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Briefing Session

Initial Rolling Pipeline of Potential ASEAN Infrastructure Projects

10 June 2019



Technical assistance from:



WORLD BANK GROUP

Funding support from:





Agenda

Part I: MPAC 2025

- Infrastructure Gap
- Objectives of Developing Rolling Pipeline
- Existing ASEAN Connectivity Initiatives

Part II: Developing the Pipeline

- Approach and Methodology
- Initial Pipeline and Potential Pipeline
- Policy Considerations

Part III: Initial Pipeline Projects

- Overview of Projects
- Next Steps

Part IV: Feedback & Discussion

- Support on Project Implementation
- Areas for Co-operation
- Tools & Initiatives



Part I: MPAC 2025

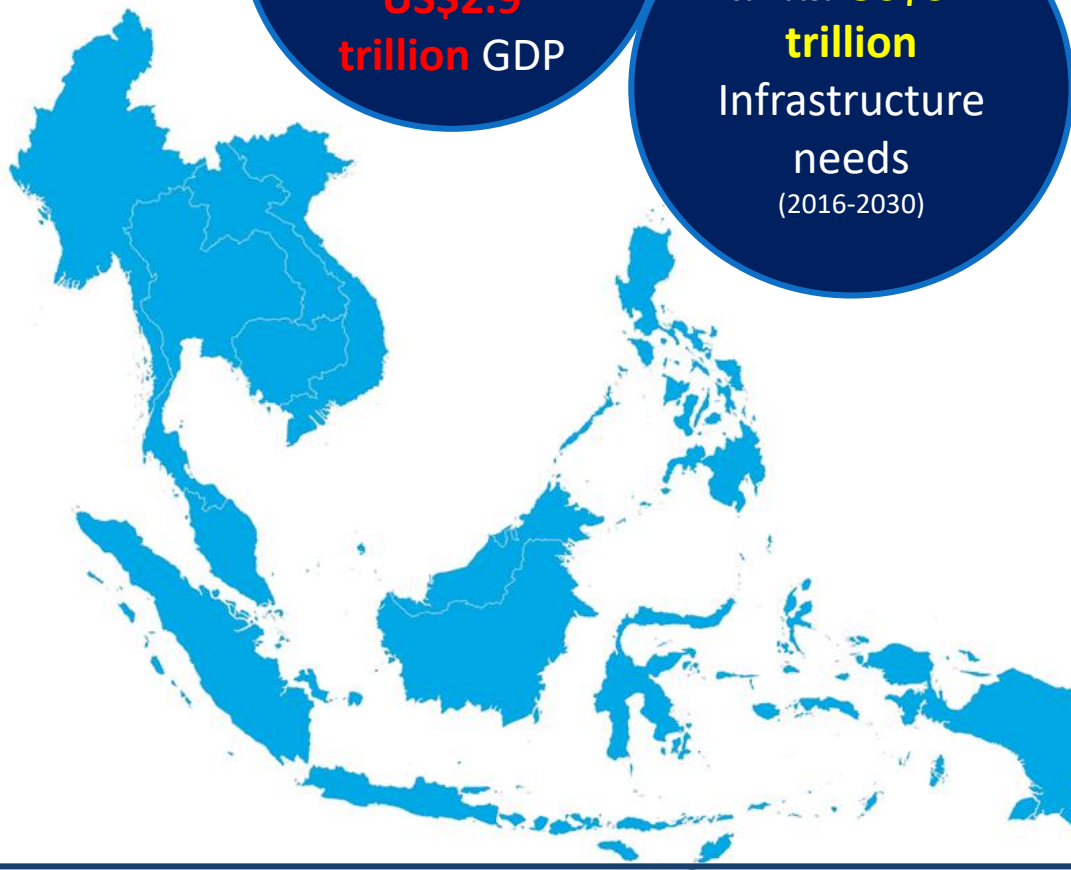


ASEAN is Growing.....but Significant Infrastructure Gap Remains

Ten countries
649 million people

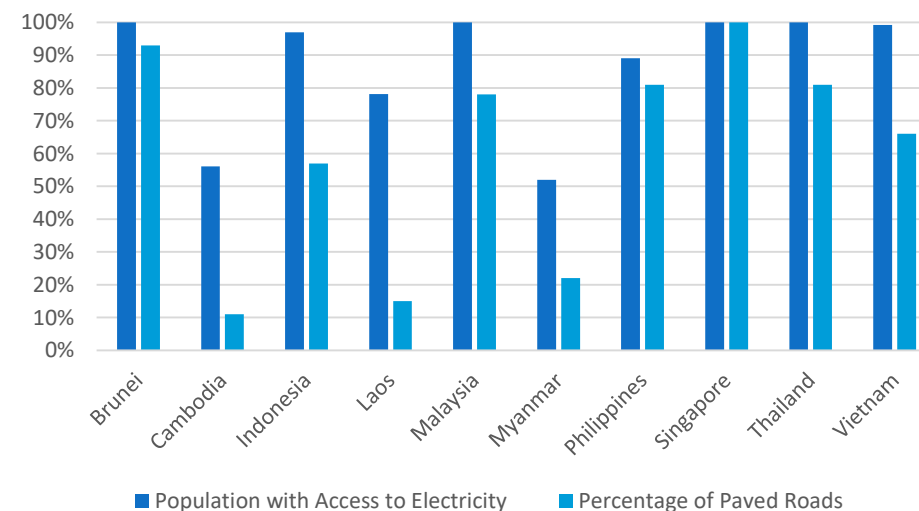
One of world's fastest growing regions with a
US\$2.9 trillion GDP

Estimated **US\$3.1 trillion** Infrastructure needs (2016-2030)



- Investing in physical infrastructure is critical to support sustainable economic development, urbanization, digital economy opportunities and improve trade and logistics routes across ASEAN member states
- Budget constraints and competing demands for limited fiscal resources means that investment in infrastructure often struggles to keep up with growing demand

➡ Quality of/access to infrastructure varies across ASEAN

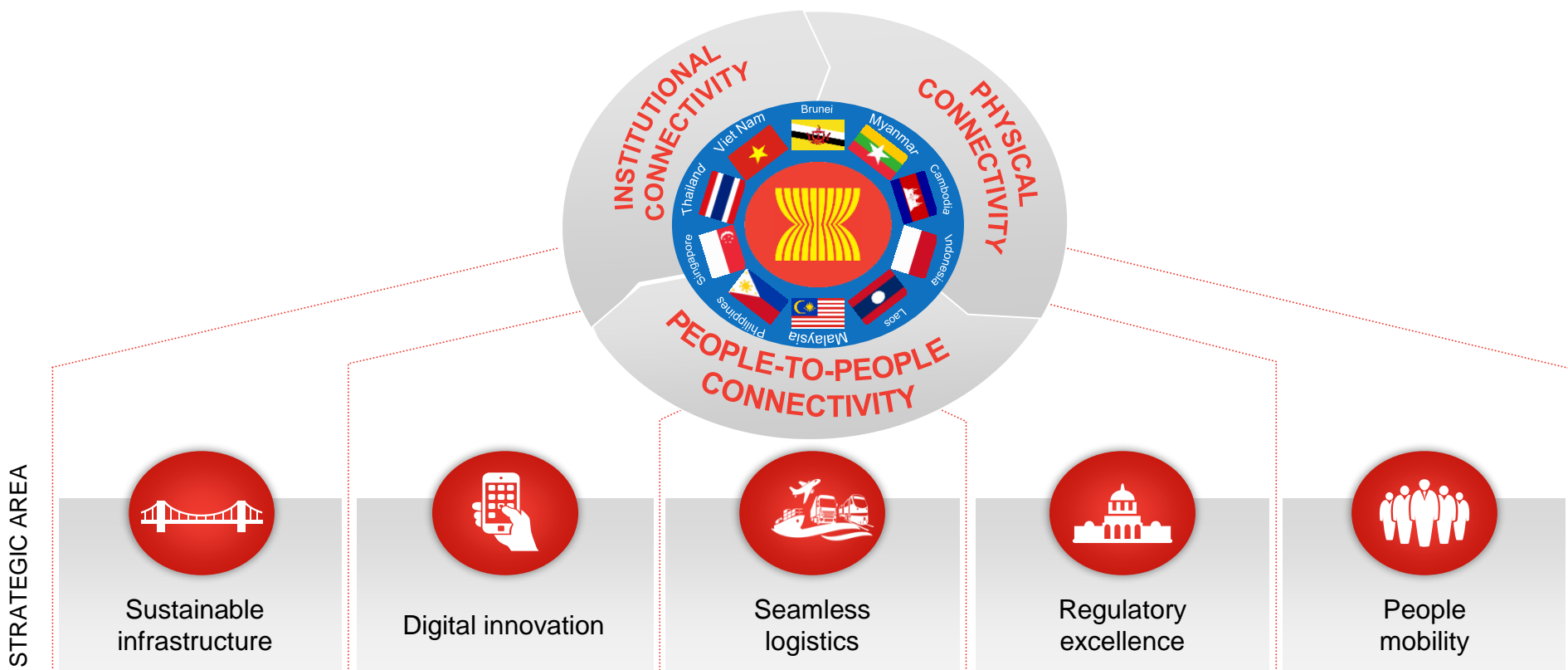


Source: World Bank. 2017. The Status of Infrastructure Services in East Asia and the Pacific.



The Master Plan on ASEAN Connectivity 2025 has 5 Strategic Areas and 15 Initiatives

Vision: “To achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness, and a greater sense of Community.”





Objectives of Developing the Rolling Pipeline

ASEAN wants to develop a pipeline of infrastructure projects that:

- ✓ Has been prioritized by the ASEAN Member States
- ✓ Focuses on connectivity
- ✓ Helps integrate ASEAN
- ✓ Encourages regional coordination
- ✓ Prioritizes project preparation and implementation (= rolling of the Pipeline)
- ✓ Supports capacity building to assess, prioritize, structure and implement projects
- ✓ **Complements existing regional and sub regional initiatives!!**



ASEAN Regional Initiatives



Asian Highway Network (AHN): The AHN is an extension of the Trans-Asian Highway network within the ASEAN region. It aims to ensure minimum ASEAN standards for 23 designated routes (for 38,400 km) across the AMS. While all AHN links have been completed, the total length of roads that is still below ASEAN standard Class III is 2,454 km (mostly in Myanmar and Lao PDR).

