ASEAN Railway Connectivity: Current Status and Major Issues

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ASEAN Railway Connectivity

SUMMARY

1- ASEAN : Current Status

2- Missing Links and SKRL Projects

3- ASEAN Countries : Major Issues

4- Conclusion and Recommendations
1- ASEAN : Current Status
The main initiative being developed to facilitate rail communication in Asia is the Trans-Asian Railway (TAR), an integrated railway network comprising 117,500 km of line and serving 28 Asian countries. The project is promoted by UNESCAP.
**Missing links**

In the **TAR**, several **missing links** still need to be built and lines need to be upgraded (opportunities in OSJD corridors that go from Eastern Europe to China, Mongolia and Vietnam and ECO rail corridors that connect Turkey to Iran and Central Asia, as well as in the SKRL routes in ASEAN countries, between Thailand, Cambodia, Laos, Myanmar and Vietnam).

5 different **track gauges** are used in the railway lines: this creates the break of gauge issue: crossings – typically at international borders – where the track gauge changes.

The **electrification of the network** is another great option for development. Only about **one-third** of the lines are currently electrified.
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2- Missing Links and SKRL Projects
Missing links between GMS countries

- Myanmar - India
- Myanmar - China
- Lao PDR - China
- Thailand - Myanmar
- Thailand - Cambodia
- Cambodia - Viet Nam

Important Rail Projects

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### ANNEX I
CURRENT STATUS OF SINGAPORE-KUNMING RAIL LINK NETWORK (SKRL) PROJECT

<table>
<thead>
<tr>
<th>Country</th>
<th>Missing Sections/Route &amp; Spur Lines</th>
<th>Rail Length</th>
<th>Pre-Feasibility (Pre-FS) or Feasibility Study (FS) Status</th>
<th>Implementation Status</th>
<th>Planned Completion Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>Poipet (Thailand border) – Sisophon</td>
<td>-</td>
<td>28</td>
<td>Completed</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Phnom Penh – Loc Ninh (Viet Nam border)</td>
<td>32</td>
<td>254</td>
<td>Ongoing</td>
<td>Not Commenced (under negotiation for funding)</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Loc Ninh (Cambodia border) – Ho Chi Minh City</td>
<td>20</td>
<td>129</td>
<td>FS Completed</td>
<td>Not Commenced</td>
</tr>
<tr>
<td>Thailand</td>
<td>Aranyaprathet - Klongluk</td>
<td>-</td>
<td>6</td>
<td>FS Completed</td>
<td>The budget for the rehabilitation has been allocated and is now in the process of bidding for its contractor.</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>Vientiane-Thanhek*</td>
<td>-</td>
<td>330</td>
<td>FS Completed</td>
<td>Not Commenced</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>Thakhek-Mu Gia (Viet Nam border)*</td>
<td>-</td>
<td>136</td>
<td>FS Completed</td>
<td>Not Commenced</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Mu Gia (Lao PDR border) – Tan Ap*</td>
<td>-</td>
<td>53</td>
<td>Pre-FS Completed</td>
<td>Not Commenced</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Tan Ap – VungAng*</td>
<td>6</td>
<td>66</td>
<td>FS Ongoing</td>
<td>Not Commenced</td>
</tr>
</tbody>
</table>

*Spur Line
Source: SKRL Fact Sheet Summary
Two alternative routes to link Thailand with Myanmar are as follows:

1. via Namtok – Three Pagoda Pass – Thanbyuzayat and
2. Ban Kao (Kanchanaburi) – Dawei.

The two countries are still working whether the first or second option will benefit both countries as well as the regional level.
Master Plan on ASEAN Connectivity

Project Title

Completion of the Singapore Kunming Rail Link (SKRL) Missing Links

Project Description

The Singapore Kunming Rail Link (SKRL) is another flagship project for land transport infrastructure intended to link seven ASEAN Member States and China through Singapore–Malaysia–Thailand–Cambodia–Viet Nam–China (Kunming) and spur lines in Thailand–Myanmar and Thailand–Lao PDR. To complete the mainline SKRL and to demonstrate ASEAN’s resolve to complete this rail link, the following links need to be prioritised for construction:

(i) Thailand: Aranyaprathet – Klongluk, 6 km
(ii) Cambodia: Poipet – Sisophon, 48 km
(iii) Cambodia and Viet Nam: Phnom Penh – Snuol – Loc Ninh, 254 km
(iv) Viet Nam: Loc Ninh – Ho Chi Minh City, 129 km
Important delays have occurred.
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3- ASEAN Countries: Major Issues

CAMBODIA

LAOS

MALAYSIA (+ SINGAPORE)

MYANMAR

THAILAND

VIETNAM

ASEAN Level
CAMBODIA
Railway Rehabilitation Project

48km Missing Link from Sisophon to Poipet, Cambodia-Thai Border.
→ Rebuilding 48 km Missing Link, this section was completed in April 2012 for 42km.
→ The remaining section of 6km, close to the border railway bridge has not been completed yet, and work is due to start early 2015.
→ On 25 July 2014, both Cambodia and Thailand started to construct a railway bridge at border in the total length of 43m. The project is due to be completed in April 2015.

