Chapter 2

Connectivity Plans in Indo-Pacific: Infrastructure for Expanded Supply Chains and Resilient Growth

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Chapter 2

Connectivity Plans in Indo-Pacific: Infrastructure for Expanded Supply Chains and Resilient Growth[5]

Anita Prakash

Popularisation of the term 'connectivity' in the context of trade and economic cooperation was especially linked to the Association of Southeast Asian Nations (ASEAN), leading to its Master Plan on ASEAN Connectivity (MPAC) adopted in Hanoi in 2011. Significantly, it has the subtitle 'One Vision, One Identity, One Community'. The link to community is not common in standard North Atlantic thinking. 'Connectivity' – like 'open regionalism', 'comprehensive and cooperative security', and even 'Asia-Pacific' – has become a concept with a substantial Asian origin (Hawke, 2007). The merits of such linkages continue with the Indo-Pacific too.

In the 21st century, all connectivity plans have Asia at its core. This is not a coincidence. Asia, particularly Southeast and East Asia, has been a model of trade and economic cooperation, and much of this region's prosperity is due to its hard and soft connectivity efforts.

Asia is the centre of pan-regional connectivity initiatives in the Indo-Pacific. The MPAC, Belt and Road Initiative (BRI), Asia–Africa Growth Corridor (AAGC), The EU's Global Gateway, and the Asia–Europe Meeting (ASEM) – all connectivity plans – aim to deepen Asia's economic dynamism and extend it to trans-regional partners. Mega-regional integration initiatives like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Regional Comprehensive Economic Partnership (RCEP) are also integral to this region. The European Union (EU) has also put in place building blocks for an EU strategy on connecting Europe and Asia, with concrete policy proposals and initiatives, including through interoperable transport, energy, and digital networks. The European strategy aims for sustainable, comprehensive, and rules-based connectivity. The initiatives aim to improve connections between Europe and Asia by establishing partnerships for connectivity based on commonly agreed rules and standards and contributing to address the sizeable investment gaps through improved mobilisation of financial resources and strengthened international partnerships. The United States (US) initiated the Infrastructure Transaction and Assistance Network to improve capacities in partner countries' project evaluation processes and project implementation, provide advisory services to support sustainable infrastructure, and coordinate US assistance support for infrastructure in the region. The Asia Reassurance Initiative Act, 2018 is an important part of US connectivity policy in Asia.

The challenge before Asia, and the Indo-Pacific region, is how to ensure greater cooperation amongst the connectivity initiatives in the region, i.e., 'connecting the connectivities'. The importance of 'connecting the connectivities' is not limited to converging different connectivity plans in Asia, between Asia and Africa, and between Asia and Europe around the principles of governance and accountability, quality and sustainable financing, and alignment with national and regional plans. An important

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economic justification lies in the fact that the connectivity plans will aid the deepening of the supply chain networks, create new efficiencies for trade and movement of people, and help to construct the new economic architecture that is emerging in the Indo-Pacific.

1. Focus on Connectivity and Supply Chains since the COVID-19 Pandemic

The coronavirus disease (COVID-19) pandemic, which originated in China at the beginning of 2020, created an unprecedented crisis for connectivity in both the developed and developing world. What started as disruption and, in some cases, a temporary breakdown in the supply chain of goods and services due to the closure of factories in China soon became a test for the endurance of production networks and the movement of people across international borders. Factory production in ASEAN, Germany, France, and parts of the US came to a spluttering halt as the supply of parts and components was disrupted at one end – China. Movement of people for trade in goods and services have been restored in 2023 with some isolated instances of regulated movement of people. The threats to the connectivity of production networks or supply chains are now under the policy watch of Asia to ensure resilient supply chains that do not fall prey to disruptions. This includes investments in alternative connectivity plans. It also means that the connectivity plans are to be implemented not just as infrastructure plans but as the conduit of supply chains – for both goods and people – in the Indo-Pacific. Some connectivity plans can provide alternative supply chains during a crisis like the current pandemic. The China centrality of the supply chains in Southeast and East Asia is also an important reason why new connectivity plans centred around supply chain networks are being put in place in Asia and other parts of the world.

Acceleration in the implementation of connectivity infrastructure is also being influenced by trade tensions between the US and China. These trade disputes are prompting new supply chain connectivities, where new centres of production and consolidation of existing supply chains are emerging in Asia, Africa, and Europe. The emergence of the new supply chain linkages in Asia are an important addition to the existing connectivity plans in Asia.

The rise of new sectors and modes of delivery will further impact the connectivity plans. The digital economy and demand for environmental products will favour a shift towards connectivity plans that will help Asia, especially developing Asia, to take advantage of these opportunities in high-income markets.

2. Connectivity Plans in Asia

2.1. The Master Plan on ASEAN Connectivity

The MPAC 2015 is based on twofold objectives:

(i) Enhancing intra-regional connectivity will promote economic growth, narrow the development gaps by sharing the benefits of growth with poorer groups and communities, enhance the competitiveness of ASEAN, and connect ASEAN Member States (AMS) within the region and with the rest of the world.

(ii) The concept of ASEAN connectivity would complement and support integration within ASEAN and within the broader regional framework in East Asia and beyond. The deepening and widening of

connectivity in the region would reinforce ASEAN's position as the hub of the East Asian region and preserve the centrality of ASEAN.

The ASEAN approach to connectivity uses the context of community building and the objective of 'a well-connected ASEAN that will contribute towards a more competitive and resilient ASEAN, as it will bring peoples, goods, services and capital closer together' (ASEAN, 2011. p i). The MPAC contemplates physical, institutional, and people-to-people components. The MPAC 2025 broadens this vision to 'achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness, and a greater sense of Community'. (ASEAN, 2017. p 7). Although the vision continues to operate under the three pillars listed above, the emphasis of its actions has greater economic and institutional connotations than those of the MPAC 2015. These actions are as follows: (i) sustainable infrastructure, (ii) digital innovation, (iii) seamless logistics, (iv) regulatory excellence, and (v) mobility of people.

The acknowledged goal of the MPAC 2025 is a seamlessly connected ASEAN. This may be more ambitious than the ASEAN Community Vision 2025, but may be a desirable goal for the ASEAN in next two decades. The previous emphasis on the movement of goods and services, mobility of skilled labour, and energy and rail connectivity is supplemented by emerging trends that will influence the ASEAN connectivity agenda. These trends include (i) a doubling of the number of ASEAN households that are part of the 'consuming class' over the next 15 years; (ii) the challenge of improving productivity to sustain economic progress as growth in the size of the workforce starts to slow; (iii) the movement of 90 million more people to cities within ASEAN by 2030; (iv) the need for infrastructure spending to more than double from historical levels; (v) the challenge of equipping the world's third-largest labour force with the skills needed to support growth and inclusiveness; (vi) the emergence of disruptive technologies; (vii) the opportunity to transform natural resources efficiency in the region; and (viii) the imperative to understand the implications for ASEAN as the world shifts towards a multi-polar global power structure. The MPAC 2025 is therefore clearly consistent with the objectives of the ASEAN Economic Community, and shares in the objective of a Socio-Cultural Community.

The infrastructure component in MPAC has been subject to budget constraints and competing demands for resources. To help accelerate investment in infrastructure in the region, the MPAC 2025 recommended the establishment of 'a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds.' (ASEAN, 2016. p 7)

As an ASEAN regional process is not yet in place for identifying and prioritising infrastructure projects, the ASEAN Secretariat engaged the World Bank, with the support of the ASEAN–Australia Development Cooperation Program Phase II, to provide technical assistance in developing a rolling priority pipeline of potential ASEAN infrastructure projects across the transport, energy, and ICT sectors. The pipeline is intended to be a list of well-structured and economically viable physical infrastructure projects that enhances the movement of people, services, goods, and innovations within ASEAN; and that contributes to ASEAN's objectives of improving access to and increasing connectivity in and amongst the AMS.