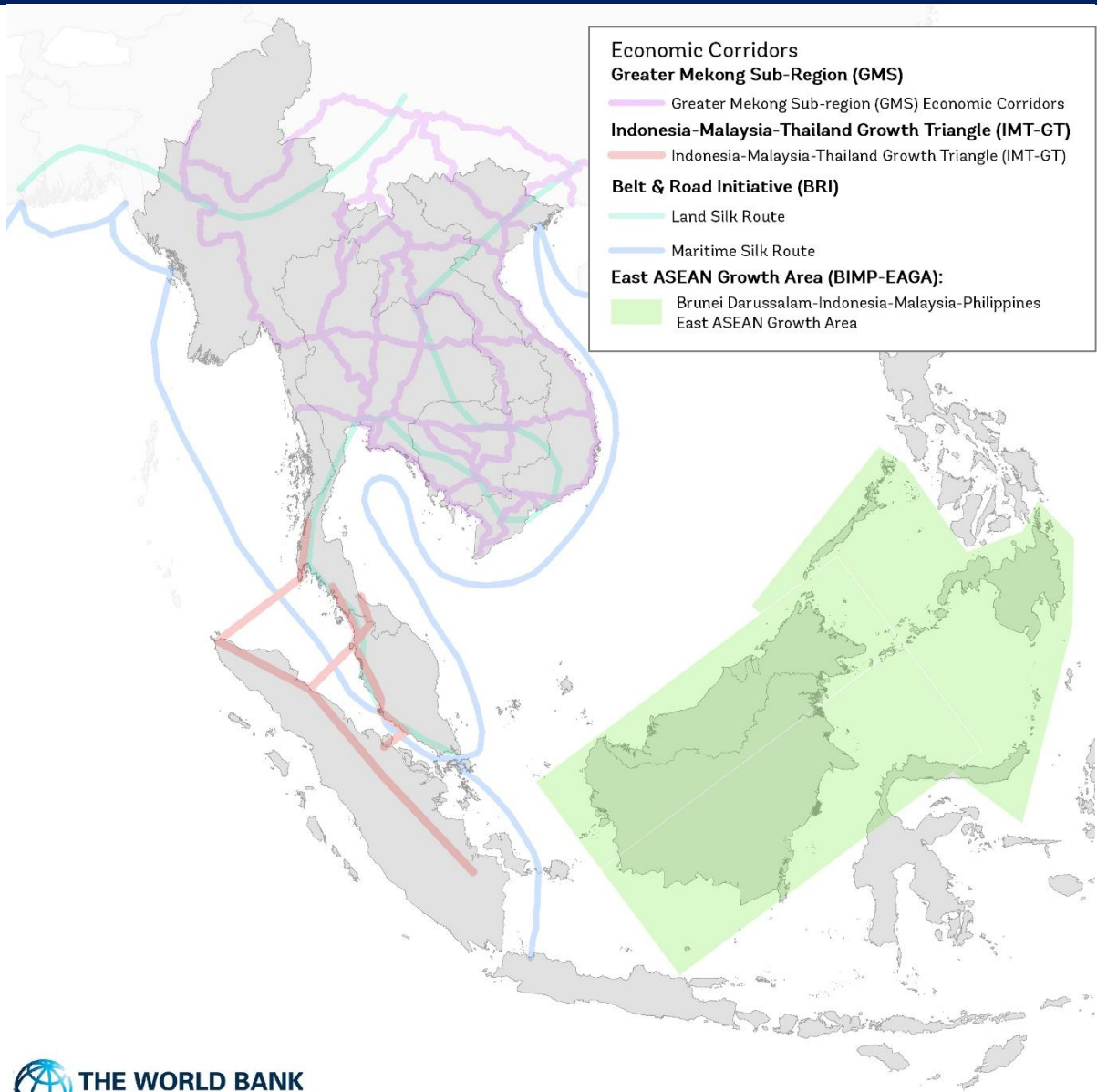
Singapore-Kunming Railway Link (SKRL): The SKRL is the ASEAN part of the Trans-Asian Railway, and aims to create an integrated freight railway network connecting Kunming in China with Viet Nam, Cambodia, Thailand, Malaysia, and Singapore (with spur lines between Thailand and Lao PDR and Thailand and Myanmar). The implementation sections from Singapore to Phnom Penh are on schedule, while the sections from Cambodia to Viet Nam (and the Lao PDR spur line) are still seeking funding.

ASEAN Roll-on/Roll-off (RoRo) Shipping Network: This initiative, aimed at boosting intra-ASEAN shipping and regional trade by reducing costs, was launched in 2013 with a JICA Study on Establishing an ASEAN RoRo Shipping Network and Short-Sea Shipping, and was expanded with a follow up study in 2016. AMS agreed to focus on operationalizing three priority routes (Dumai-Melaka, Belawan-Penang-Phuket, and Davao/General Santos-Bitung). The first RoRo shipping line from Bitung to Davao was launched in 2017. Another RoRo shipping line from Dumai to Melaka is expected to start in 2019, with ongoing discussions between Indonesia and Malaysia.

ASEAN Power Grid (APG): The APG aims to help the AMS meet their increasing demand for electricity and improve access by enhancing trade in electricity across borders, optimizing energy generation, and developing and encouraging possible reserve sharing schemes. Under the APG, it is expected that the AMS would be able to gradually achieve full system-to-system integration of national electricity networks through interconnections. Since the adoption of MPAC 2010, nine power interconnection projects have been completed.



Sub-Regional Arrangements



Greater Mekong Subregion (GMS): The GMS is a sub-regional economic cooperation program between Cambodia, China, Lao PDR, Myanmar, Thailand, and Viet Nam. The initiative, led by ADB, translates into the GMS Regional Investment Framework (RIF) 2022: a pipeline of over 90 priority projects (across energy, transport, and other sectors) worth more than USD 30 billion. In the transport sector, GMS identified key economic corridors and several investment projects. In the energy sector, the main goal is to achieve sub-regional power trade and interconnection: the Thailand-Lao PDR interconnection is the only one completed so far.

Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA): The BIMP-EAGA is also an ADB-led sub-regional economic cooperation initiative in Southeast Asia. It has four members: Brunei Darussalam, Indonesia, Malaysia, and the Philippines. The BIMP-EAGA Vision 2025, lists a total of 57 priority infrastructure projects worth over USD 21 billion across roads, railways and bridges, inland transport services, airports, seaports, power and energy infrastructure, ICT, and other sectors.

Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT): The IMT-GT is a sub-regional cooperation initiative formed by Indonesia, Malaysia, and Thailand to accelerate economic and social transformation in less developed provinces of the member countries. In 2017, the IMT-GT Implementation Blueprint 2017–2021 was issued, containing the first batch of five-year strategies toward implementing the new IMT-GT Vision 2036. On physical connectivity projects alone, the Implementation Blueprint has listed 29 priority projects amounting to USD 45 billion covering roads, railways, and bridges, inland transport, airports, and seaports.



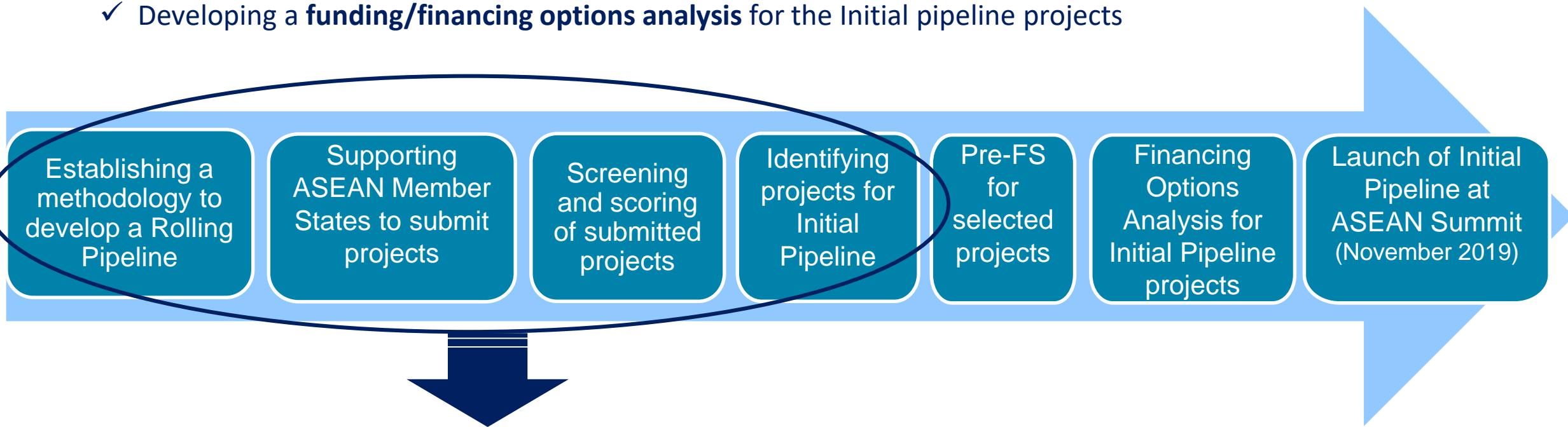
Part II: Developing the Pipeline



World Bank Technical Support to Enhance ASEAN Infrastructure Connectivity

World Bank was appointed by ASEAN to provide technical assistance in:

- ✓ Establishing a **methodology to develop a Rolling Pipeline** of Potential ASEAN Infrastructure Projects
- ✓ Supporting ASEAN Member States to submit projects
- ✓ Identifying an **Initial Pipeline** of ASEAN priority infrastructure projects with regional connectivity impact
- ✓ Conducting **Pre-Feasibility Studies** (Pre-FS) for selected projects in the Initial Pipeline
- ✓ Developing a **funding/financing options analysis** for the Initial pipeline projects



Scope delivered by World Bank to-date



Framework, Project Origination, Screening and Scoring

Developed a methodology for identifying the Pipeline



Supported ASEAN Member States to submit projects



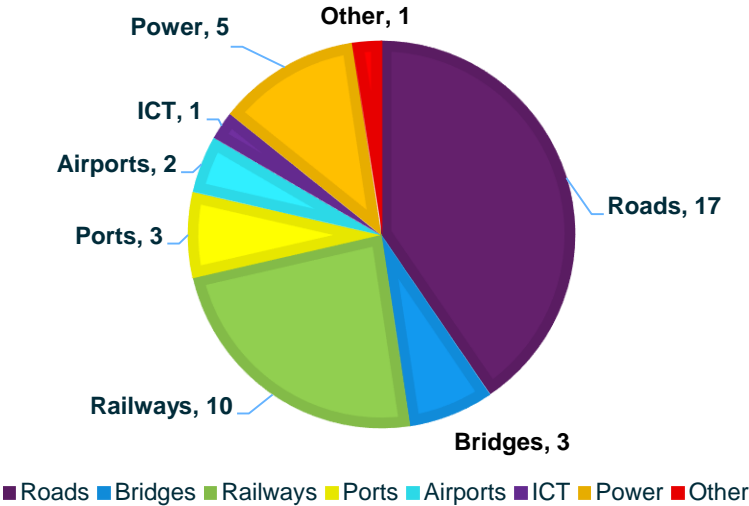
Screened and scored submitted projects

A standardized project application form was developed to gather relevant information on each project, followed by an Inception Workshop and several country visits/meetings



AMS submitted 42 projects

Breakdown of Submitted Projects by Sector



Projects were assessed through a 2 stage process

Stage 1:
Screening
across seven minimum requirements to be met for the project to proceed to the second phase



Stage 2:
Scoring
based on five weighted criteria



The Five Scoring Criteria



1. Strategic Relevance & Regional Connectivity (20%) assesses the strategic relevance of the project, its support from ASEAN Member State(s) and the extent to which the project will have regional impact across ASEAN, through qualitative questions as well as quantitative methods (Graph Theory Analysis).



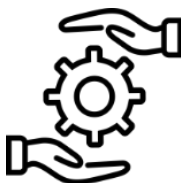
2. Need, Economic and Social benefits (25%) assesses the need for a project and its economic and social benefits, by using qualitative questions and quantitative methods (Economic Connectivity Analysis).



3. Environmental and Social impact (30%) assesses the magnitude of E&S impacts and the extent to which they can be mitigated, as well as the amount of land that needs to be acquired, by reviewing projects' supporting documentation (ESIA or other studies when available) as well as reference sources (IBAT and UNESCO information on Heritage Sites) .