206 km Missing Link from Phnom Penh to Loc Ninh, Cambodia-Vietnam Border: important delay, work not started yet.
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CAMBODIA

1. Construction of Poi Pet (CAM)-Klong Loeuk (Thai) Railway Bridge

2. Construction of Remaining Railway Line Section (6km) closed to the Border Railway Bridge

3. Rehabilitation of Existing Railway Line from Sisophon to Bat Doeung (306km)

Southern Line
Phnom Penh - Sihanouk Ville
264 km

Missing Link
4. Railway from Bat Doeung (CAM) to Lock Ninh (VN) 257 Km
LAOS
Railway Construction Projects

Laos plans railway links with China, Vietnam and Thailand to help drive socio-economic development. The project’s original plan called for China to finance 70 percent of the 421 km standard gauge rail line linking Vientiane to South Western China, with work to begin in 2011 and end in 2015. ADB believes the project is unaffordable and could plunge Laos into debt.

The second project from Savannakhet to Lao Bao (220 km standard gauge) with Malaysian investors is still pending.
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MALAYSIA
Malaysian-Thai Border Projects

KTMB has identified the need to expand the current yard at Padang Besar from existing 8 acres of space to approximately 50 acres. The completion of Double Tracking Project from Padang Besar to Ipoh will enable KTMB to run more than 8 to 16 trains daily from Padang Besar to Penang Port.

However, the current terminal area has limited handling capacity up to 10,000 TEUS per month.

Due to land space limitation in the area, KTMB requires the assistance either from the Federal / State Government of Malaysia or the State Railway of Thailand (SRT) in the area of land acquisition.
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MALAYSIA

Malaysian-Thai Border Projects

Issues on operational arrangement at the border station of Padang Besar:
- Crew change is required as the communication and signaling system in Malaysia and Thailand is different.
- There will also be a locomotive change at Padang Besar.
- Crew and locomotive change takes up about 40 minutes and this increases travel time.

Next issue: rehabilitation of Rantau Panjang-Sungai Golok Eastern Border Link.

Malaysian-Singaporean Border Project

Operational issue: there is no combined immigration clearance at only one location which can shorten travel time.

Myanmar has signed the ASEAN Framework Agreement on the Facilitation of Goods in Transit (AFAFGIT) / Protocol 6: Railway Border and Interchange Stations, at the 17th ASEAN Transport Ministers Meeting held in Phnom Penh, Cambodia, in December, 2011. Then, Myanmar has sent the Instrument of Ratification for the Protocol 6 to the ASEAN Secretariat in Jakarta on February 3rd 2014. The existing 4,800 km meter-gauge railway network of Myanmar has no cross-border links at the moment.

- Potential projects with China (especially the standard-gauge line Kyaukpyu-Kunming) are on hold since July 2014.
- Missing link with India: pending.
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THAILAND
Railway Cross Border Link Projects

Thailand is very involved in cross border projects with Myanmar, Laos, Cambodia and Malaysia, related to the SKRL Regional Project.

3 Corridors:
- North-South (with China, Laos, Myanmar and Malaysia)
- East-West (with Myanmar, Laos and Vietnam)
- Southern (with Cambodia and Vietnam)

Objective of the Thailand-Cambodia link: standardize railway track structure to improve: Loading Capacity / Speed / Safety / Reliability / Convenience / Maintenance / Connectivity.

Thailand-Myanmar link:
Namtok-Three Pagoda Pass-Thanbyuzayat Rail Link (263 km): the feasibility study was undertaken in 2007 and it was concluded that the project provided low return and should be put off. It led to the alternative: Kanchanaburi-Dawei Rail Link (185 km). SRT to table it in 2015 for approval.
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THAILAND

Standard Gauge Electric – Double Tracking Projects

To set new standards, safety, speed and reliability.
To connect ASEAN countries and Southern China.
VIETNAM
Railway Construction Projects

Vietnam is involved in several cross border projects with China, Laos and Cambodia. The most advanced is the rehabilitation of the Yen Vien-Lao Cai line (Border with Yunnan Province, China).