2.2. The Trilateral Highway

Greater connectivity between India and ASEAN has long been both an economic and strategic objective for the ASEAN–India partnership. The Trilateral Highway (TLH) underlines ASEAN–India partnership in which trilateral connectivity between India, Myanmar, and Thailand is linked with ASEAN's connectivity plans. The TLH was conceived at the Trilateral Ministerial Meeting on Transport Linkages in Yangon in

April 2002, where India, Myanmar, and Thailand agreed to make efforts to establish trilateral connectivity by 2016. The Chair's Statement of the ASEAN–India Summits in 2010 and 2012 acknowledged the importance of linking the TLH with ASEAN's connectivity plans, and its extension to the Lao People's Democratic Republic (Lao PDR), Cambodia, and Viet Nam.

The original alignment of the TLH starts at Moreh in India, crosses Myanmar from northwest to southeast passing Mandalay and Yangon, and ends at Mae Sot in Thailand. A major part of the TLH is the road network in Myanmar, together with border crossing facilities at two terminals in India and Thailand. Although delayed, the upgrading work of a 120.74-kilometre (km) section between Kalewa and Yagyi has been in progress with assistance from India. This will serve as an alternative route connecting Kalay and Chaung-U in Myanmar. Looking beyond Moreh, the terminal point of the TLH in India, a 95 km section between Moreh and Imphal, including the section between Moreh and Palel, has been upgraded and expanded under assistance from the Asian Development Bank (ADB). Institutional arrangements have been improved as well.

Progress has been made in the development of the TLH, including the opening of the integrated check post at Moreh (India) in January 2019, which will upgrade the functions of the existing land custom station. Many of the original alignments of the TLH have been recently completed or upgraded – the bypass road connecting Myawaddy and Kawkareik (Thailand) and the second friendship bridge connecting Myawaddy and Mae Sot being the most important. Ongoing upgrading and repair of roads between Kalewa (India) and Monywa (Myanmar), the new Bago bridge (supported by Japan), and the construction of an arterial road connecting Bago and Kyaikto (by ADB) are significant indicators of progress in the TLH project. Matching the urgency for the replacement of 69 bridges along the Tamu–Kyigone– Kalewa road and upgrading the Thaton–Eindu road is required, although both are subject to prolonged litigation and disputes.

Border trade between Moreh (India) and Tamu (Myanmar) was normalised in 2015 by removing the positive list of tradable items for barter trade. Border trade potential between India and Myanmar, and with ASEAN, is yet to be unlocked. Myanmar is the gateway to and from ASEAN. Completion of the TLH is expected to generate new demand for trade through the land border, particularly via Moreh and Tamu. Furthermore, to facilitate cross-border transportation along the TLH, India proposed a motor vehicles agreement to Myanmar and Thailand, although it remains under negotiation. The TLH is still under construction, so its contribution to the economic growth and development of the region has not yet reached its potential.

2.3. The Trilateral Highway and its Extension to Cambodia, the Lao PDR, and Viet Nam

Following the ASEAN–India Summit Meeting of 2018, the Government of India commissioned the Economic Research Institute for ASEAN and East Asia (ERIA) to undertake a study on the feasibility of establishing a seamless, efficient, and end-to-end transportation corridor along the existing TLH and its extension towards Cambodia, the Lao PDR, and Viet Nam. The first phase of the study is complete; and it offers physical, institutional, and economic pathways, along with policy recommendations for the development of the TLH and its eastward extension. (Kimura, Umezaki, and Prakash, 2020)

Greater connectivity between India and ASEAN has long been both an economic and strategic objective for the ASEAN–India partnership. Based on the Thai proposal at the 16th ASEAN Highway Sub-Working Group Meeting in August 2018 and other existing initiatives – such as the Greater Mekong Subregion (GMS), Ayeyawady–Chao Phraya–Mekong Economic Cooperation Strategy, MPAC 2025, and the ASEAN

Highway Network – as well as the recognition that connectivity to international ports is an important factor for the development of economic corridors, this study considered the original alignment of the TLH (Moreh–Tamu–Kalewa–Monywa–Mandalay–Nay Pyi Taw–Bago–Myawaddy–Mae Sot) with two possible routes for eastward extension:

- the northern route from Meiktila in Myanmar to Ha Noi and Hai Phong in Viet Nam via the Myanmar–Lao PDR Friendship Bridge; and
- the Southern route from Mae Sot to Aranyaprathet via Bangkok in Thailand to Phnom Penh/Sihanoukville–Bavet in Cambodia and Moc Bai−Ho Chi Minh City−Vung Tau in Viet Nam.

Except for one small section between Xieng Kok and Luang Namtha via Muang Sing in the Lao PDR, all sections of the suggested northern route are already designated as parts of transport corridor projects supported by ADB, the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and the MPAC 2025. All sections of the southern route of the eastward extension overlap with ADB's East–West Economic Corridor (EWEC), North–South Economic Corridor (NSEC), and Southern Economic Corridor (SEC). The TLH extension plans therefore imply close cooperation with international projects.

The southern extension route has been better developed as part of the GMS economic corridors, including the already well-developed road networks in Thailand and the construction of the Tsubasa Bridge over the Mekong River in Neak Loung, Cambodia. In terms of physical infrastructure, the southern route will not require a large amount of additional investment. However, large sections of physical infrastructure in Myanmar will require financial assistance from partner countries for construction/upgrading and maintenance.

The TLH, including its eastward extension, would primarily be a transport corridor as the vibrant economic agglomerations are mainly at one end (e.g. Bangkok, Ho Chi Minh City, and Ha Noi). In the current alignment, Myanmar occupies the longest length of the TLH and is the largest beneficiary of its development and eastward extension. From an inclusive growth perspective, both actual and potential impacts on India and member countries are important as infrastructure and connectivity provide longer-term development and economic returns. As a seamless transport corridor, the TLH and its eastward extension implies the importance of implementing policies beyond the scope of infrastructure development and institutional arrangements for cross-border transport facilitation (Kimura, Umezaki, and Prakash, 2020).

2.4. Mekong–India Economic Corridor

During an ASEAN+6[6] meeting, the Economic Ministers endorsed the idea of an East Asia Industrial Corridor (EAIC) to be studied by the ERIA as a model for the integration of East Asia. The EAIC is envisioned as a region-wide comprehensive development plan, affirming the importance of linking infrastructure development and industrial development planning.

The EAIC aims to facilitate and enhance economic growth by linking economies in East Asia. It is envisaged to be realised through the development of several interregional industrial belts such as the Delhi–Mumbai Industrial Corridor, the EWEC, and the SEC.[7] Linking India with the Mekong region is an

[6] ASEAN+6 refers to the AMS plus China, India, Japan, the Republic of Korea, Australia, and New Zealand.
[7] Conceptualised by ADB.

important component of the integration of East Asia under the EAIC umbrella project. The ERIA conceptualised the Mekong–India Economic Corridor (MIEC) as a step in this direction. Based on the SEC alignment (Ho Chi Minh City–Phnom Penh–Bangkok), the MIEC extends further to Dawei in Myanmar. With Dawei, it opens up on Andaman Sea and connects the Mekong region to India on its east coast. The MIEC is an important step towards realising the potential of the EAIC.

The MIEC involves the integration of four Greater Mekong Countries – Myanmar, Thailand, Cambodia, and Viet Nam – with India through its east coast. It proposes to connect Ho Chi Minh City (Viet Nam) with Dawei (Myanmar) through Bangkok (Thailand) and Phnom Penh (Cambodia), linking further to the east coast of India (Figure 2.1). The integration with India is likely to benefit the corridor development in view of the growing trade and investment linkages between India and the Mekong countries.