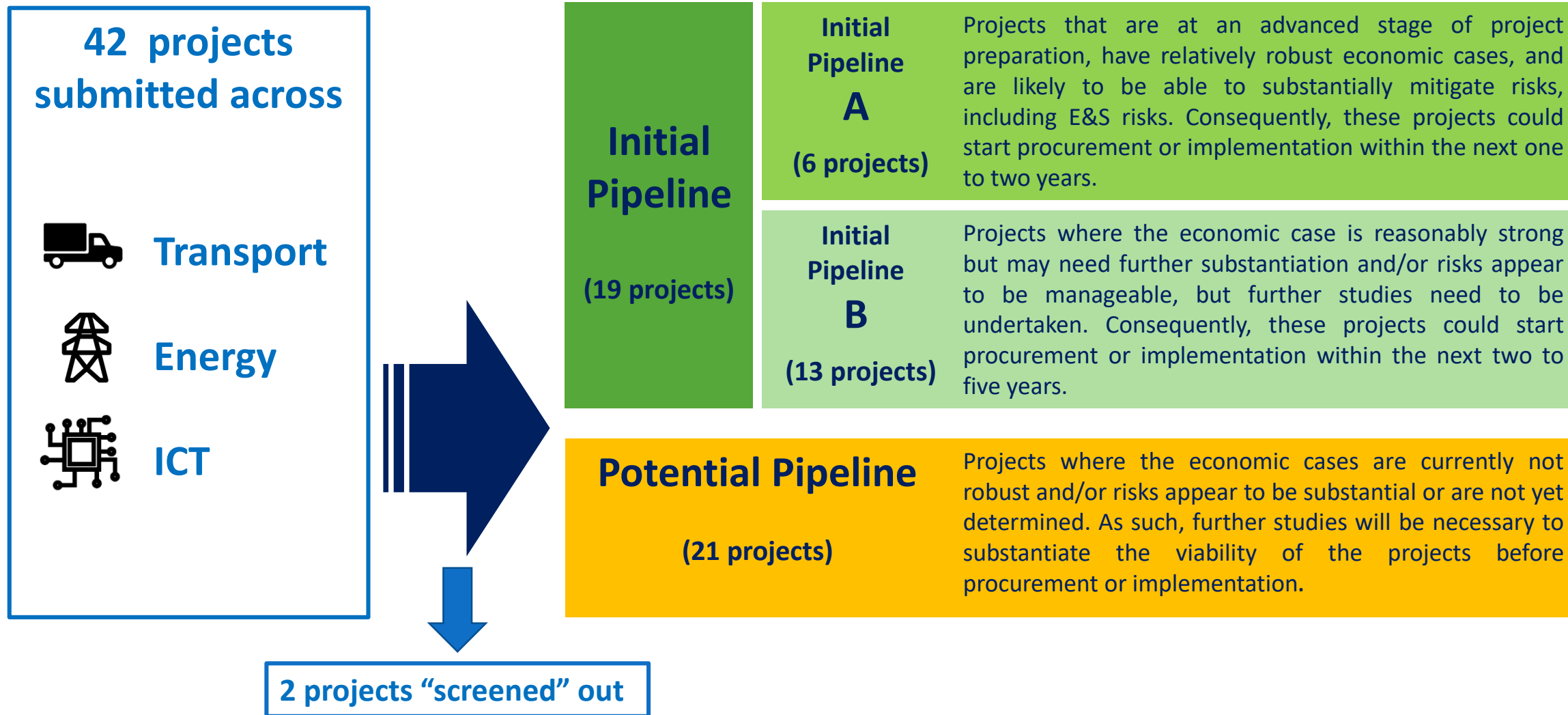


4. Financial Viability (19%): assesses the extent to which the project is affordable to the government and/or end users, the level of interest shown by any potential funders/investors and whether it is the intention of the contracting agency to competitively procure the project.



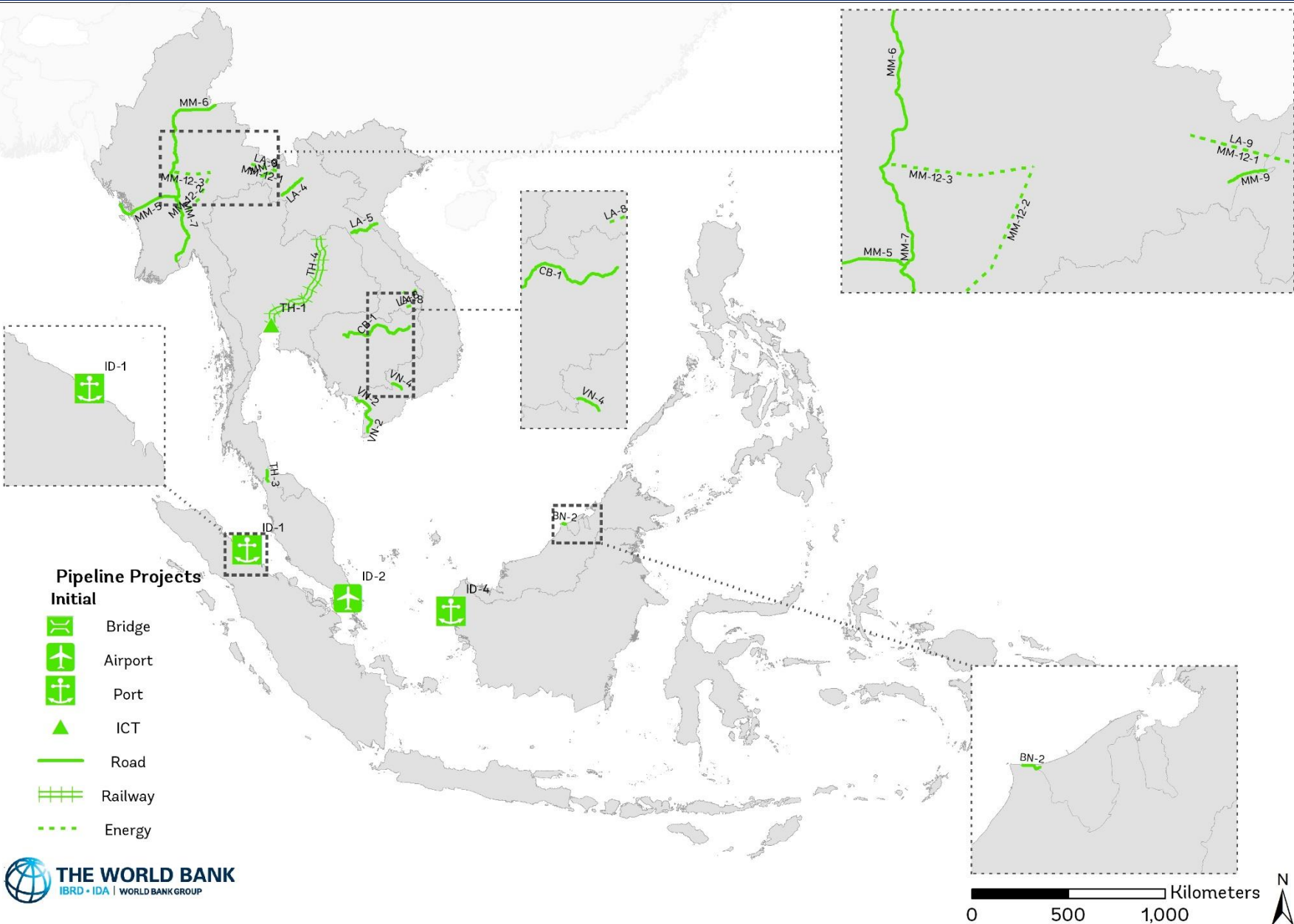
5. Implementation risks (6%): assesses the enabling environment and ability of the contracting agency to support the project, based on information provided by AMS and other sources.

Identifying the Initial and Potential Pipelines





The Initial Pipeline

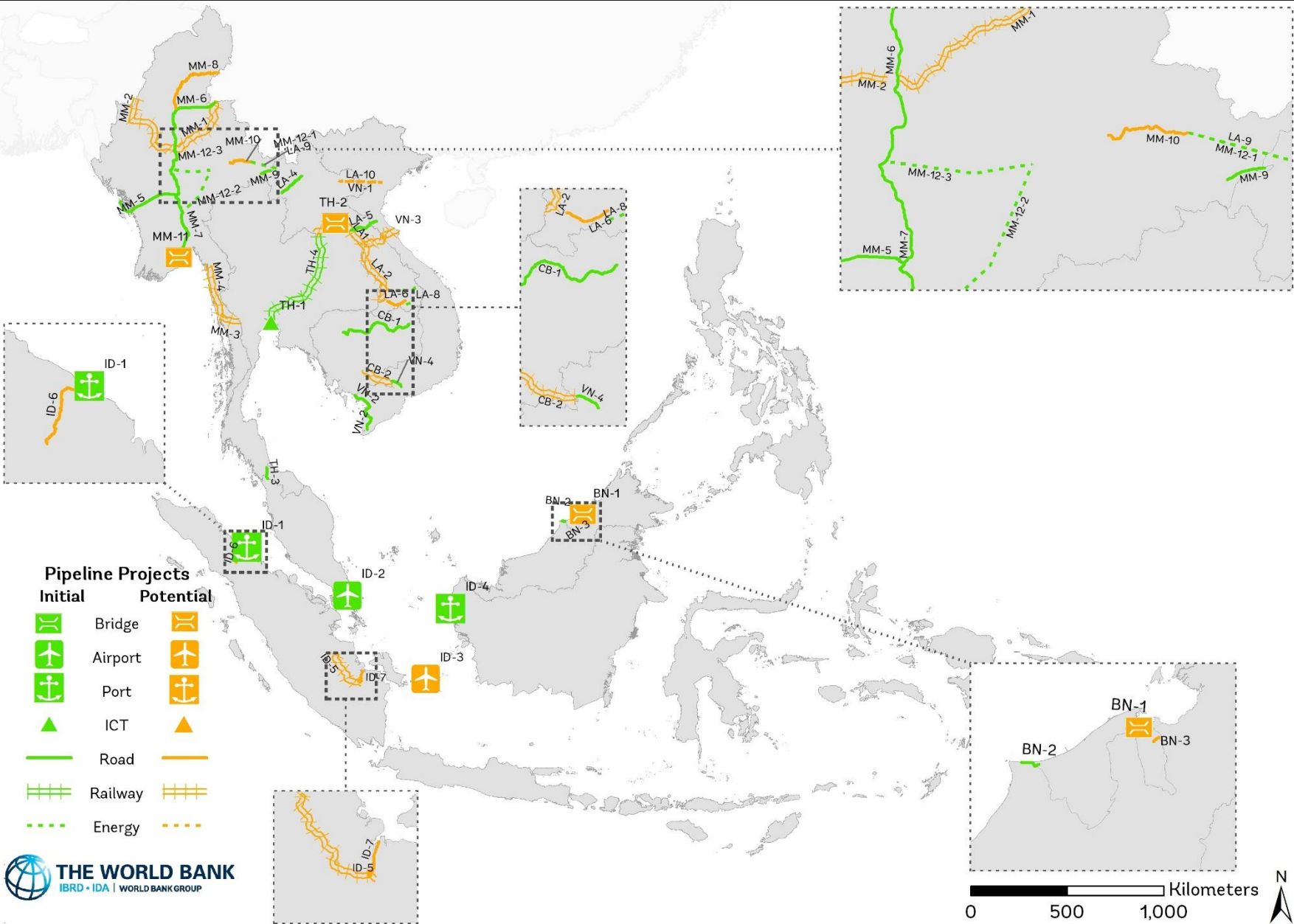


Initial Pipeline

BN-2	Jalan Rasau, Kuala-Belait District upgrading roadwork from single lane to dua carriageways
CB-1	Siem Reap to Rattanakiri National Roads Upgrading
ID-1	Kuala Tanjung International Hub Port and Industrial Estates
ID-2	Expansion of Passenger Terminal Hang Nadim International Airport (Batam)
ID-4	Development of Kijing Port
LA-4	Upgrading National Road No. 2W on the Asian Highway (AH13)
LA-5	Upgrading National Road No. 8 on the Asian Highway (AH15)
LA-8	Lao PDR-Viet Nam Power Transmission Line
LA-9	230 kV M Long - Kengtaung Power Transmission Line
MM-12	
MM-5	NPT-Kyaukphyu Expressway
MM-6	Muse-Tigyaing-Mandalay Expressway
MM-7	Yangon-Mandalay Expressway Improvement
MM-9	Tarlay-Phasho-Kyainglat Road Upgrading
TH-1	ASEAN Digital Hub
TH-3	Hat Yai-Sadao Motorway
TH-4	Bangkok-Nong Khai HSR Development for Regional Connectivity
VN-2	Southern Coastal Corridor Project, Phase 2
VN-3	HCMC-Moc Bai Expressway



