ENHANCING ASEAN CONNECTIVITY

Developing a Rolling Priority Pipeline of ASEAN Infrastructure Projects
A key objective of the Master Plan on ASEAN Connectivity (MPAC) 2025 is “to achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness, and a greater sense of community.”

Investment in physical infrastructure in the transport, energy, and information and communications technology (ICT) sectors will help to improve connectivity both within and between ASEAN Member States (AMS).

Due to budget constraints and competing demands for resources, there is not always sufficient investment in physical infrastructure in ASEAN. As a result, the quality of and access to infrastructure services across and between countries is varied. The bar chart shown right, measures access to electricity and percentage of paved roads across ASEAN, indicating the gaps that currently inhibit economic growth and productivity, poverty reduction, and resilience.

To help attract more public and private investments for infrastructure in ASEAN, MPAC 2025 recommended the establishment of “a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds.”

Introduction
A pipeline of well-structured and economically viable physical infrastructure projects that enhances the movement of people, services, goods, and innovations within ASEAN is critical to attracting public and private sector investments, thereby contributing to sustained economic growth of the region.

The Pipeline will be rolling, meaning that the projects in the Pipeline will not be static but will evolve over time, as new project proposals are submitted, and existing Pipeline projects are either implemented or removed from the Pipeline due to lack of progress or change in circumstances. In this way, the Pipeline is designed to be a long-term tool to help AMS assess and prioritise infrastructure projects that will have a regional impact.
As ASEAN does not have an existing process for identifying and prioritising infrastructure projects at the regional level, ASEAN has engaged the World Bank, with the support of the ASEAN-Australia Development Cooperation Program Phase II (AADCP II), to help develop the rolling priority pipeline of potential ASEAN infrastructure projects across the transport, energy, and ICT sectors (the Pipeline).

The Pipeline will contribute to ASEAN’s objective to improve access and increase connectivity in and among AMS by identifying and prioritising physical infrastructure projects that have regional economic impact.

The end result of the pipeline development process yields a list of projects that have been screened and prioritised, with procurement options identified and a financing assessment undertaken. It is anticipated that the process of developing the Pipeline will help AMS strengthen their own project development capacity in line with international best practices.
Growth in ASEAN container traffic is expected to increase exceeding growth in other regions.

Projected Growth TEU 2013-2030

<table>
<thead>
<tr>
<th>Region</th>
<th>2013</th>
<th>2030</th>
</tr>
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<tbody>
<tr>
<td>ASEAN</td>
<td>88.0</td>
<td>231.0</td>
</tr>
<tr>
<td>Africa</td>
<td>28.1</td>
<td>59.6</td>
</tr>
<tr>
<td>Western Europe</td>
<td>97.8</td>
<td>149.4</td>
</tr>
<tr>
<td>Middle East</td>
<td>36.7</td>
<td>50.0</td>
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</tbody>
</table>

Source: OECD/ITF 2017 Transport Outlook

ASEAN is one of the world’s fastest growing regions, driven by a global shift in economic balance towards Asia as productivity and trade in the region continue to grow. Infrastructure development must keep pace with such growth in order for the region to reach its full potential.

Enhanced connectivity promotes growth and productivity, and increases access to markets and opportunities to participate in global value chains.¹ In addition to economic impact, the development of robust networks connecting economic centres enhances the resilience and reliability of trade and industry systems in the region at a time when there are increasing instances of extreme climate-related events such as flooding and earthquakes.

Well-designed connectivity networks can also enhance socio-cultural integration among AMS, strengthen regional identity and support community-building.

¹ Global Infrastructure Connectivity Alliance, Why Connectivity Matters, www.gica.global
Projects proposed by AMS are shortlisted based on a comprehensive set of criteria that encourages positive impact while reducing risks and ensuring sustainability.

Such selection criteria are designed to prioritise projects that contribute to the development of missing links between cities and/or countries, have high economic and connectivity impact, and upgrade capacity and embed resilience to match expected demand across sectors (transport, energy, and ICT).

At the same time, factors such as political support, financial viability, social benefits or risks, and environmental impact are also considered in the assessment of the projects. The project selection process is described on the following page.
Projects for the Pipeline are proposed by the AMS using a standardised project proposal form.