Figure 2.1: The Mekong–India Economic Corridor

Source: ERIA (2009).

The corridor will provide opportunities to Myanmar, Thailand, Cambodia, and Viet Nam to build a strong economic and industrial base as well as world-class infrastructure. The emphasis of the corridor is on expanding the manufacturing base and trade with the rest of the world, particularly India. The corridor will enable these economies to integrate further and emerge collectively as a globally competitive economic bloc.

The MIEC is expected to enhance trade with India by reducing the travel distance between India and the MIEC countries and removing supply-side bottlenecks.

2.5. The GMS Economic Corridor

The GMS countries adopted the economic corridor approach at the Eighth GMS Ministerial Conference in Manila in 1998 to accelerate subregional development. The EWEC, NSEC, and SEC were subsequently designated as flagship programmes under the 10-year GMS strategic framework, 2002–2012. Thus, complementary efforts such as trade and transport facilitation, border and corridor towns development, investment promotion, and enterprise development have mainly focused on the EWEC,

NSEC, and SEC. The development of GMS corridors as economic corridors continued to be at the centre of the GMS program under the GMS strategic framework, 2012–2022.

The original alignment of the TLH is a subset of the GMS NSEC. The primary considerations for including specific routes as part of the EWEC, NSEC, and SEC in the current configuration were their potential to become trade, investment, tourism, and transit corridors; and the presence of significant sections that can be developed into hubs for regional trade, investment, and tourism. The GMS member countries and ADB are undertaking a review of their configuration. The review will ensure that (i) developments arising from the opening up of Myanmar are taken into account; (ii) corridors include and link all GMS capitals and major economic centres; (iii) corridors are connected to key GMS maritime gateways and industrial hubs; and (iv) major trade flows are reflected in the alignment of the corridors.

The GMS economic corridor is an integrated system of road, rail, and ports interconnecting (i) GMS country borders; (ii) production centres (manufacturing hubs, industrial clusters, and economic zones); (iii) demand centres (capitals and major urban centres); and (iv) gateways (important seaports used for intra-regional and international trade). The areas of influence of GMS economic corridors extend beyond a single route, encompassing an economic zone running in parallel with the main transport artery.

Economic corridors can attract investment in economic activities along and around their main routes, thus generating additional demand and increasing their viability. They are critical for economic integration in the GMS because they not only facilitate cross-border movement of people, goods and services, labour, and capital along the corridors, but also promote the development of areas that can be accessed through improved connectivity.

Operationally, the economic corridor approach is aimed at (i) extending the benefits of improved transport links to remote and landlocked locations in the GMS, which have been disadvantaged by their lack of integration with more prosperous and better located neighbouring areas; (ii) providing a spatial focus on GMS activities, with the main routes, growth centres, and nodal points serving as a catalyst to the development of surrounding areas; (iii) serving as a mechanism for prioritising and coordinating investments amongst neighbouring countries; (iv) opening up opportunities for various types of investment from within and outside the GMS; (v) enhancing the impact of subregional activities through the clustering of projects; and (vi) generating tangible demonstration effects.

The EWEC, NSEC, and SEC were designated as priorities for economic corridor development, as they (i) have the greatest potential to become foreign trade, investment, and tourist corridors; and (ii) have relatively significant sections that can be developed into hubs for regional trade, investment, and tourism.

2.6. Asian Highway Network

The Asian Highway Network is a regional transport cooperation initiative aimed at enhancing the efficiency and development of road infrastructure in Asia, supporting the development of Euro–Asia transport linkages, and improving connectivity for landlocked countries. It comprises more than 141,000 km of roads passing through 32 member countries. The network extends from Tokyo in the east to Kapikule (Turkey) in the west and from Torfyanovka (Russia) in the north to Denpasar (Indonesia) in the south.

The Asian Highway project was initiated in 1959 with the aim of promoting the development of an international road transport system in the region. From 1960 to 1970, potential routes were identified and analysed. However, the progress was slow until political and economic changes in the region spurred renewed interest in the network in the late 1980s and early 1990s. Under a renewed UNESCAP initiative, the Asian Land Transport Infrastructure Development Project was launched in 1992. The project provided a framework for the development of a region-wide integrated transport network comprising road and rail networks. A series of studies for the development and formulation of the Asian Highway Network, covering all subregions, was conducted between 1994 and 2002. These studies, together with a series of meetings of the member countries at the subregional level, helped to build consensus on an agreed network.

The formalisation of the network was initiated in 2002. The UNESCAP Secretariat worked with national governments to develop the Intergovernmental Agreement on the Asian Highway Network, which was adopted on 18 November 2003 and entered into force on 4 July 2005. The agreement includes a list of Asian Highway routes and classification and design standards.

The major benefits of the agreement are that it:

- provides a basis for the coordinated development of road networks at the regional, subregional, and national levels;
- creates interest in greater connectivity at the regional/subregional level, which has led to the development of subregional networks;
- develops common design and technical standards for highway development for regional roads, which many subregional organisations have adopted;
- enhances domestic and road transport connectivity, which has supported the growth of national economies and inter-country trade;
- offers a better negotiating position for member states to secure financing from development banks as well as to maintain minimum design standards; and
- increases development banks' interest in financing road projects of regional importance.

UNESCAP maintains the Asian Highway Database, which includes detailed information on the road conditions.

2.7. ASEAN Highway Network

The 'Ministerial Understanding on the Development of the ASEAN Highway Network Project' was signed during the Fifth ASEAN Transport Ministers' Meeting in Hanoi in September 1999. The network consists of 23 designated routes, totalling about 38,400 km. It comprises the Asian Highway under UNESCAP, which passes through AMS, as well as several additional routes. While all ASEAN Highway Network links have been completed, the total length of roads that are still below the class III ASEAN standard is 2,454 km, mostly in Myanmar and the Lao PDR.

The ASEAN Highway Network Database has been developed and maintained through voluntary efforts of the Department of Highways, Ministry of Transport, Thailand. It has been updated occasionally and the latest update was done in 2015. No plan is indicated to update the database in the near future.

3. Trans-Asian Connectivity Plans

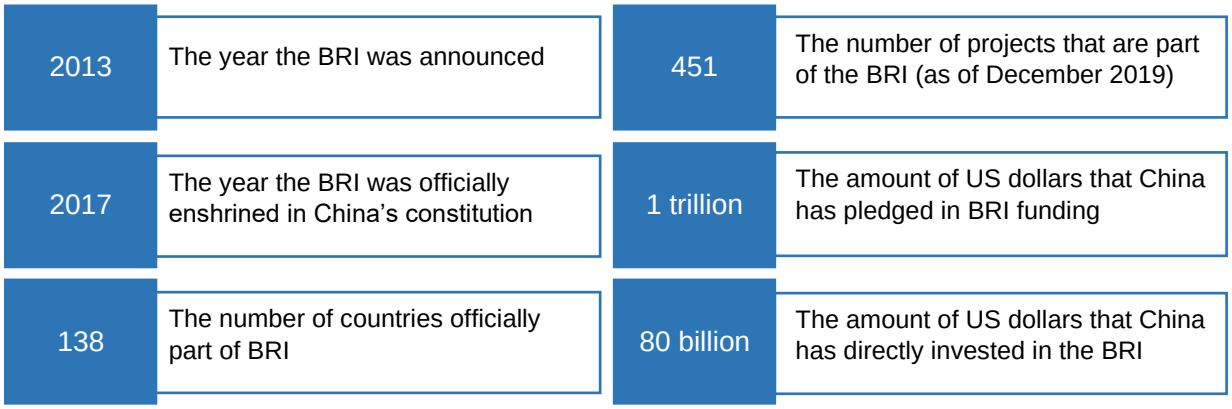
Regional connectivity is on the rise worldwide. Asia, Africa, Europe, and the other continents are becoming increasingly interlinked through pan-regional initiatives. Asia is the trailblazer in this regard, and most connectivity plans have Asia at its core. Asia is also the centre of pan-regional connectivity initiatives. The MPAC, BRI, Asia–Africa Growth Corridor, and Asia–Europe Meeting (ASEM) – all connectivity plans – aim to deepen Asia's economic dynamism and extend it to trans-regional partners. Mega-regional integration initiatives such as the CPTPP and the RECP are also integral to this region.