The Potential Pipeline

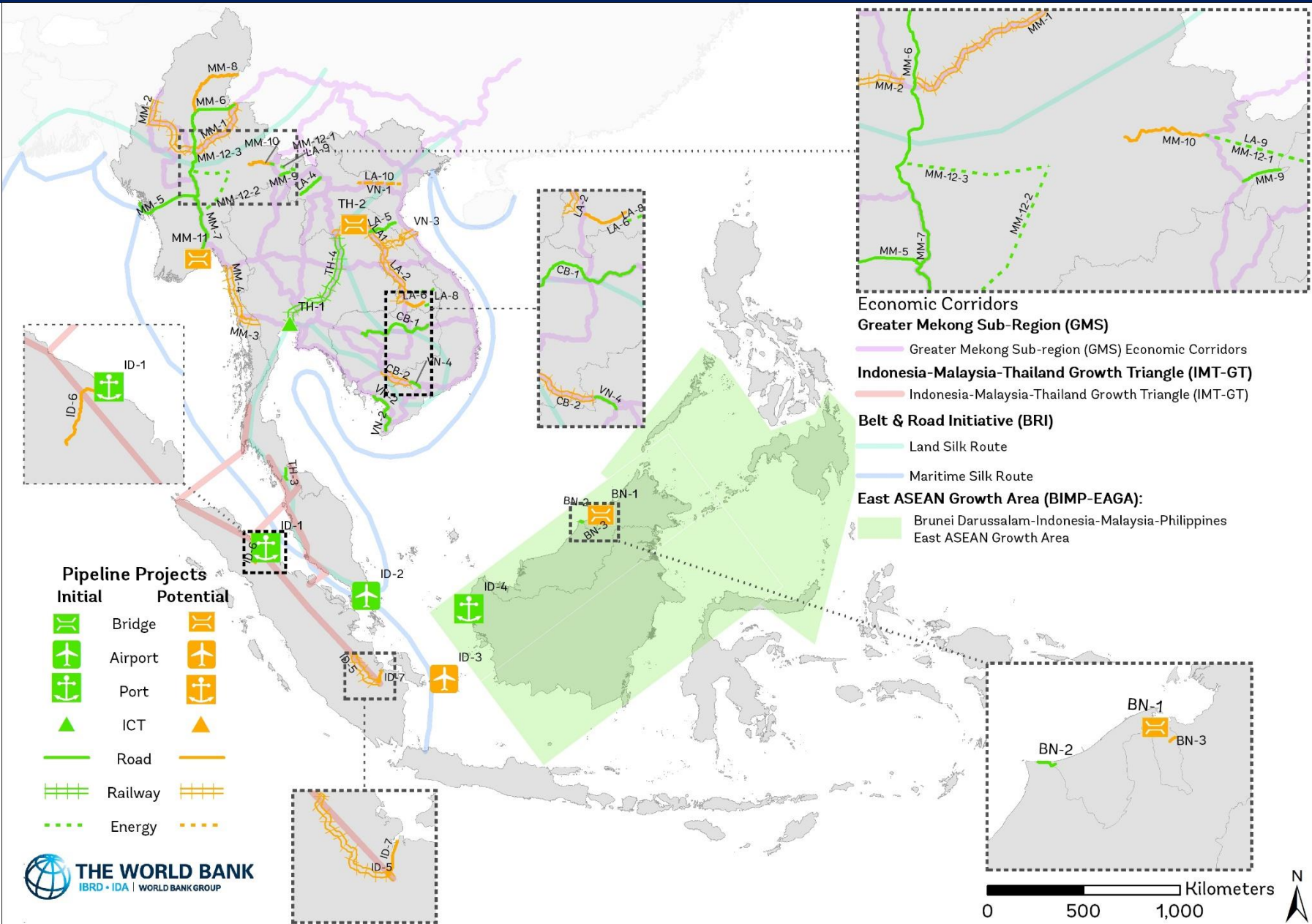


Potential Pipeline

BN-1	Brunei Temburong Bridge Project (Mentiri Tunnels and Viaducts)
BN-3	Jalan Labu, Temburong District Upgrading roadwork from single lane to Dual-Carriageways
CB-2	Phnom Penh to Bavet Railway (HCMC)
ID-3	Development of H.A.S. Hanandjoedin Airport, Tanjung Pandan, Bangka Belitung Province
ID-5	Trans Sumatera Railway: Jambi-Betung-Palembang
ID-6	Trans - Sumatera Toll Roads: Kuala Tanjung - Tebing Tinggi - Parapat
ID-7	Trans-Sumatera Toll Roads: Palembang-Tanjung Api-Api
LA-1	Vientiane – Mu Gia - Vung Ang Railway project
VN-3	
LA-2	Thakhek-Savannakhet-Pakse-Vang tao Railway
LA-6	Upgrading National Road No. 18A on the ASIAN Highway (AH123)
LA-10	Lao PDR-Viet Nam (Xam Neua-Nha Quan) 500 kV Power Transmission Line
VN-1	
MM-1	Muse-Mandalay Railway
MM-2	Tamu Kalay-Mandalay Railway
MM-3	Dawei to Hitki Railway
MM-4	Mawlamyine-Ye-Dawei Railway Upgrade
MM-8	Kan Pai Ti-Myitkyina-Tigyaing Expressway
MM-10	Takaw-Kyaington Section on Asian Highway Number 2 road upgrading
MM-11	New Hpa-An Bridge
TH-2	The 5th Thai-Lao Friendship Bridge at Bungkan-Bolikhamxay

