Key Potential Railway Corridor along Trans Asian Railway Southern Corridor

*Impact on Costs of Trade & challenges involved*

New Delhi, India
15 March 2017
The facts

» Countries in Asia have had the highest growth rates of 5.9% p.a. in exports and 6.7 % p.a. in imports during 2010-2015 as compared to total world trade which grew at 3.1% and 2.6% p.a. respectively during the period. They have been major drivers of limited global economic recovery.

» However, these countries, particularly the countries in South & South West Asia region rely heavily on demand for their products in advanced economies and now face altered economic environment in aftermath of global financial crisis in the west.

» In the aftermath of this crisis, the domestic & regional trade is a must to sustain growth for these countries for which adequate “Regional Land Transport Connectivity” is very critical.
Unfortunately, on this front, of regional transport connectivity, the Southern Corridor of TAR passing through SSWA region is yet to make much progress (except for operationalization of ITI link) due to a mix of physical and non-physical barriers which hampers connectivity. Despite progress, the region still has a long way to go in realizing seamless connectivity in infrastructure and operational facilitation.

As a result, logistic costs in South Asia are pretty high, ranging between 13-14% of GDP as against norm of 8 to 9%, undermining their competitiveness in global markets besides leading to high cost economies in proportion of their dependence on imports.

Improvement of Regional Transport Connectivity can really help the group countries to reap the advantage of current world conditions and give a fillip to the growth dynamics of the countries involved.

In this context, next slide shows the perceived benefits of improved regional transport connectivity.
Perceived Benefits of improved Connectivity

» Reduction in Logistics costs for exports, more competitive
» Cut in import costs to reduce input costs and make local industry competitive and stimulate investment
» Boost in trade with neighboring countries from abysmally low figures
» Accretion of transit freight benefits to transit nations for through traffic
» Substantial reduction in inventory carrying costs due to saving in transit times
» Enhanced access to markets and greater opportunity for participation in regional economic process could make a significant dent in social position of these nations through substantial beneficial impact on employment and developing tourism.

ESCAP study shows that Southern Corridor of TAR may be advantageous to serve trade within that part of the corridor bounded on the west by the Eastern part of Turkey and on the east by Bangladesh and North Eastern India in form of Trunk Corridor – Feeder Route model.

In this context, we examine individual country’s status in relation to Southern corridor of TAR in following slides.
Country Status of Connectivity to TAR (Afghanistan)

» Afghanistan being land locked does not have a direct rail connectivity with Southern Corridor’s alignment of TAR. However, there is a potentially upcoming port of Chabahar in Islamic Republic of Iran.

» The Chabahar port will allow South Asian economies access to landlocked Afghanistan and energy-rich Central Asia. For instance, India would be able to access through JN Port and Kandla port on India’s west coast.

» A 218 km-road link is connecting Delaram with Zaranj in Afghanistan, which is adjacent to Iran’s border.

» The port will promote regional connectivity with eight functional dry ports of Afghanistan including the dry ports located in Kabul, Jalalabad and Kandahar.
Country Status of Connectivity to TAR (Bangladesh)

- Bangladesh has excellent Rail connectivity with India at 5 locations. First three are active-
  1. Ranaghat (India) – Dhaka (Bangladesh) via Gede (BG)- Dasana (BG): Active
  2. Bongaon (India) – Khulna (Bangladesh) via Petrapole (BG)- Benapole(BG): Active
  3. Old Malda (India) – Ishurdi (Bangladesh) via Singhabad (BG)- Rohanpur (BG): Active
  4. Barsoi (India) – Parbatipur (Bangladesh) via Radhikapur (BG)- Birol (MG)
  5. Karimgunj (India) – Kulaura (Bangladesh) via Mahishashan (MG)- Shahbazpur (MG)

In addition, planning is on for rail connectivity at Badarpur (India) and Bhairab (Bangladesh) via new proposed link between Agartala - Akhaura
Country Status of Connectivity to TAR (Bangladesh continued...)

- Dhaka – Ishurdi – Darsana – Gede identified as main TAR route. Has potentials to get extended beyond Dhaka to Imphal on MG route via Aakaura, Kulaura, Shabazpur (Bangladesh) entering India again at Mahishasan border point to Imphal.