3.1. The Belt and Road Initiative

President Xi Jinping launched the BRI as a signature foreign policy initiative during his official visit to Kazakhstan in 2013. The BRI is envisioned as a grand development plan to increase global connectivity, with China at its centre. The BRI aims to promote connectivity amongst the Asian, European, and African continents and their adjacent seas. It also aims to establish and strengthen partnerships amongst the countries along the 'Belt and Road'; set up all-dimensional, multi-tiered connectivity networks; and realise diversified, independent, balanced, and sustainable development in these countries (Xinhua, 2017). The framework covers the area of the ancient Silk Road, but it is open to all countries.

The BRI has two components: (i) the land-based 'Silk Road Economic Belt', and (ii) the 'Maritime Silk Road'. It will focus on building a new Eurasian land bridge; and developing China–Mongolia–Russia, China–Central Asia–West Asia, and China–Indochina Peninsula economic corridors. To do so, it will take advantage of international transport routes, rely on core cities along the Belt and Road, and use key economic industrial parks as cooperation platforms. Many of China's bilateral infrastructure projects in Asia, Europe, Africa, the Indian Ocean islands, and the Pacific Islands have been brought within the BRI.

Figure 2.2: Belt and Road Initiative Snapshot



BRI = Belt and Road Initiative, US = United States.
Source: ERIA (2021).

The aim of improving connectivity across Asia–Europe is at the core of the initiative. Most of the projects and activities under the BRI focus on transportation infrastructure within and between Asia and Europe. Still, it should be noted that the BRI's geographic scope is near-global, as it also encompasses Africa, Oceania, and Latin America. Moreover, apart from transportation connectivity, energy and communication infrastructure are also key BRI sectors. The BRI has major implications for economic and

financial integration, multilateral governance, and people-to-people ties across Asia–Europe and beyond. Many, though not all, countries in Asia and Europe have concluded bilateral memoranda of understanding with China for closer cooperation on BRI-related activities (Green Finance and Development Center, 2020).

While the BRI is a top-level plan, as President Xi's signature foreign policy, it is not a centralised strategy. A central task force – the Leading Small Group on Advancing the Construction of the Belt and Road – was created in 2015 to improve BRI coordination amongst various Chinese actors involved in the BRI. However, despite these efforts, the BRI at times still suffers from coordination issues due to its scope and the multitude of actors involved.

The Belt and Road vision extends well beyond investment in economic infrastructure. The Action Plan on BRI published in March 2015 sets out five dimensions of connectivity: (i) policy coordination; (ii) high-quality transport, communications, and energy networks to facilitate international commerce; (iii) reducing the cost and risks of trade and other international economic transactions along supply chains; (iv) financial integration; and (v) people-to-people bonds.

Strong financial commitments from China support the BRI. China has launched a $40 billion Silk Road Fund, which will directly support the initiative. Additional financial resources for the initiative will be provided by the Asian Infrastructure Investment Bank (AIIB), which was primarily set up to address the infrastructure funding gap in Asia (estimated by ADB to total $8 trillion between 2010 and 2020) (ADB, 2017).

The scope of the BRI is unprecedented as it aims to link many of the economies of Asia and Europe and reach out to others. Trillions of dollars will need to be invested over several decades. If the BRI is implemented efficiently, many economies can become deeply integrated and engage successfully in global value chains (GVCs). The Chinese government has earmarked up to $1 trillion for investments. Decision-making on infrastructure projects is based on bilateral agreements with other governments. Many early investments are already under way, and focus on building on and improving existing infrastructure.

Activities under the BRI relating to transport infrastructure can be subdivided into financing and construction, rail transport, maritime transport, and air transport. In addition to transport infrastructure, the digital domain is a key connectivity feature of the BRI.

a. Transport Infrastructure Financing and Construction

From the announcement of the BRI in September 2013 to 2019, more than $500 billion of construction contracts for ports, railways, motorways, airports, bridges, power plants, and dams were signed (AEI, 2020). Annual financing peaked in 2014 at around $95 billion, then dropped somewhat to $76 billion in 2018. Many projects take longer than expected to complete. This trend has been more evident since the COVID-19 pandemic.

b. Transport Infrastructure Management and Use: Rail, Maritime, and Air

BRI rail freight has been operational between Asia and Europe since 2011. The main corridor connects multiple Chinese and European cities via Kazakhstan, Mongolia, Russia, and Belarus. Other corridors connect China to Europe via Central Asia and the Middle East. BRI rail freight between Europe and China

is heavily subsidised by central, provincial, and local Chinese governments, which helps the trains operate and establish new routes. More cargo is transported from China to Europe than vice versa.

Port development and terminal management along the Maritime Silk Road is the most important aspect of maritime projects in the BRI. Since 2015, aviation has officially been part of the BRI, though it is not a dominant feature (CAPA Centre for Aviation, 2018). China has become a major origin and destination of air traffic. Air transport passengers from China increased from 352.79 million in 2013 to 611.43 million in 2018 (World Bank, 2020b). The COVID-19 pandemic interrupted the former trend, while China–Europe air cargo has increased due to the transport of medical equipment and pharmaceuticals (Knowler, 2020).

c. Digital Infrastructure

The digital component of the BRI, or Digital Silk Road (DSR), was first announced in 2015. The DSR aims at improving global digital connectivity, with China at its centre, through building digital infrastructure and expanding e-commerce offerings, amongst others. Chinese actors play a dominant role here – as manufacturers of products sold through e-commerce, as e-commerce platforms, and as logistics and transport providers to BRI countries. The main players are Chinese private technology giants such as Alibaba, Tencent, JD.com, Baidu, Huawei, and ZTE, which are part of the DSR, promoting global e-commerce and digital infrastructure.

The Action Plan on the BRI notes that investments in physical connectivity should be backed up by policy development and capacity building to make international commerce amongst Belt and Road economies cheaper, easier, and faster; and should include cooperation to strengthen institutional and people-to-people linkages. Following early investments in new or existing transport, communications, and energy networks, the BRI is looking for sustainable cooperation amongst a diverse group of countries where political leaders and officials, both in China and in partner countries, are able to (i) create bilateral projects based on mutual benefit and mutual trust, (ii) agree on investments that are sustainable and achieve the stated objectives, (iii) effectively manage risks through transparency and responsible governance, (iv) converge the infrastructure projects and associated capacities with the development priorities of the partner countries, and (v) invest in sustainable infrastructure.

The early phase of the BRI has focused on investment in the hard infrastructure of transport, communications, and energy networks. The developmental and fiscal results in some of the countries hosting BRI projects has brought the BRI under immense global scrutiny, especially on its policy coordination role with the host country. The BRI needs to transform from an infrastructure programme to a connectivity programme by embracing the multidimensional aspects of connectivity.

The BRI process links participants that differ greatly in terms of the size of their populations and economies, forms of governance, institutional development, and productivity. Several decades of experience of economic cooperation indicate that successful and sustained cooperation amongst such a diverse group should be voluntary and based on the principles of openness, transparency, mutual benefit, mutual trust, mutual respect, and careful evolution. The challenge for BRI in the coming years is to put these sound guiding principles into practice, and to take BRI projects where they are needed. The BRI in the Indo-Pacific architecture must adhere to these principles and aim to avoid a hegemonic race for infrastructure projects.