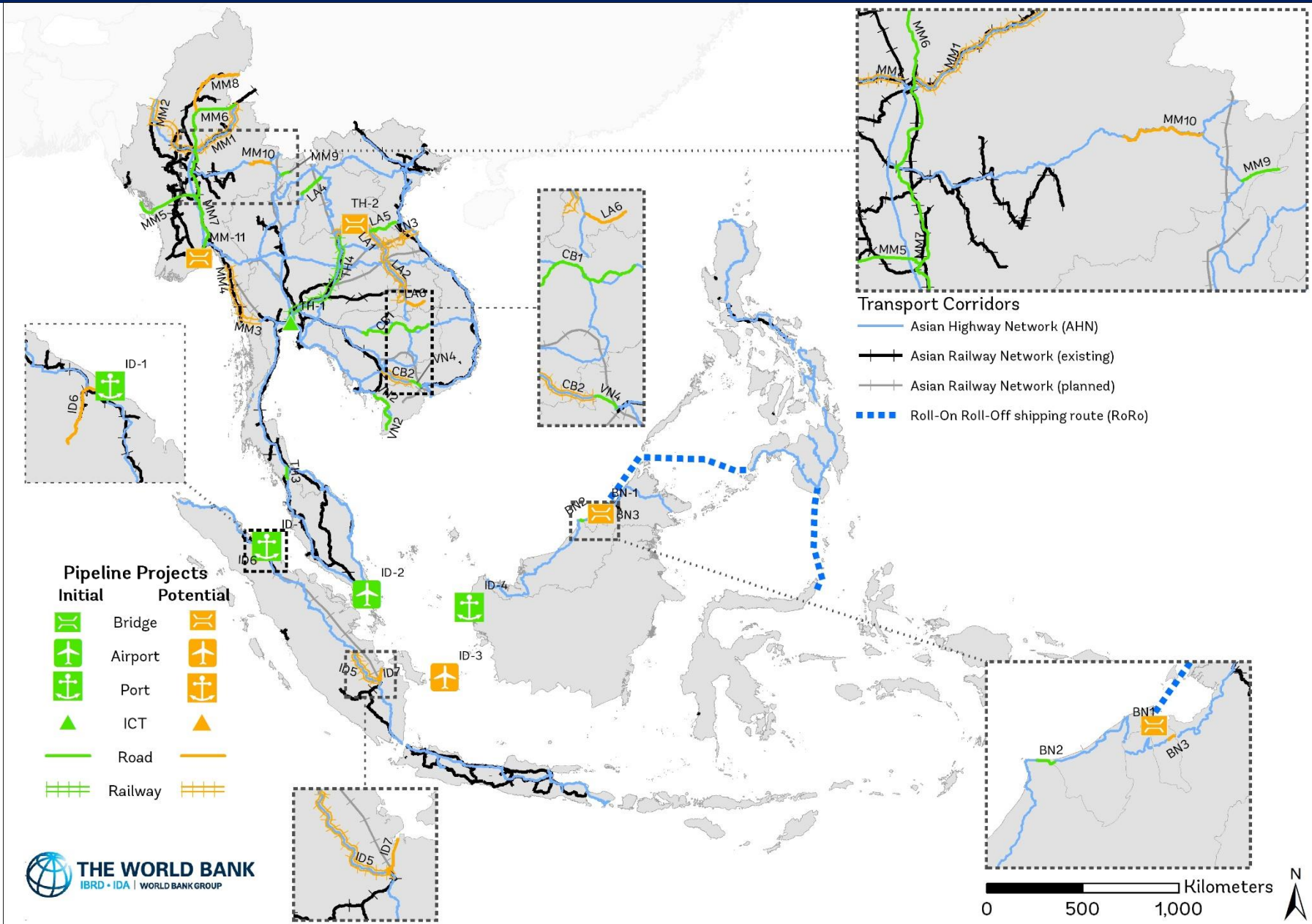


Pipelines Complement Existing Economic Corridors



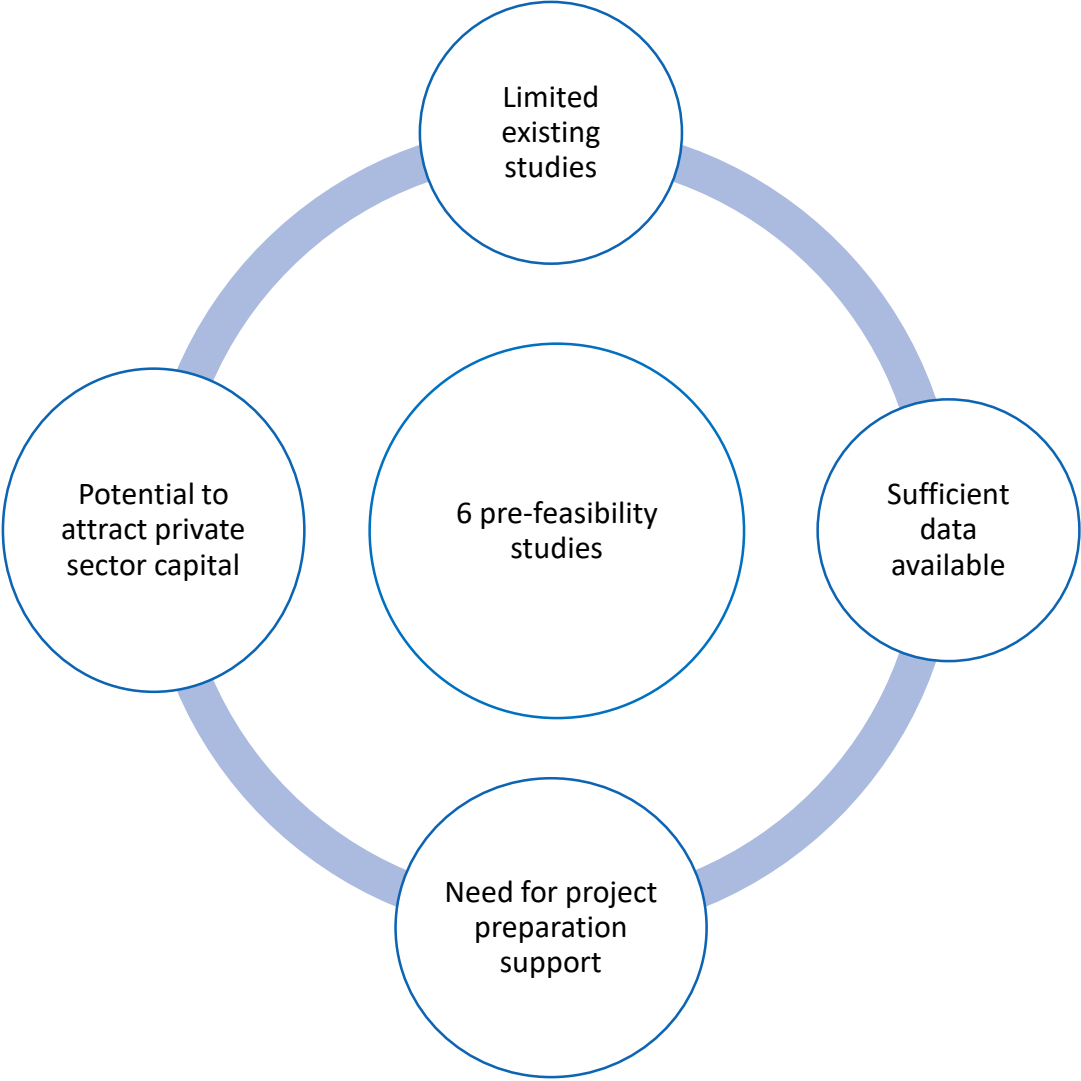


.....As well as Existing Transit Corridors





Criteria for Pre-FS



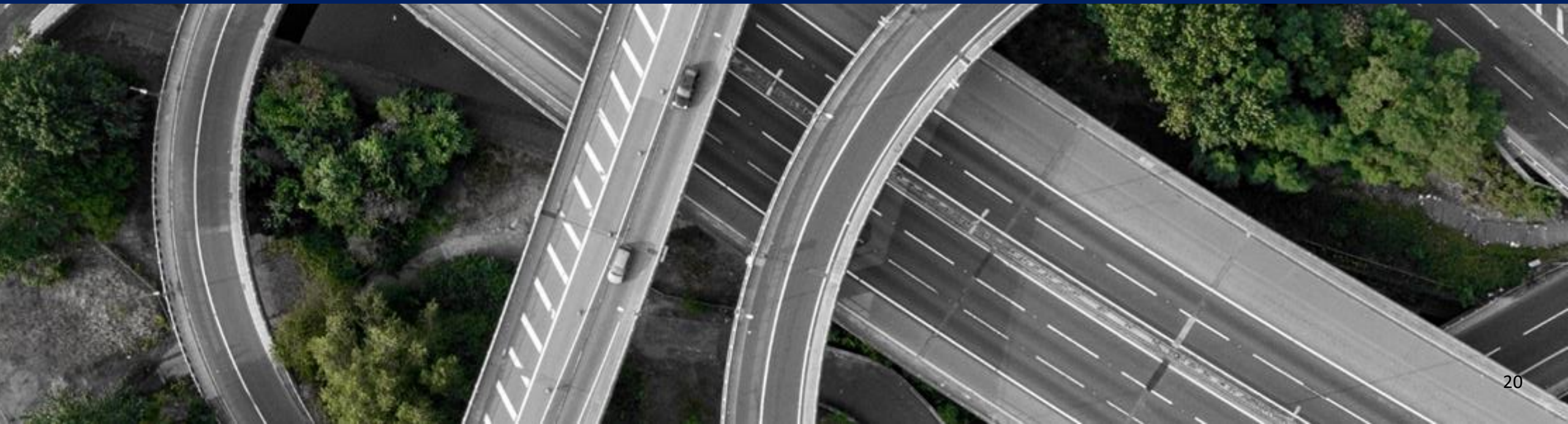


Key Policy Considerations When Developing the Projects in the Pipeline

- ✓ Undertake early E&S consultations and impact assessments
- ✓ Mitigate infrastructure redundancy risk
- ✓ Consider interdependent projects
- ✓ Monitor debt sustainability
- ✓ Promote transparency and competitive procurement
- ✓ Strengthen implementing capacity
- ✓ Carefully assess benefits of bi-laterally funded/financed Projects



Part III: Initial Pipeline Projects





Brunei: Widening of Jalan Rasau into Dual Carriageway

- Widening of approximately 19 km of the road which connects Malaysia and Brunei Darussalam and leads to the busiest land crossing in Brunei Darussalam
- Part of the Pan-Borneo Highway (AH150)
- The project responds to the need to cater to traffic volumes arising from future development in the area by reducing travel time and border crossing times

Strengths

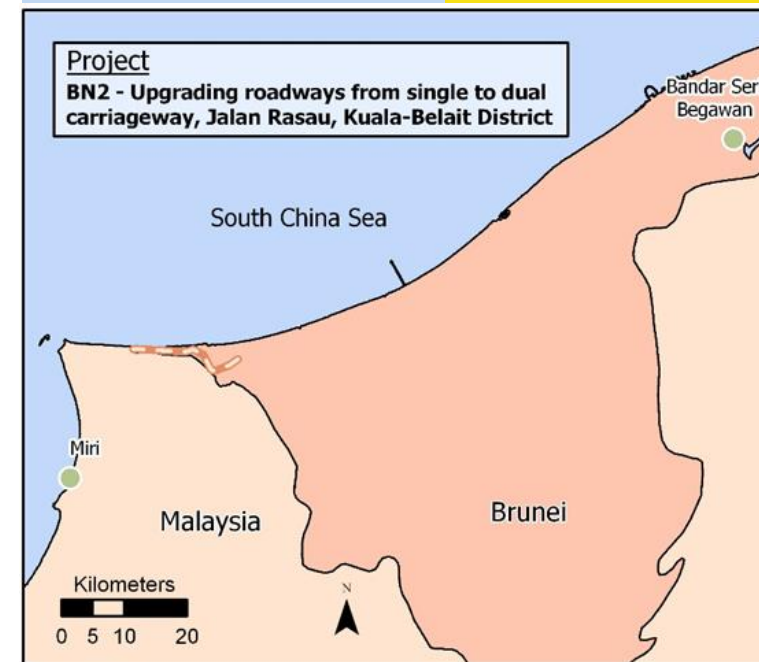
- ✓ Connectivity impact
- ✓ Current congestion and high demand
- ✓ Land needed already owned by the government
- ✓ Could be a pioneer PPP project in Brunei

Weaknesses

- ✓ May require moving an existing gas pipeline which will increase costs
- ✓ Potential E&S impacts related to moving the gas pipeline

Brownfield Road

Est. Investment size:
US\$45 million



Next steps

- Further studies to determine whether the relocation of the gas pipeline is required
- Assessing alternative financing and procurement options (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place



Cambodia: Siem Reap to Rattanakiri National Road Upgrading (Pre-FS)

- Rehabilitation and improvement of the existing 390 km Northern Corridor between Siem Reap and Rattanakiri
- Part of the Asian Highway Network (AH21)
- Route lies on the GMS Southern East-West Corridor (key connectivity route linking Thailand with Viet Nam via Cambodia) and the project is included in the GMS Reference Investment Framework 2022

Strengths

- ✓ Connectivity impact
- ✓ Economic benefits (tourism contribution)
- ✓ Improve accessibility in the Northern region of Cambodia (one of country's poorest)

Weaknesses

- ✓ Early stages of project preparation
- ✓ Environmental and Social risks to be mitigated (especially cultural heritage and biodiversity)

Next steps

- Pre-FS under way
- Assessing alternative financing and procurement options (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Brownfield Road

Est. Investment size:
US\$450 million





Indonesia: Kuala Tanjung International Hub Port and Industrial Estate Phase II

- Phase 2 of the Kuala Tanjung International Hub aims to develop a 56 ha SEZ, breakwater of 50 m width, and a dry bulk terminal with a capacity of 13 million tons
- Kuala Tanjung deep-water port aims to become the international gateway of the Western part of Indonesia, in particular for trade exports in Sumatera
- The port falls within the Indonesia-Malaysia Thailand Growth Triangle (IMT-GT) economic area

Strengths

- ✓ Connectivity Impact
- ✓ Potential economic benefits
- ✓ Priority project for Indonesia with high political commitment

Weaknesses

- ✓ May require government funding for financial viability
- ✓ Environmental and Social impacts for dredging and land acquisition
- ✓ Competition with nearby ports

Next steps

- Review FS demand assumption and level of public funding required for financial viability, accounting for competition of nearby ports
- Sound market appetite for Phase 2 and consideration of “right-sizing” the project
- Ensure a sound E&S management and mitigation measures for environmental and social risks identified in the ESIA (currently under way) and preparation of cumulative impact assessment

Greenfield Port

Est. Investment size:
US\$150 million





Indonesia: Expansion of Passenger Terminal Hang Nadim International Airport

- Expansion of an existing international airport in the industrial and tourist island of Batam including the refurbishment of terminal 1, the development of a new passenger terminal, and the expansions of the apron and taxiway
- The airport's traffic flows are exceeding its current capacity and its expansion would allow the opening of new international routes to regional destinations
- It will be offered as a 25-year build-operate-transfer (BOT) to a private consortium through a competitive tender

Strengths

- ✓ Improved capacity with regional connectivity potential
- ✓ Competitive PPP structure
- ✓ Land already acquired and no significant E&S risks

Weaknesses

- ✓ Requirement to have a majority local operator
- ✓ Private sector appetite depends on project risk allocation

Next steps

- Pre-qualification stage for the project launched
- Careful consideration of issues that could hinder market appetite and competition, such as risk allocation, competing airports and regulatory restrictions on foreign participation

Brownfield Airport

Est. Investment size:
US\$260 million





Indonesia: Development of Kijing Port

- Development of a deep-water international port project in West Kalimantan with capacity of 500,000 TEUs of containers and 250,000 tons of multipurpose products during the initial phase, with potential to expand in subsequent Phase 1
- The Kijing Port aims to become the international gateway for Indonesia adjacent to the South China Sea and it lies within the BIMP-EAGA Economic Area
- The current Pontianak Port located in West Kalimantan has high cargo traffic but is facing limitations with respect to channel depth and land for further development

Strengths

- ✓ Improving regional shipping routes
- ✓ Positive economic benefits and financial viability
- ✓ Part of GOI's National strategic projects

