro@eximbankindia.in

Dhaka

Madhumita Plaza, 12th Floor,
Plot No. 11, Road No. 11, Block G,
Banani, Dhaka, Bangladesh - 1213.
Phone : (088) 0170820444
E-mail : eximdhaka@eximbankindia.in

Dubai

Level 5, Tenancy 1B,
Gate Precinct Building No. 3,
Dubai International Financial Centre,
PO Box No. 506541, Dubai, UAE.
Phone : (971 4) 3637462
Fax : (971 4) 3637461
E-mail : eximdubai@eximbankindia.in

Johannesburg

2nd Floor, Sandton City Twin Towers East,
Sandhurst Ext. 3, Sandton 2196,
Johannesburg, South Africa.
Phone : (27) 716094473
Fax : (27 11) 7844511
E-mail : eximjro@eximbankindia.in

Singapore

20, Collyer Quay, #10-02,
Tung Centre, Singapore 049319.
Phone : (65) 65326464
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E-mail : eximsingapore@eximbankindia.in

Washington D.C.

1750 Pennsylvania Avenue NW,
Suite 1202, Washington D.C. 20006,
United States of America.
Phone : (1 202) 223 3238
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E-mail : eximwashington@eximbankindia.in

Yangon

House No. 54/A, Ground Floor,
Boyarnyunt Street, Dagon Township,
Yangon, Myanmar
Phone : (95) 1389520
Mobile : (95) 1389520
Email : eximyangon@eximbankindia.in