3.2. Asia–Africa Growth Corridor

Asia–Africa relations are both historical in terms of their common past and contemporary in terms of their aspirations. They share past struggles, present efforts, and prospects for a bright future with enormous prospects for cooperation and growth. This bond is also apparent from their coming together on many occasions: bilaterally, sub-regionally, as global forces, and as the 'one voice' of the developing world on issues touching human concerns of every kind. The Indian Ocean is the natural link between the two regions, enabling trade and connectivity from time immemorial.

The Asian economy, especially that of East Asia, has demonstrated resilience and provided a robust drive for the global economy, and it continues to provide the tailwinds thereof. Africa, on the other hand, is on the path to growth. Its young demography and economy require integration and expansion into the GVCs of production that exist in Asia. The two regions account for 70% of the global population and 37% of global gross domestic product (GDP). Conjoined by the Indian Ocean, the two regions provide a renewed opportunity for partnership for sustainable development. As developing regions, both continents are committed to promoting strong, balanced, sustainable, and inclusive growth, at both the national and international levels.

The vision document of the AAGC – the 'Asia Africa Growth Corridor: Partnership for Sustainable and Innovative Development' – was presented at the African Development Bank annual meeting on 25 May 2017 in Ahmedabad, India. The AAGC foresees Africa's integration with Asia, in which South Asia, West Asia, Southeast Asia, East Asia, and Oceania play an important part. The AAGC proposes four major pillars of connectivity and cooperation to bring peoples, goods, services, capital, and institutions closer together to realise the objective of an Asia–Africa partnership for sustainable and innovative development. These pillars are (i) development and cooperation projects, (ii) quality infrastructure and institutional connectivity, (iii) enhanced capacities and skills, and (iv) people-to-people partnership.

These will facilitate and enhance economic growth by linking economies in Asia and Africa through the development of institutional and human capacity, connecting institutions and people, building capacities for planning and executing projects, facilitating trade, developing human resources, and improving the technology and infrastructure (ports, airports, industrial parks, telecommunications, and information technology) of the two continents. The AAGC emphasises capacity building and expanding the manufacturing base and trade between Africa and Asia. The aim is to transform the region into a growth corridor to embed development processes and value chains in Africa and Asia. It will enable the connected economies to integrate further and collectively emerge as a globally competitive economic region. The AAGC remains especially aligned with the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, and provides green projects with priority funding and implementation.

The AAGC provides new supply chain linkages between two developing regions and offers a multidimensional approach to industrialisation, trade, and integration in the regional and global value chains in which industrial development is matched with higher spending on education and the development of skills and training for adapting to digital age technologies and improved productivity. With improved productivity and rising wages in important East Asian economies, labour-intensive manufacturing jobs are likely to move to the developing regions of South Asia, Africa, and even Central Asia. The AAGC and the TLH together will provide the new economic linkages and GVC integration between Asia and Africa.

The AAGC strengthens Asia–Africa economic connectivity through development plans that are suitable for and in sync with the development priorities of countries in Africa, Asia, and the Asia-Pacific region. The AAGC, therefore, is not merely a plan for development and cooperation between Asia and Africa, but also encourages freedom of movement of people, goods, services, and capital in a geographical spread between the western edges of Africa to the eastern edges of Asia and Oceania. The AAGC is the first such attempt to prepare a growth plan that connects two continents, by which the development strengths of Asia can be shared and dovetailed with the development priorities of the countries and regions of Africa. The AAGC prioritises the prosperity of the people of Africa and Asia, and their development goals, in all plans and projects under its aegis.

3.3. **Europe–Asia Connectivity**

The European Commission proposed building blocks for an EU Strategy on Connecting Europe and Asia, with concrete policy proposals and initiatives to improve connections between Europe and Asia, including through interoperable transport, energy, and digital networks.

The EU–Asia connectivity strategy is built on the belief that the EU and Asia should ensure efficient and sustainable connectivity because it contributes to economic growth and jobs; global competitiveness and trade; and the movement of people, goods, and services across and between Europe and Asia. It has outlined concrete policy proposals and initiatives to improve connections between Europe and Asia, including through interoperable transport, energy, and digital networks. The EU promotes an approach to connectivity with Asia which is sustainable, comprehensive, and rules-based:

- Sustainable connectivity envisages that connectivity has to be economically, fiscally, environmentally, and socially sustainable in the long term.
- Comprehensive connectivity is about networks; and the flow of people, goods, services, and capital that pass through them. It emphasises the crucial human dimension and people's interests and rights, which should be at the core of connectivity.
- International rules-based connectivity is required for people, goods, services, and capital to move efficiently, fairly, and smoothly. Internationally agreed practices, rules, conventions, and technical standards – supported by international organisations and institutions – enable the interoperability of networks and trade across borders. (European Commission, 2018a).

In addition, the EU will engage with its Asian partners along three strands:

(i) by contributing to efficient connections and networks between Europe and Asia through priority transport corridors, digital links, and energy cooperation at the service of people and their respective economies;

(ii) by establishing partnerships for connectivity based on commonly agreed rules and standards, enabling better governance of flows of goods, people, capital, and services; and

(iii) by contributing to addressing the sizeable investment gaps through improved mobilisation of resources, reinforced leveraging of the EU's financial resources, and strengthened international partnerships.

For building efficient connections between Europe and Asia, the EU–Asia connectivity strategy envisages physical connectivity (air, land, and sea transport). The EU would work towards connecting

the well-developed Trans-European Transport Network (TEN–T) framework with networks in Asia. The EU has extended the TEN–T to the Western Balkans, and agreed on the extension of the TEN–T with six Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine) (European Commission, 2018b). Both the north–south rail connections and the east–west rail connections could play an important role in the future. The EU–China rail connection, in particular, has been experiencing strong growth. The EU is supporting the Unified Railway Law initiative of the United Nations Economic Commission for Europe, which is seeking to unify the legal regime for the carriage of goods by rail across the Eurasian continent. The EU will work with relevant rail transport organisations to extend the application of the EU's technical specifications and safety management frameworks.

While the EU–Asia strategy covers air and sea connectivity in some measure, road transport receives more attention as it is deemed to make more sense over medium distances (such as to Central Asia) and as a secondary transport network in combination with other modes of transport. Promoting road safety by sharing best practices, furthering the exchange of customs information, and developing cooperation on transit (both bilaterally and through the World Customs Organization) are important policy measures for road transport.

Digital and energy connectivity are also envisaged as important for this plan. High-capacity network links are critical to support the digital economy. Backbone network links with Asian and other third countries will contribute to a fully meshed network, providing the required bandwidth and other quality criteria for this critical infrastructure. In its relations with Asian countries, the EU strategy promotes a peaceful, secure, and open ICT environment, while addressing cybersecurity threats and protecting human rights and freedoms online, including the protection of personal data. The EU–Asia connectivity has provisioned for a coherent regulatory approach in digital connectivity, as it is critical to support private and public investment in the digital infrastructure. It also underlines policies and incentives to bridge the digital divide, particularly in remote regions or landlocked countries. The EU's Digital4Development strategy in Asia will be pursued to promote digital technologies and services to foster socio-economic development.

The EU proposes to promote regional energy connectivity platforms that focus on market principles, encourage modernisation of the energy system and the adoption of clean (decentralised) solutions, promote energy efficiency, and support energy connectivity both amongst and with partners in Asia.

Some other important features of the EU's strategy for connectivity with Asia include actions that build on existing bilateral, regional, and international cooperation programmes and activities in Asia.

In the 2021 State of the Union Address by President von der Leyen, the EU has presented its new connectivity strategy called Global Gateway. (European Commission, 2021). In this strategy, the EU proposes to build Global Gateway partnerships with countries around the world, including Asia. The EU is offering investments in quality infrastructure for connecting goods, people, and services around the world.