Weaknesses

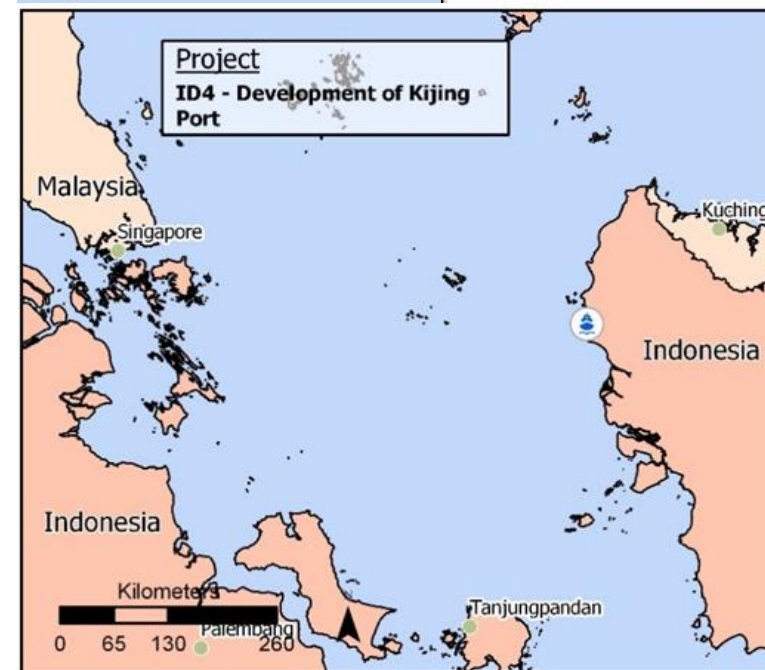
- ✓ Uncertainties in long-term demand forecasts and on tariffs
- ✓ Low hinterland connectivity to the port
- ✓ Land acquisition, resettlement and access to be resolved

Next steps

- Due diligence assessment on demand (including plans for SEZ and refinery), and tariff mechanisms
- Ensure that a detailed ESIA is carried out as part of the due diligence and effective mitigation measures are in place, particularly for land acquisition, resettlement and access
- Pelindo 2 will need to design an effective and viable commercial arrangement with the private investors

Greenfield Port

Est. Investment size:
US\$295 million





Lao PDR: Upgrading National Road No. 2W on the Asian Highway (Pre-FS)

- Upgrade of 151 km of National Road 2W (NR2W) in Oudomxay Province by applying ASEAN Highway Class II standard, adding extra lanes, and reconstructing bridges
- This road is part of the AHN (AH13) but its current conditions are not meeting ASEAN standards (included in MPAC 2025): the upgrade will improve travel quality and safety
- NR2W and NR2E constitute a west-east corridor connecting Thailand with Viet Nam and crossing the city of Xai, capital of the Oudomxay Province, which is one of the main stations along the Lao-China railway (currently under construction)

Strengths

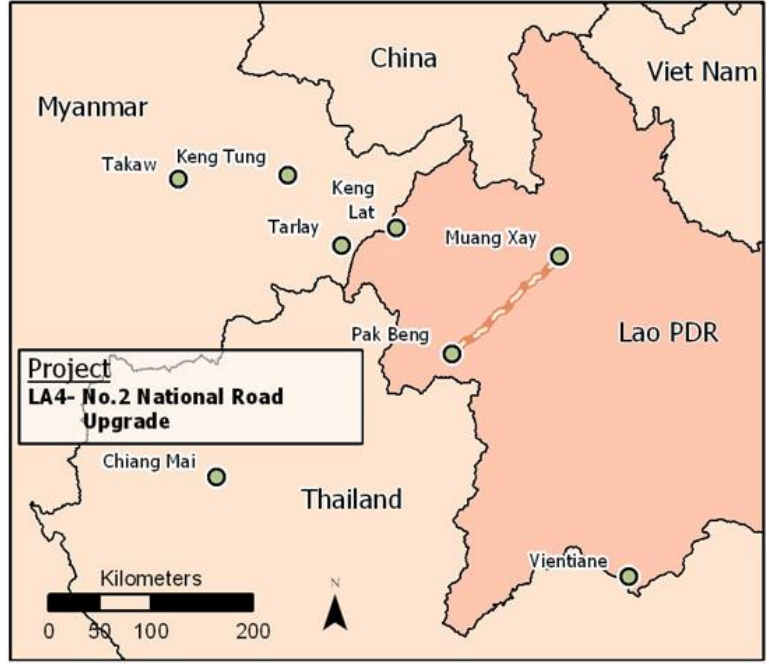
- ✓ Regional connectivity impact
- ✓ Socio-economic benefits
- ✓ Low expected environmental and social risks
- ✓ Commitment and political support from GoL and Provincial Authorities

Weaknesses

- ✓ Uncertainties on traffic volumes
- ✓ Financial challenges of sustaining road maintenance given fiscal constraints and limitations in the ability to introduce tolls

Brownfield Road

Est. Investment size:
US\$106 million



Next steps

- Pre-FS under way, further detailed technical studies will be required
- Verify traffic demand, ensuring financial and fiscal sustainability of road maintenance, assessing alternative financing and procurement options (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place



Lao PDR: Upgrading National Road No. 8 on the Asian Highway (AH15)

- Upgrade of National Road 8 (NR8) in Bolikhamxay Province by applying ASEAN Highway Class II standard, construction of a tunnel, and reconstructing bridges
- Part of the AHN (AH15): the upgrade will allow to meet ASEAN standards (as per MPAC 2025) and by connecting to NR13 (recently upgraded) it will provide the shortest route between the capital Vientiane and the Viet Nam border (with potential to be integrated with the planned Vientiane-Hanoi Expressway)
- Project included in the GMS Reference Investment Framework 2022

Strengths

- ✓ Regional connectivity impact
- ✓ Socio-economic benefits
- ✓ Advanced project preparation (FS and preliminary E&S screening) and political commitment from GoL
- ✓ Preliminary interest expressed from potential donors

Weaknesses

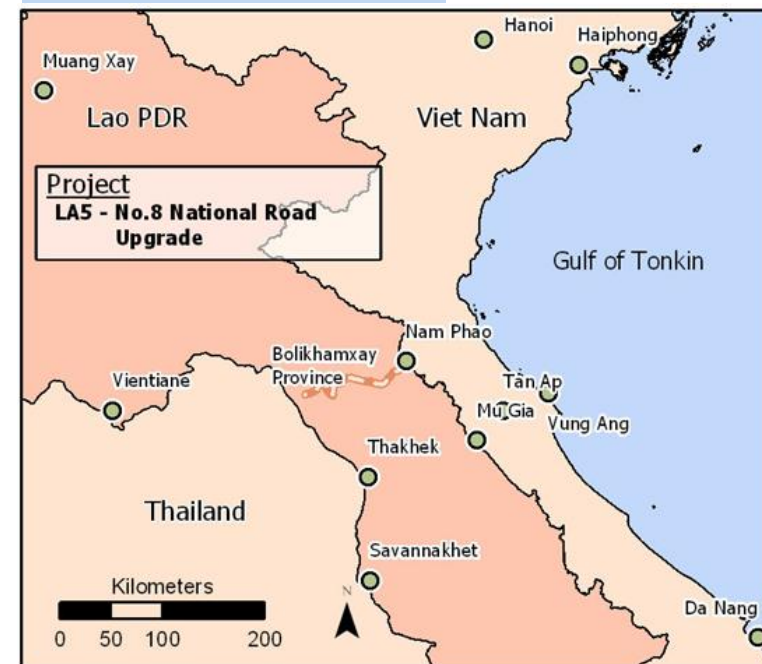
- ✓ Potential traffic growth depends on connectivity with existing and planned transport networks
- ✓ Financial challenges to sustaining road maintenance

Next steps

- Carefully assessing technical feasibility and potential fiscal liabilities of a proposed PPP solution as part of assessing financing and procurement options (Financing options analysis under way)
- Sound out market appetite for potential donors to co-finance the project, investors, developers and operators
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Brownfield Road

Est. Investment size:
US\$196.2 million





Lao PDR: Lao PDR - Viet Nam Interconnector and Transmission Line (South)

- Potential greenfield (or mix of greenfield-brownfield) power interconnection and cross-border transmission line aimed at exporting power from Lao PDR to Viet Nam. Currently multiple alternatives and configurations are under consideration involving local IPPs, MEM, EDL, World Bank, IFC, and private foreign energy companies
- The project has the potential to enhance power trade in the region and optimize the use of renewable energy (hydropower) by meeting Viet Nam's needs for clean power alternatives to coal
- Project included in the GMS Reference Investment Framework 2022

Strengths

- ✓ Enhancing regional power integration
- ✓ Mutual socio-economic benefits for Lao PDRs and Viet Nam
- ✓ Positive climate impact in terms of GHG reduction

Weaknesses

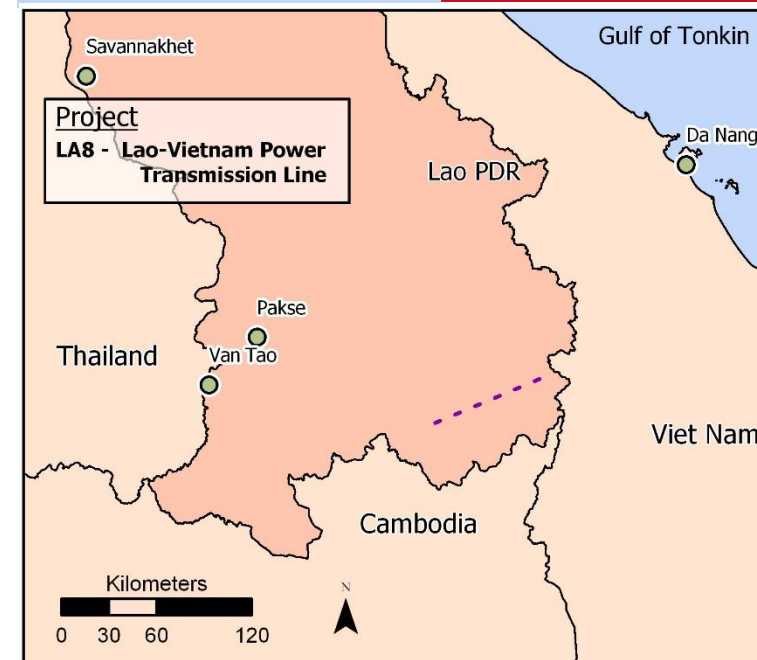
- ✓ Pending commercial negotiations
- ✓ Uncertainties on the scale and configuration of the project
- ✓ Alternative schemes being considered require to compare costs and risks

Next steps

- Multiple Pre-FSs and FS currently under way to study different technical and business alternatives (B2G and G2G)
- Compare alternative options and assess what is the most suitable option to benefit both countries
- Finalizing PPA negotiations on electricity tariffs and technical agreement on common standards
- Implement a robust ESMP to manage the environmental and social risks identified in the ESIA

Greenfield Power Transmission

Est. Investment size:
[under study]





Lao PDR/Myanmar: Lao PDR-Myanmar Interconnection Project

- Power interconnection and minimum 230 kV transmission line that will connect Lao PDR with Shan state, Myanmar
- The project would allow Lao PDR (abundant in hydropower supply) to export power to meet Myanmar's needs
- Enhance power trade in the region with the potential, in the long-term, of full-system to system power integration in the ASEAN region

Strengths

- ✓ Enhancing regional power integration
- ✓ Socio-economic benefits
- ✓ Positive climate impact in terms of GHG reduction
- ✓ Bilateral interest (MoU signed)

Weaknesses

- ✓ Technical challenges due to terrain and socio-environmental risks
- ✓ Dependency on associated transmission lines and IPP
- ✓ Commercial negotiations at early stage with no prior power exchange

Next steps

- Pre-FS under way by ADB to consider alignment and technical options for the benefit of both countries
- Finalize PPA negotiations on electricity tariffs and technical agreement on common standards
- Ensure that a detailed ESIA is carried and effective mitigation measures are in place

Greenfield Power Transmission

Est. Investment size:
US\$130 million





Myanmar: Nay Pyi Taw-Kyaukpyu Expressway (Pre-FS)