Next projects:

- Development of Hanoi-Nanning (Guangxi Province, China) line.
- Construction of Vietnam-Thailand lines via Laos.
- Vietnam-Cambodia link: Ho Chi Minh-Loc Ninh (border), 129 km.
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VIETNAM

Lao Cai - Hekou Interchange

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ASEAN Issues: What do we have to prepare for AEC * ?
- Joint Traffic Agreement
- Well-Trained Staff
- Accounting Settlement

Expansion of Business / United Railway Network of Over 10,000 km / Increase trading opportunity / Reduce gasoline consumption / Reduce GHG Emission / Reduce damage of road accident / Prepare your railway to confront with the new challenges / Link to Archipelagic countries / Improve the regional competitiveness

* AEC = ASEAN Economic Community, starting on 01.01.2016.
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Physical Connectivity:

- **Missing railway links** = calls for the upgrading of existing infrastructure, harmonisation of regulatory frameworks, nurturing of innovation culture. Currently, there is still about **4,000 km of missing links** or links which need to be rehabilitated in Cambodia, Laos, Malaysia, Myanmar, Thailand and Vietnam.

Institutional Connectivity:

- ASEAN needs to resolve a number of key issues including impediments to movements of vehicles, goods, services and skilled labour across borders.
- To operationalise key transport facilitation agreements, including ASEAN Framework Agreement on the Facilitation of Goods in Transit (**AFAFGIT**), ASEAN Framework Agreement on the Facilitation of Inter-State Transport (**AFAFIST**), and ASEAN Framework Agreement on Multimodal Transport (**AFAMT**) = to reduce the costs of moving goods across borders.
- In addition, ASEAN Member States must fully implement their respective National Single Windows towards realising the **ASEAN Single Window** by 2015 to bring about seamless flow of goods at, between and behind national borders.
The ASEAN Frameworks AFAFGIT, AFAFIST and AFAMT are aimed at improving transport facilitation.

Currently, many protocols of these agreements have not been ratified or implemented, thereby delaying the establishment of effective cross-border facilitation. The ASEAN Single Window would enable a single submission of data and information, therefore a single decision-making system for custom clearance of cargo. This would be reinforced with the ASEAN Single Stop Inspection.

Sub-regional initiatives also contribute to ASEAN efforts in improving cross-border facilitation and institutional connectivity. Of particular importance is the Greater Mekong Sub-Region (GMS) Cross-Border Transport Agreement (CBTA), which emphasises key issues such as exchange of commercial traffic rights, single-stop inspection and single-window inspection at key border checkpoint.
Conclusion and Recommendations

Cross-border connectivity
Issues

- Much focus on hard infrastructure
- Many forms of barriers to cross-border transport
- Inconsistent and time consuming, costly border crossing formalities and procedures
- Restriction/limitation on entry of vehicles
- Trans shipment needed at the border
- Difficult and different process for transit traffic
- Differential/reciprocal tariffs/charges
- Incompatible working hours at borders
- Lack of coordination among various stake holders
- Excessive security checks

Work to be done

- Need to give more focus on streamlining procedures and “soft” issues
- Look for single window system
- Have a Corridor based approach

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- Lack of integration
  - Intergovernmental Agreement on Intermodal Corridors
    - action-oriented and priority-based
    - based on Asian Highway and Trans-Asian Railway networks
  - Infrastructure financing
    - use of all multi-lateral platforms for cooperation
    - Asian Infrastructure Investment Bank
      (Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam have signed MOU establishing the Bank)

- Missing links
  - Harmonization of technical standards
    - Compact for Regional Technical Standards

- Harmonization of procedures
  - ESCAP resolution on facilitation of rail transport

UN Economic and Social Commission for Asia and the Pacific (ESCAP)
Asian Development Bank (ADB)
The Asian Infrastructure Investment Bank (AIIB)
Key Actions

1- Construct the missing link sections

2- Formulate a strategy for a seamless operation of the SKRL Project as soon as possible

3- Properly address the issue on metric / standard gauges differences

4- Mobilise financial resources and technical assistance from external partners, either on a bilateral basis or with the coordination of ADB and AIIB, to support the completion of SKRL in accordance with the agreed deadline.

5- Study the possibility of extending the SKRL to Indonesia (Sumatra and Java Islands).
Intermodal transportation is becoming more and more attractive as its possibilities for better mobility and sustainability become evident. It is:

- Better from the environmental point of view
- Better from the economic point of view
- Better from the passenger point of view
- Better from the transport operator point of view

**Strengthening Network**

Encourage Interoperability by construction of missing links to have regional rail network in place
Thank you for your kind attention

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