The European strategy stands for sustainable and trusted connections to tackle the most pressing global challenges, from climate change and protecting the environment, to improving health security and boosting competitiveness and global supply chains. Global Gateway aims to mobilise up to Euro 300 billion in investments between 2021 and 2027 and it is expected that Asia will be an important beneficiary of this strategy. (European Commission, 2021b),

3.4. EU–Japan Partnership on Sustainable Connectivity and Quality Infrastructure

Japan's plan for quality infrastructure and sustainable development is the basis of its connectivity partnerships in the region. Quality infrastructure is central to all of Japan's infrastructure and connectivity initiatives. In 2019, Japan and the EU affirmed their commitment to establishing a connectivity partnership based on sustainability as a shared value, quality infrastructure, and their belief in the benefits of a level playing field. In the EU–Japan Partnership on Sustainable Connectivity and Quality Infrastructure, the EU and Japan intend to work together on all dimensions of connectivity, bilaterally and multilaterally, including digital, transport, energy, and people-to-people exchanges (Ministry of Foreign Affairs, Japan, 2019). The connectivity plans will fully take into account partners' needs and demands, and pay utmost attention to their fiscal capacity and debt sustainability. The EU and Japan will coordinate their respective cooperation on connectivity and quality infrastructure with partner third countries, notably in the regions of the Western Balkans, Eastern Europe, Central Asia, and the Indo-Pacific, as well as Africa.

In view of their commitment to promoting rules-based connectivity globally, both sides intend to cooperate in international and regional bodies, including international fora such as the G7, G20, the Organisation for Economic Co-operation and Development, the World Bank, the International Monetary Fund, the European Bank for Reconstruction and Development, and ADB. Together with the Japan–EU Economic Partnership Agreement, promoting regulatory cooperation for free, open, rules-based, and fair trade and investment is an important institutional component of this connectivity partnership. Both sides have underlined the positive contribution of sustainable connectivity to the implementation of the 2030 Agenda for Sustainable Development and recall their readiness to support partner countries in creating an environment that stimulates investment.

Both the EU and Japan have underlined digital connectivity as a powerful enabler of inclusive growth and sustainable development, including through digital and data infrastructure as well as policy and regulatory frameworks, in developing countries. Japan and the EU emphasise that the development of a digital economy depends on an open, free, stable, accessible, interoperable, reliable, and secure cyberspace; and on 'data free flow with trust' (as declared by the G20 leaders in Osaka). Japan and the EU intend to work together to further elaborate, promote, and operationalise the concept of 'data free flow with trust', including with a view to enhancing trust concerning data security and privacy, while respecting each other's respective regulatory framework.

Japan and the EU plan to use the existing Japan–EU Transport Dialogue as a framework for engaging in and cooperating on all modes of transport and horizontal issues. Enhancing sustainable transport connectivity – through deeper cooperation and synergies of regulatory frameworks, interconnection of transport corridors, and enhancement of safety and security of transport – will be central to this connectivity partnership. Cooperation plans and projects in the framework of the connectivity partnership will be identified through existing dialogues and cooperation frameworks, in particular in the Japan–EU Strategic Partnership Agreement and the Economic Partnership Agreement. The Joint Committee established under the Japan–EU Strategic Partnership Agreement will review the progress on a regular basis. Furthermore, the Japan–EU High Level Industrial, Trade and Economic Dialogue can function as a platform for strategic discussions under the connectivity partnership.

3.5. The US Initiative and Other Plans

The US initiated the Infrastructure Transaction and Assistance Network, which provides capacity building programmes to improve partner countries' project evaluation processes and project implementation capacities, advisory services to support sustainable infrastructure, and coordinate US assistance support for infrastructure in the region. The US has deployed the Transaction Advisory Fund and the Global Infrastructure Coordinating Committee in the region for technical assistance and development finance. The Asia Reassurance Initiative Act, 2018, providing $1.5 billion for 5 years until 2023, is an important part of US policy for the Indo-Pacific.

The Greater Tumen Initiative (GTI) (originally known as the Tumen River Area Development Program) is an intergovernmental cooperation mechanism amongst four countries – China; Mongolia; the Republic of Korea (henceforth, Korea); and Russia – supported by the United Nations Development Programme (Dulambazar, 2015). In 1995, the member governments signed agreements to establish the GTI mechanism, aimed at strengthening economic and technical cooperation, and attaining greater growth and sustainable development in Northeast Asia, especially the Greater Tumen Region (GTR). The GTI focuses on the priority areas of transport, trade and investment, tourism, agriculture, and energy, with environment as a cross-cutting sector.

The GTI effectively converges the BRI initiated by China, the Eurasia Initiative proposed by Russia, and the Grassland Road undertaken by Mongolia, in building the China–Russia–Mongolia transport corridor in the GTR. Some of the important projects in the Trans-GTR Transport Corridor are the Tumen Road Corridor, Tumen Rail Corridor, Suifenhe Transport Corridor, Siberian Land Bridge, Dalian Transport Corridor, Korean Peninsula West Corridor and East Corridor, and the China Land Bridge Transport Corridor connecting Asia with Europe via Kazakhstan. In 2013, two additional transport channels between Ulaanbaatar and Bichigt were added in the Tumen transport area. The GTI Common Fund, contributed by the member countries, is a United Nations Development Programme Trust Fund to finance the operation of the GTI Secretariat.

Similarly, the Central Asian Regional Economic Cooperation (CAREC) offers connectivity between Northern Asia and Central Asia. Korea's New Southern Policy leverages ASEAN and India as its key regional partners and as a strategic priority for Korea.

4. Funding the Connectivity Plans

Asia is one of the most dynamic and productive regions, but it is held back from realising its full potential by huge constraints in crucial infrastructure caused by a lack of investment. ADB has estimated that developing Asia will need to invest $26 trillion for infrastructure from 2016 to 2030, or $1.7 trillion per year. This would allow the region to maintain its growth momentum, eradicate poverty, and respond to climate change. Without climate change mitigation and adaptation costs, $22.6 trillion, or $1.5 trillion per year, will be needed (ADB, 2017).

Infrastructure investment varies considerably by sector (Table 2.1). The power and transport sectors require the largest investments, accounting for 52% and 35%, respectively, of total infrastructure investments. Telecommunications and water and sanitation are no less important for an economy or for individual welfare, and therefore require investment. Each of these sectors has varying levels of regulatory, governance, and sustainability challenges in different countries.

Table 2.1: Infrastructure Investment Needs by Sector in 45 ADB Developing Member Countries, 2016–2030

($ billion in 2015 prices)