- Four-lane 256 km greenfield expressway between the capital Nay Pyi Taw (NPT) and Kyaukpyu (where a deep-sea port and industrial zone is currently under development)
- The road segment is part of Kyaukpyu - Muse/Ruili Corridor, and it is included in the GMS Reference Investment Framework 2022
- The project will connect the deep-sea port to China and is part of the Myanmar- China Economic Corridor

Strengths

- ✓ Enhancing connectivity and trade
- ✓ Economic benefits
- ✓ Potential for PPP structure

Weaknesses

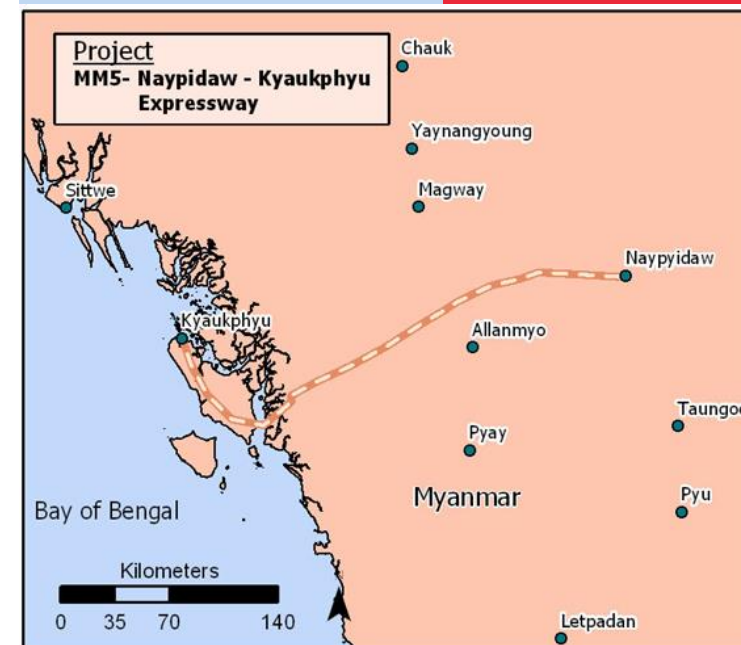
- ✓ Dependency on the successful development of Kyaukpyu port
- ✓ Environmental and Social risks

Next steps

- FS under way by China Harbor Engineering Company along with a financing options analysis in parallel
- Ensure that a detailed ESIA is carried out as part of the due diligence and effective mitigation measures are in place
- Ensure that procurement is done on a competitive basis to maximize the benefits for the country

Greenfield Road

Est. Investment size:
US\$510 million





Myanmar: Muse-Tigyaing-Mandalay Expressway (Pre-FS)

- Greenfield road from Mandalay to Tigyaing (approx 255 km) and from Tigyaing to Muse (188 km)
- This road will provide an alternative to the existing tolled highway which already connects Mandalay to Muse (NH3) and is very congested
- Connecting the Chinese border (Muse) with Myanmar's second largest economic center, this project is part of the Myanmar- China Economic Corridor

Strengths

- ✓ Enhancing connectivity and trade
- ✓ Economic benefits
- ✓ Contribute to the upgrade of the national road network
- ✓ Potential for PPP structure

Weaknesses

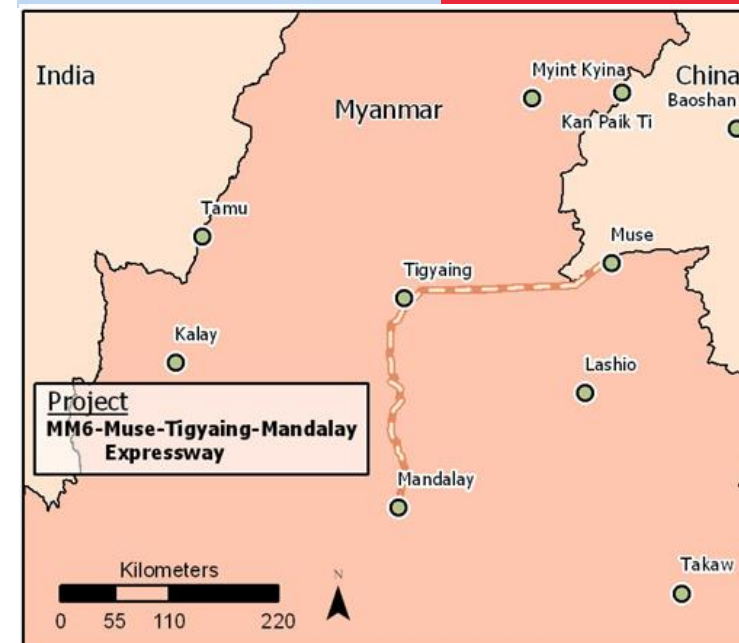
- ✓ Risk of infrastructure redundancy
- ✓ Competing demand with other routes and modes of transport may affect financial viability
- ✓ Environmental and Social risks

Next steps

- FS underway by China Harbor Engineering Company, along with parallel financing options analysis
- Ensure that a detailed ESIA is carried out as part of the due diligence and effective mitigation measures are in place
- Ensure that procurement is done on a competitive basis to maximize the benefits for the country

Greenfield Road

Est. Investment size:
US\$820 million





Myanmar: Yangon-Mandalay Expressway Improvement

- Upgrading of the existing four-lane 580 km expressway between Yangon and Mandalay, by improving the parameters to international standards and alignment
- This project will allow trucks to use this expressway, decreasing journey times and improving safety
- Key national economic corridor connecting Myanmar's three main commercial and political centers (Yangon, NPT, and Mandalay)

Strengths

- ✓ Enhancing connectivity and trade
- ✓ Socio-economic benefits
- ✓ Increased financial revenues from tolls
- ✓ Contribute to the upgrade of the national road network

Weaknesses

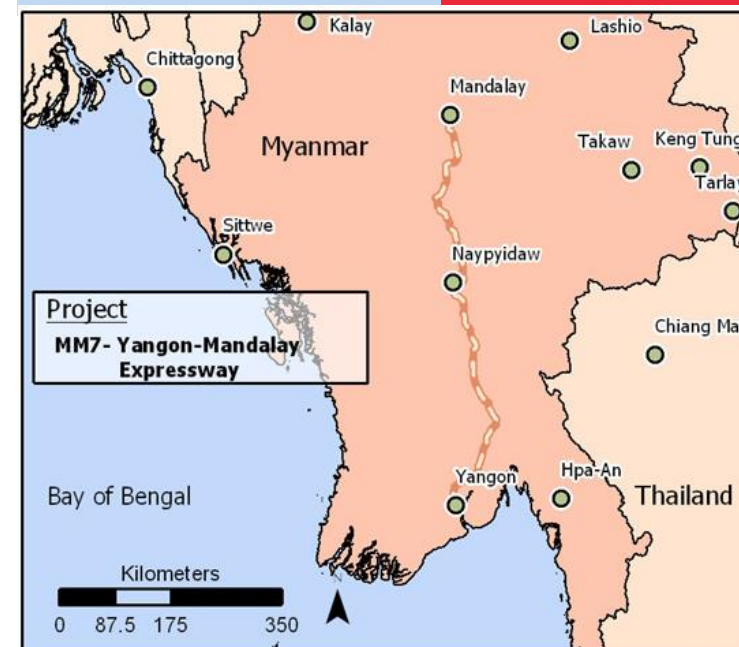
- ✓ High investment costs
- ✓ Uncertain viability of the proposed PPP solution

Next steps

- FS under way by KOICA, first 65 km being rehabilitated by ADB
- Ensure that a detailed ESIA is carried out as part of the due diligence and effective mitigation measures are in place
- Verify traffic demand to ascertain financial viability of the PPP solution (Financing options analysis under way)

Brownfield Road

Est. Investment size:
US\$1,182 million





Myanmar: Upgrading Tarlay-Phasho-Kyainglat Road (Pre-FS)

- Upgrading of the existing 56 km road to ASEAN Class III standard with widening of curved sections, barriers and retaining walls, as well as improving drainage system
- This is the only cross-border road between Myanmar and Lao PDR
- In Tarlay, the road connects to AH2 (AHN connecting Myanmar with Thailand)

Strengths

- ✓ Regional connectivity impact
- ✓ Socio-economic benefits
- ✓ Low expected environmental and social risks
- ✓ Potential candidate for IFI and IDA regional support

Weaknesses

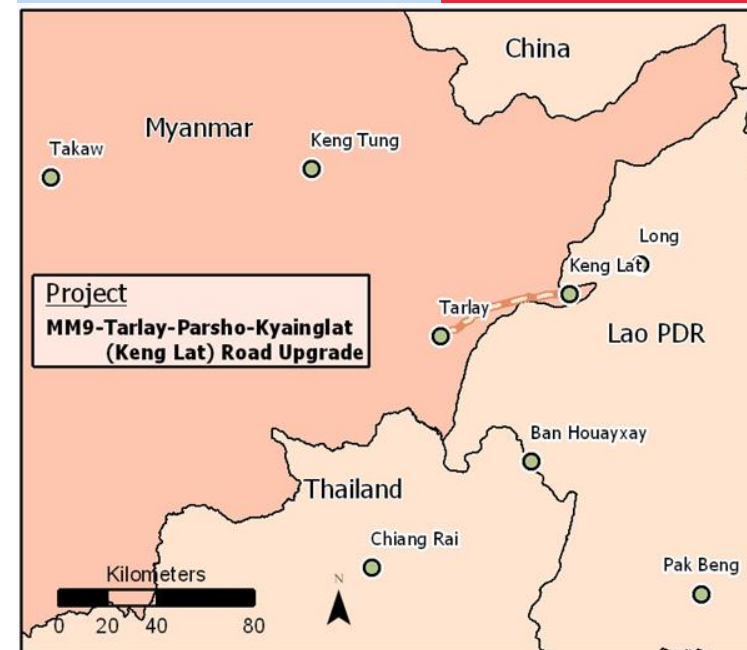
- ✓ Connectivity impact dependent on status of connecting transport networks and border facilities
- ✓ Uncertainties on traffic volumes
- ✓ Early stage project with limited information available

Next steps

- Pre-FS under way
- Verify traffic demand, ensuring socio-economic benefits and financial sustainability of road maintenance
- Discuss cross-border facilities with Laos
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Brownfield Road

Est. Investment size:
US\$67.6 million





Thailand: ASEAN Digital Hub

- Increasing existing international cable systems' bandwidth—1,770 Gbps.
- Constructing new cables connecting Thailand to countries in the Pacific Region with initial bandwidth of 200 Gbps to Malaysia, potentially Cambodia, Viet Nam, and HK
- This project aims to support Thailand's drive to becoming one of the digital hubs of the ASEAN region

Strengths

- ✓ Digital connectivity impact in the region
- ✓ Part of Thailand 4.0 strategy
- ✓ Opportunities for private sector investors and operators