Each project is then screened to ensure that it satisfies the following basic eligibility requirements.

Once a project passes the screening stage, it is then assessed and scored based on four criteria to determine the overall robustness of the project in terms of its impact and ability to attract funding and/or financing.

Projects that demonstrate the highest degrees of alignment with the criteria will be eligible for inclusion in the Pipeline.
To support the evaluation and scoring of the impacts of a specific project in a simple but objective manner, the World Bank is using analytical approaches based on geo-spatial and quantitative methods.
The connectivity impact of each project is measured by how it impacts the cost of trade in the economic corridor in which the project lies (See steps below).

This assessment prioritises investments that promote economies of scale and yield higher economic returns. Volumes of goods and passengers are assumed to be proportional to the economic output along a corridor.

1. Economic corridors or catchment areas are identified for each project.
2. The cost of trade on a given economic corridor is a product of the volume of trade and the per unit generalized cost of transportation.
3. As a proxy for volume of trade, GDP of a corridor is calculated within a 10 km buffer and spatially distributed using night lights data.
4. Generalized cost of transportation, which takes into account direct transport cost and value of time, is calculated for each corridor.
5. Using the GDP and generalized cost of transportation results, the cost of trade is calculated before and after the project is implemented to calculate the change in cost of trade.
6. Connectivity impact is measured as the change in the cost of trade per dollar of investment in the project.

Source: World Bank 2018

Spatial distribution of GDP based on night lights data in ASEAN
Projects in the Pipeline can be financed or funded through a variety of sources, including through public budgets, bilateral or overseas development assistance, the private sector, or a combination of the above (for example, private sector loans with a government or multilateral guarantee).

The World Bank notes that, to maximize finance for development² (“MFD”), projects capable of attracting private financing through the generation of appropriate returns should be brought to the market, thereby reserving limited public funds for projects that are economically viable but less financially attractive.

**Sources of Funding & Financing**

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**Evaluating Environmental and Social Impacts**

The projects are screened to assess potential environmental & social (E&S) risks and impact based on available project-related information.

This will be done in two stages. First, the preferred alignment/location of the project is plotted on satellite imagery based on available data.

Subsequently, these plots will be reviewed against E&S databases to determine potential E&S risks and impact, such as the expected scale of any land acquisition and related resettlement, the presence/absence of protected areas (or areas of potentially high biodiversity), and presence of tangible cultural heritage.

The process will also identify potential “red flags” that would be difficult for the project to mitigate or manage, such as negative impact on UNESCO World Heritage Sites.
AMS have submitted 42 potential projects for inclusion in the Pipeline, spanning the roads, rail, ports, airports, electricity and ICT sectors. The World Bank is screening and scoring the submitted projects with the objective of recommending a list of robust projects for the Pipeline. As it is likely that many of the projects selected for the Pipeline will be in the initial stages of development, further due diligence will need to be conducted through detailed studies and stakeholder engagements to determine the overall feasibility of a project before its implementation. It is anticipated that the initial Pipeline, including the pre-feasibility studies of some projects, will be unveiled by Q4 2019. Once unveiled, ASEAN, with the help of the World Bank and other partners, will raise the profile of the Pipeline to attract funding and financing support for the projects from a wide range of stakeholders including multilateral banks, bilateral institutions, donors, and the private sector.

About ASEAN

The Association of Southeast Asian Nations (ASEAN) was founded on 8 August 1967 in Bangkok with the signing of the ASEAN Declaration by Indonesia, Malaysia, Philippines, Singapore and Thailand. The ASEAN Declaration committed the signatory States to cooperate for the purpose of economic growth, social progress, cultural development, and regional peace and stability.


About the World Bank

The World Bank Group plays a key role in the global effort to end extreme poverty and boost shared prosperity. It consists of five institutions: The World Bank, including the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA); the International Finance Corporation (IFC); the Multilateral Investment Guarantee Agency (MIGA); and the International Centre for Settlement of Investment Disputes (ICSID). Working together in more than 100 countries, these institutions provide financing, advice, and other solutions that enable countries to address the most urgent challenges of development.

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