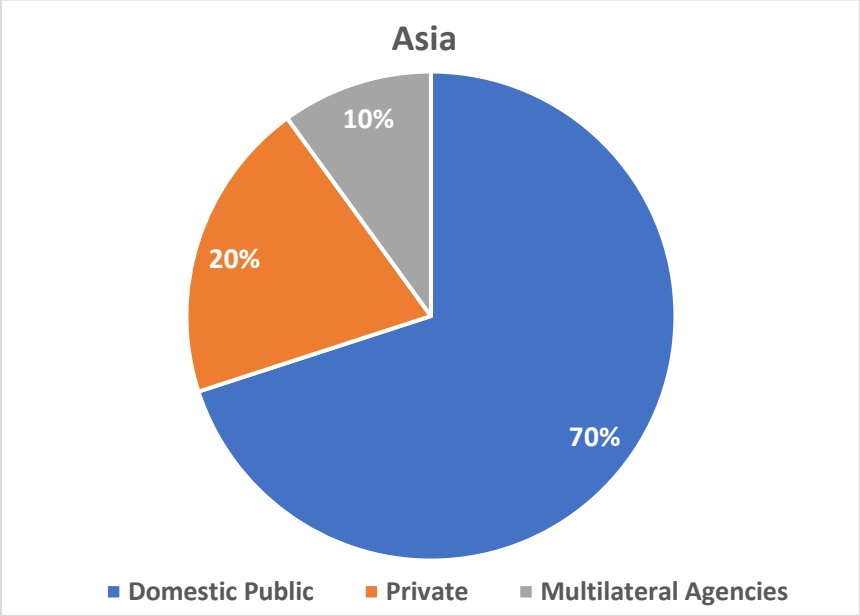
Sector	Baseline estimates			Climate-adjusted estimates			Climate-related investments (annual)	
	Investment needs	Annual average	Share of total	Investment needs	Annual average	Share of total	Adaptation	Mitigation
Power	11,689	779	51.8	14,731	982	6.76	3	200
Transport	7,796	520	34.6	8,353	557	6.56	37	-
Telecommunications	2,279	152	10.1	2,279	152	5.12	-	-
Water and sanitation	787	52	3.5	802	53	3.31	1	200
Total	**22,551**	**1,503**	**100.0**	**26,166**	**1,744**	**1.02**	**41**	

ADB = Asian Development Bank.
Note: Numbers may not total exactly because of rounding.
Source: Asian Development Bank estimates (2017).

5. Funding Agencies and Partnerships

Infrastructure projects focused on cross-border connectivity present significant investment opportunities and are vital for long-term growth in Asia. Much of the funding would continue to come from public resources, through better domestic revenue mobilisation, cost recovery, and better prioritisation of fiscal resources. Yet, it is also very clear that more private sector financing is required. While public spending still provides the bulk of needed infrastructure investments, fiscal constraints and debt sustainability considerations limit the extension of public finance (Figure 2.3). Various multilateral development banks (MDBs) have also made mobilising private capital a priority. ADB emphasises private participation in infrastructure and capital market development in its private sector operations framework. The World Bank also takes an approach of 'maximizing finance for development' to leverage all sources of finance systematically. The AIIB has a more focused mandate on infrastructure project financing and does not offer concessionary financing. It aims to create infrastructure projects as an asset class for private sector investors by increasing the level of data quality. This helps market participants to make informed financing decisions.

Figure 2.3: Composition of Infrastructure Financing



Source: Subhanij, 2018.

Besides the MDBs and public–private financing in Asia, the ASEAN Infrastructure Fund (AIF) promotes regional infrastructure financing and financial resilience to support the long-term development of the AMS. The AIF is dedicated to meeting some of the region's infrastructure investment needs. ADB has invested $150 million and administers the AIF and provides technical support.

Given the plethora of connectivity plans in Asia and their trans-regional nature, the future of financing of these projects may well remain in multilateral cooperation partnerships. The Multilateral Cooperation Center for Development Finance (MCDF) was set up through a memorandum of understanding between China's Ministry of Finance, the AIIB, ADB, the European Bank for Reconstruction and Development, the European Investment Bank, the New Development Bank, and the World Bank to promote infrastructure and connectivity. The MCDF will act as a platform to foster high-quality infrastructure and connectivity for developing countries. It multilateralises infrastructure financing and advocates for a transparent, non-discriminatory, and predictable financing environment, taking into account debt sustainability in mobilising finance. Information sharing, capacity building, and project preparation are the focus areas of the MCDF.

6. Addressing the Financing Gap

Project governance and sustainability increase the cost of infrastructure but are important for attracting financing from financial institutions (Prakash, 2020a). The financing gap for infrastructure is, in large part, the result of inadequate policies and processes and a lack of familiarity with projects. Governments play a central role in most infrastructure projects because infrastructure has strong public good characteristics, requires large-scale capital mobilisation, and is highly sensitive to local politics. However, the scale of infrastructure spending required over the next 10–15 years, coupled with widespread public sector fiscal constraints, means that private finance will be increasingly important. A positive 'enabling environment' – that is, one characterised by sound policies, effective institutions,

transparency, reliable contract enforcement, and other sector-specific factors – makes it easier to mobilise private finance. Conversely, a poor enabling environment – one characterised by distorting subsidies, unreliable counterparties, and flawed procurement processes – can raise the cost of private finance to the point where infrastructure projects are no longer economically viable (Bielenberg et al., 2016).

Trans-regional plans such as the BRI, AAGC, MPAC, and EU–Asia connectivity are seeking greater emphasis on governance, standards, transparency, and sustainability to varying degrees. Institutions such as the Asian Development Bank Institute and the African Development Bank have helped to further this objective by providing climate adaptation and mitigation adjusted costs for infrastructure. Transparency in project preparation and accountability in project execution are important global concerns emerging from the financing and implementation of infrastructure plans. Global attention has been drawn towards issues of planning and project design, financing and debt sustainability, territorial integrity, and people's choices.

7. Multilateral Cooperation for Investment in Connectivity Plans

A multilateral cooperation programme amongst Indo-Pacific countries and MDBs could facilitate global investment in infrastructure for connectivity by creating more efficient, informed, transparent, and predictable investment conditions around infrastructure plans and projects. Development banks feature prominently in this multilateral cooperation because they have the mandate, motivation, and means to influence financing flows and shape markets and have experience in infrastructure funding that could help other actors, such as private sector and institutional investors, in taking on the projects (Prakash, 2020b). Such cooperation works best when undertaken at a regional level, as is seen in the case of connectivity infrastructure projects in Asia and Africa. This is also important because it helps policymakers to find synergies between national and regional development strategies. Some examples of this are projects such as the BRI, AAGC, TLH, and Greater Tumen Initiative. However, the cooperation can extend to other regions too, as funds are expected to flow from near and far. The experience of members from other regions also matters (Prakash, 2020b). The measures undertaken for investment facilitation would include:

- Aggregation of information on pipelines of infrastructure projects in roads, railways, power interconnections and transmission lines, bridges, ports and airports, and ICT networks that are at an advanced stage of project preparation, have relatively robust economic cases, and are likely to be able to substantially mitigate risks, including environmental and social risks.
- Follow-up information on the pipeline of projects where the economic case is reasonably strong but may need further substantiation and/or have risks that appear to be manageable.
- Project preparation facilities and technical assistance to increase the 'bankability' of project pipelines.
- Improving regulatory transparency and predictability – such as the publication/notification of investment-related measures, and enquiry points/single window.
- Streamlining and speeding up administrative procedures – such as the procedural aspects of investment applications, approval processes, licensing and qualifications, and formalities and documentation requirements – as one-stop shop/single window services.

- Enhancing international cooperation and addressing the needs of developing members – such as the exchange of information amongst competent authorities and technical assistance and capacity building for developing countries and least developed countries.
- Environmental and social assessments of projects.
- Debt sustainability and fiscal risk assessments of the projects.

Some important initiatives of multilateral cooperation are already taking shape, and each is unique to the strengths and requirements of the members and partners. The MCDF initiated by the AIIB, the AAGC, and the MPAC 2025 are following the multilateral or trilateral cooperation framework for all or some aspects of infrastructure financing, project preparation, information sharing, and capacity building.

Multilateral cooperation for investment facilitation will improve the speed, scale, and pricing with which private capital could flow into infrastructure investment. It will lead and complement the capital markets' response towards infrastructure investments through streamlining of policy and regulatory rules, institutional conduct, and agency factors. Multilateral cooperation, supported by the EU, the G20, and other similar groups of economies, will encourage governments and MDBs to provide an informed, predictable, and transparent investment environment for institutional investors and get capital to flow into projects.