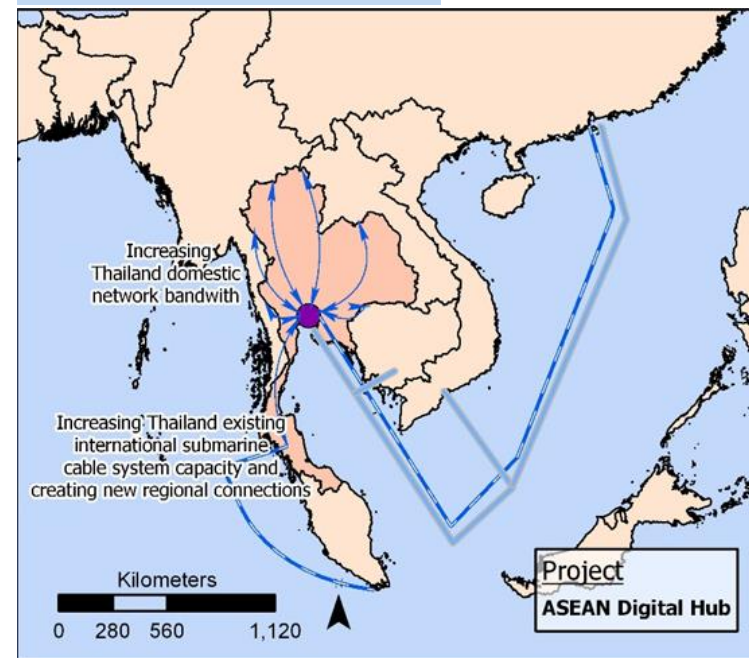
Weaknesses

- ✓ Complex regulatory environment
- ✓ Lack of data on demand projections
- ✓ Cross-border cooperation challenges

Next steps

- Conduct analysis on demand, project benefits and bandwidth pricing (Financing options analysis under way)
- Encourage competition in end services
- Clarify roles and responsibilities between CAT (the state telecom) and the Ministry of Digital Economy

**Mix Greenfield/
Brownfield ICT**
Est. Investment size:
US\$151 million





Thailand: Hat Yai-Sadao Intercity Motorway Project

- A new 70 km tolled motorway connecting the cities of Hat Yai, Thailand and Sadao, Malaysia (where a SEZ is planned)
- The new road will ease the traffic volume on National Road 4 (Hat Yai - Sadao) and facilitate the movement of goods and people to and from the Malaysia border
- Part of the ASEAN Highway Network (AHN)

Strengths

- ✓ Connectivity and trade impact at congested border
- ✓ Economic benefits
- ✓ Potential for PPP structure

Weaknesses

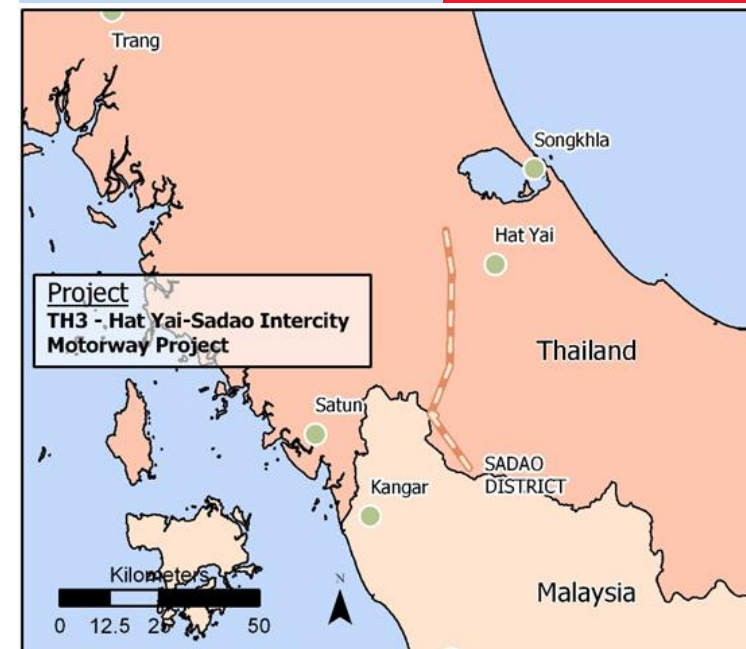
- ✓ Dependencies and uncertainties over traffic demand
- ✓ Significant land acquisition
- ✓ Border connection with Malaysia still to be determined

Next steps

- Verify traffic demand and toll revenues
- Market sounding to test the financial structure (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Greenfield Road

Est. Investment size:
US\$1,010 million





Thailand: Bangkok-Nong Khai HSR

- Construction of a 355 km double track High Speed Rail from Nakhon Ratchasima to Nong Khai (border with Lao PDR), of which 120 km elevated, and with five stations
- The project is Phase 2 of the broader HSR rail line connecting to Bangkok and is the remaining link
- The railway is planned to connect with the high speed railway line from Boten to Vientiane (Lao PDR) currently under construction

Strengths

- ✓ Regional connectivity impact
- ✓ Potential for transit-oriented development
- ✓ Integrated planning to minimize land acquisition

Weaknesses

- ✓ Large-size investment
- ✓ Dependencies on network integration
- ✓ Unclear demand if passenger only

Next steps

- Assess demand, fiscal implications, debt sustainability and budget constraints
- Evaluate different PPP options considering land value capture (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Greenfield Railway

Est. Investment size:
US\$5,600 million





Vietnam: Southern Coastal Corridor Project, Phase 2 (SCCP2)

- Two-lane road from Ha Tien (border with Cambodia) to Rach Gia, consisting in upgrading 5.8km of existing QL80 and building 89.88 km of new alignment until Rach Gia and Minh Luong, (including construction of a bridge, upgrading access roads (4.3 km) and expansion of cross-border facilities
- The project complete the Southern Coastal Corridor by connecting to the SCCP, Phase 1 and is included in the GMS Reference Investment Framework 2022

Strengths

- ✓ Connectivity impact
- ✓ Socio-economic benefits
- ✓ Advanced project preparation and support from Viet Nam government implementing agency (Cuu Long CIPM)

Weaknesses

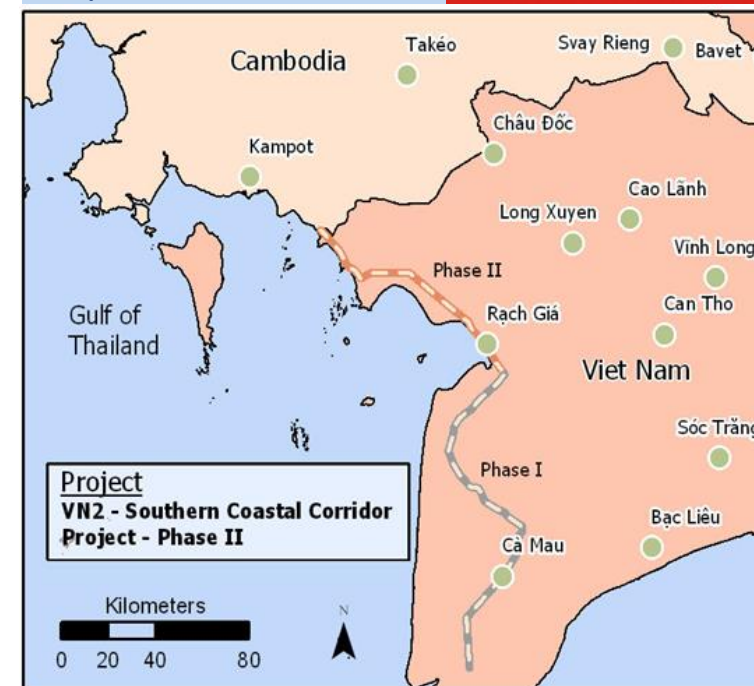
- ✓ Uncertainties on traffic demand
- ✓ Medium term budget not allocated
- ✓ Implementation risks and costs increasing with time

Next steps

- Review investment costs and update traffic demand forecasts
- Assess fiscal implications, debt sustainability and budget constraints
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Mix Greenfield/ Brownfield Road

Est. Investment size:
US\$326.01 million





Vietnam: Ho Chi Minh City (HCMC)-Moc Bai Expressway Project

- Four-lane expressway connecting Viet Nam's largest economic center (HCMC) with the Cambodia border in Tay Ninh Province
- The route runs along the Asian Highway Network (AHN) and it links with the planned Phnom Penh - Bavet Highway (connecting to Cambodia's capital)
- The new road will address bottlenecks along the existing National Road 22 (QL22) by shortening travel time between HCMC and Moc Bai border

Strengths

- ✓ Connectivity impact
- ✓ Economic and trade benefits
- ✓ Project preparation and support from Viet Nam government implementing agency (PMU2)

Weaknesses

- ✓ Uncertainties on route alignment and border connection
- ✓ Potential implementation risks for the proposed PPP solution

Next steps

- Finalize border connecting point and alignment
- Carefully assess potential PPP options, fiscal implications and risks (Financing options analysis under way)
- Ensure that a detailed ESIA is carried out and effective mitigation measures are in place

Greenfield Road

Est. Investment size:
Approx US\$500 million





Next Steps

Establishing methodology to develop Rolling Pipeline

Supporting ASEAN Member States to submit projects

Screening and scoring of submitted projects

Identifying Initial Pipeline

Pre-FS for selected projects

Financing Options Analysis for Initial Pipeline projects

Next steps under the current World Bank assignment:

- ✓ 6 Pre-FSs for selected projects in the Initial Pipeline
- ✓ 7 reviews of existing studies
- ✓ Financing options analysis for all projects in the Initial Pipeline
- ✓ Showcase projects to potential investors and market sounding

Potential areas for future cooperation

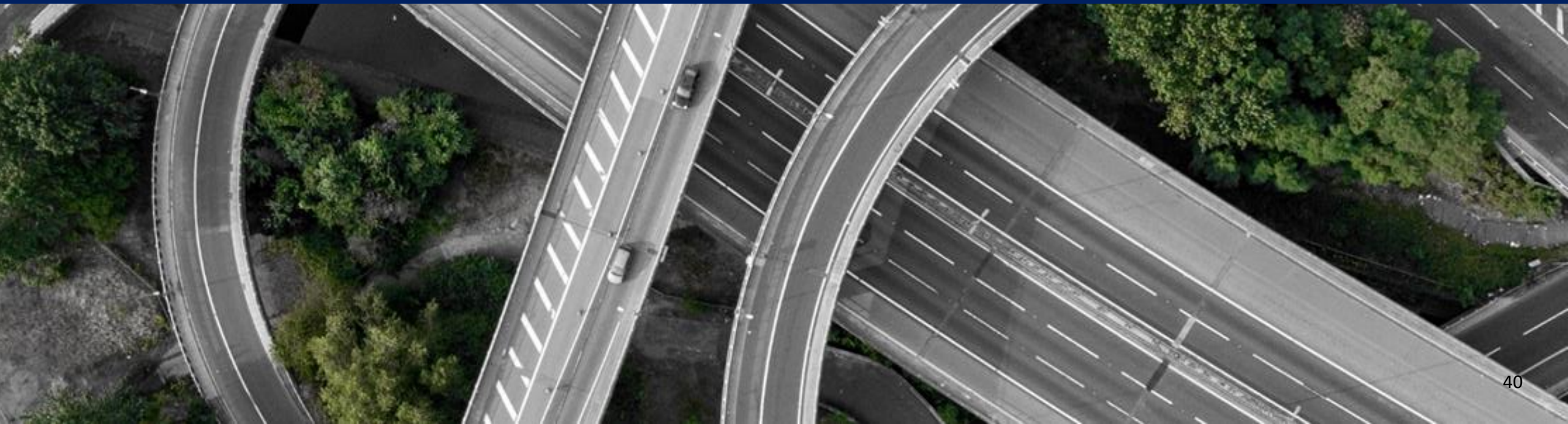
Capacity building for project development within AMS governments

Pooling resources into a regional project development facility

Strengthening synergies for co-financing



Part IV: Feedback and Discussion





Feedback and Discussion

- How would you suggest to better synergize the ASEAN Pipeline with other regional and sub-regional initiatives?
- What platforms and tools could facilitate cooperation among project owners, development partners, and potential investors?
- Are you already involved in the project preparation and/or funding of one or more of the Initial Pipeline projects?
- Do you have an interest in supporting the preparation/financing of any of the projects?

Thank You!

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