8. Supply Chains: New Drivers of Connectivity Plans in Indo-Pacific

ASEAN and East Asia are manufacturing hubs with close trade relations within the region, and with important markets in the EU and the US. Such trade integration has been achieved through supply chain efficiencies and market demands in which seamless connectivity plays an important role. Supply chains in ASEAN and East Asia rest on a stable foundation of trade and investment links. To the extent that there are risks, they are primarily at a micro level.

Four important events have brought the focus on new connectivity strategies that would help the supply chains in Asia remain resilient to changes in the international trade dynamics.

One, repeated natural disasters and the ongoing COVID-19 pandemic have reminded the world of the vulnerability of supply chains and risks to connectivity. In this context, the potential of connectivity plans such as the TLH lies in providing resilience to connectivity and supply chains, once it is well connected to other road networks (e.g. the GMS economic corridors) and the networks of other modes of transportation (e.g. railways, waterways, maritime, and air).

Two, the US–China trade tensions were forecast to affect supply chains, investments, and production locations in the region. International suppliers from the ASEAN region have remained resilient to such tensions. However, the China centrality of the supply chains in East Asia is driving new connectivity amongst Australia, Japan, India, and the US in the Quadrilateral Security Dialogue. Similar supply chain led connectivity plans are seen in South Asia. The AAGC is planned partly to provide alternative supply chain linkages in Asia. More recently, the India–Australia–Japan Supply Chain Resilience Initiative, signed on 27 April 2021, was launched to minimise supply chain disruptions and to diversify trade and investments, with a provision to expand the initiative to other regions (MOCI, 2021). The renewed emphasis on the Mekong Subregion in these new supply chain initiatives is leading to new connectivity drives in Asia which have trade integration at the core.

Third, the advent of the digital economy has brought an urgency to digital connectivity plans in Asia. Investments in infrastructure for the digital economy and cybersecurity are the two most pressing needs in ASEAN and other parts of developing Asia for it to grow as a digital economy hub. However, the development of ICT-related infrastructure in individual Asian countries is uneven and gaps remain across and within countries (Chen, 2020). The digital economy could also allow less developed countries/regions to skip certain stages and leapfrog to a higher level of development. With an appropriate set of skills, the digital economy enables possible leapfrogging from the pre-globalised world to active participation in trade through technology and connectivity. Digital connectivity plans with trusted partners in Asia and Europe would fulfil the scope and need for value chains of the digital economy in Asia. EU–Asia connectivity has a strong focus on connectivity designed for the digital economy.

Fourth, the slowdown in trade in goods reflects capacity overhangs in investment and production. However, the growth in trade in services remains high. There is a pressing need to create new supply chains that can utilise the young demography and labour force and cater to new markets. Manufacturing will not diminish in the digital economy. The geographic span of the GVCs will expand, and their concentration may also shift from current locations. The production and consumption of goods and services will occur in new locations and platforms. The AAGC is a good example in this regard. Similarly, ASEAN–UK cooperation and ASEAN–EU connectivity address new supply chains for trade in services. Connectivity and cooperation – through market access, facilitation, and rules – can upgrade the existing value chains for trade in goods and services, and create new ones.

9. Can the Connectivity Plans Converge?

The ASEAN notions of connectedness and community building, despite some differences, are compatible with European and African thinking and can therefore be used effectively in pan-Asia, Asia–Africa, and Asia–Europe connectivity. However, in a global milieu, connectivity plans are competing for space, influence, and results (usually for the promoting country).

Seeking convergence amongst competing connectivity plans is based on the notion that all connectivity plans have similar objectives. The contours of the MPAC, AAGC, BRI, and other connectivity plans will show that this is not always the case. There are inherent differences in each of these plans, given their origins, partnerships, resources, and the political and economic priorities of the promoters. Given these competitive differences, a consensus amongst governments, businesses, and people is emerging to set up governance mechanisms that would place different connectivity plans behind globally agreed development goals. This will help to create common objectives and create synergies amongst the different connectivity plans.

The transformational changes in global governance, international relations, the aspirations of the young demography, technological connectivity, and the future of work are driving the current discourse on connectivity. For this reason, a free and open Indo-Pacific, ASEAN–India connectivity, the AAGC, the BRI, and EU−Asia connectivity are seeking greater emphasis on governance, standards, transparency, and accountability.

The apparent commonality of objectives in connectivity plans and mechanisms is deceptive because the principal agents in each plan choose different pathways towards apparently common goals. Therefore, the results differ amongst various connectivity plans. Primarily, the financing of connectivity plans,

transparency in project preparation, and accountability in project execution are important global concerns emerging from the implementation of connectivity plans. The example of the BRI is important as it has drawn global attention towards issues of planning and project design, financing and debt sustainability, territorial integrity, and people's voices. Controversies in Pakistan, Sri Lanka, the Maldives, the Lao PDR, and Montenegro relate to debt sustainability and underline the disconnect between connectivity plans and development strategies. This emphasises the need for governance standards and processes which transcend bilateral arrangements and can be measured against generally accepted and globally agreed standards and norms for connectivity plans, especially infrastructure plans.

Finding the global standards for connectivity projects and activities is difficult but not impossible. Global development programmes and the impetus for multilateralism can provide a way to create greater interlinkages between connectivity plans through governments, and regional and multilateral institutions. The Bretton Woods framework monitored money and monetary institutions to foster peace and build growth in the post-war years. Similarly, with connectivity as the new international strategy for growth, it is essential that global governance reach and monitor its various aspects and actors. It is already evident in the MPAC, AAGC, and EU−Asia connectivity that triangular and multilateral cooperation on connectivity are producing more inclusive and sustainable plans due to greater oversight of project preparation processes and plan outcomes.

The practical aspects of trans-regional connectivity call for a unified or common regime for the carriage of goods and people across continents. Technical specifications, safety management frameworks, the social and economic well-being of workers in the sector, competition policy, and customs cooperation are some important beyond-the-border issues that require agreed standards and regulations, especially in rail and road transport. Air and sea connectivity have international rules but require calibration around new collaborations and routes. Digital connectivity is embedded in most plans, but promoting a peaceful, secure, and open ICT environment, including data protection, requires a coherent regulatory approach as well as policies and incentives to bridge the digital divide. Clearly, the synergy in different connectivity plans is incumbent on common rules and standards.

Global standards and governance rules for infrastructure-related connectivity plans can be drawn from the broad commitment to put people and their prosperity at the core of connectivity programmes. Employing good governance and accountability as drivers, the plans must work towards the goals of sustainable development and inclusive growth. When connectivity plans converge with regional, national, and global development priorities, monitoring of plans will likely become easier. Finally, the monitoring and regulatory mechanisms must ensure that connectivity plans are not used as a foil for regional leadership – nor can they be used to export debt problems in the promoter country or group of countries. Policymakers are working towards global standards on contemporary issues such as taxation, digital finance, the internet, data ownership and transfer, and artificial intelligence. A global consensus around climate change, the Sustainable Development Goals, multilateralism, and global trade is also being renewed. It is only logical that global (and regional) mechanisms for the monitoring and regulation of connectivity plans should ensure that these plans enhance economic and social well-being amongst people and create trust amongst partners.

Connectivity plans that cater to new supply chain linkages, whether for trade in goods or services, or for the digital economy, will be subject to efficiencies and markets. At the same time, the global discourse on balanced, sustainable, and inclusive growth shifts the emphasis on economic corridors that can stimulate two-way trade between economic agglomerations within Asia, and between Asia, Africa,

and Europe. The COVID-19 pandemic has revealed the vulnerability of connectivity and GVCs. Connectivity between new production locations and markets will strengthen the resiliency of inter-regional connectivity and the GVCs, and improve trade integration. In the post-COVID-19 phase, it will also support restructuring and diversification of supply chains and markets. Indo-Pacific has high stakes in the new supply chain led connectivity projects. Restructuring, understanding, and preparing for a connected Indo-Pacific will ensure stable and inclusive growth in the region.

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