- Bangladesh has 8 Dry ports including Dry port Dhaka (Kamlapur ICD) all of which can be connected to Ishurdi yard which has also been identified for developing a rail based ICD.

- Indications for a transshipment hub at Muladuli (third station from Ishwardi Junction towards Dhaka) in view of load restriction on crossing of Bangbandhu bridge in which case ICD Dhaka and other ICDs can be linked with Muladuli by road, to provide an integrated multi-modal transport linkage to TAR.
Country Status of Connectivity to TAR (Bhutan)

- Bhutan has no Rail connectivity. Nearest railhead is around 18 km away from its border point, in India at Hashimara in Lumding division of NEF Railway from where both bilateral and third country trade cargo can be transshipped for road carriage via Jaigon (India) – Phuentsholing (Bhutan) border post till Thimphu.

- Bhutan has lone functional Dry port at Phuentsholing. Five more are at planning stage at Gomtu, Gelephu, Nganglam, Samdrupjongkhar and Samtse.

- Current movements are all primarily road based between Kolkata – Thimpu via Phuentsholing. Thimpu – Phuentsholing is 172 km while Phuentsholing – Kolkata is 738 km.
Country Status of Connectivity to TAR (India)

• In India, the main corridor starts from Gede on Bangladesh border, traversing all the way through to Attari near Pakistan border, through New Delhi. Many sections on this route are very busy, but Indian Government is building Eastern Dedicated Freight Corridor which will take care of capacity constraints for major part of the route. The route is well connected by almost over 55 Dry Ports being patronized by various Container Train Operators (CTOs).

• There is potentiality to run Container trains across the subcontinent with Kolkata as Hub and spokes at Birgunj (Nepal), Ludhiana (connecting by rail/road to Pakistan) and Tuticorin (connection through feeder services to Sri Lanka).

• Indian Dry port facilities near International borders are Dhandari Lakan (Ludhiana) in the west, 171 kms from Attari - Wagah border, and Kolkata in the east, 113 kms from Gede and further 275 kms from Darsana to Dhaka.

• India can have Container protocol with Bangladesh & Pakistan similar to India-Nepal protocol (RSA).
Country Status of Connectivity to TAR (Islamic Republic of Iran)

- In Islamic Republic of Iran, the ITI link is already operationalised though frequency of runs is very low due to non materialisation of adequate traffic.

- Country has also got well developed connections with four dry ports located in Islamic Republic of Iran, and with Central Asia with regular trains plying between Islamic Republic of Iran and Azerbaijan and Turkmenistan.

- Is well poised for linking Chabahar to Afghanistan and Central Asian Republics via shorter routes.
Country Status of Connectivity to TAR (Myanmar)

- In Myanmar, all existing railheads are long distance from the borders with India and Bangladesh as a result of which its connectivity to TAR is not envisaged in near future.
- There is a 539 km rail link developed in Myanmar between Mandalay and Kalay, which can be further extended to join Indian Railway network at Moreh for connecting to Imphal – Jiribam. Imphal – Moreh traffic survey is being conducted by Indian Railways. This would leave a 135 km gap between Kalay and Tamu which has been identified by Myanmar as a priority for development. The construction of these links in Myanmar and India would provide Myanmar a direct rail connectivity to TAR via Imphal-Dhaka-Kolkata.
- Myanmar has plans to develop dry ports at as many as eight locations including Tamu and Mandalay which can be linked once the connectivity is established.
Country Status of Connectivity to TAR (Nepal)

• Nepal has Rail connectivity with India at two locations, out of which only one is active for freight -
  1. Kolkata (India) – Birgunj (Nepal) via Raxaul- Birgunj (BG): Active for freight trains
  2. Jayanagar- Janakpur (NG): Active for passenger trains

• Nepal has 4 Dry ports, out of which only one is rail connected-
  Birgunj (rail connected),
  Biratnagar, Bhairahawa & Kakarbhitta are road linked

• Birgunj - Raxaul – Kolkata has been identified as TAR route. However, it is also possible to move the traffic straight-away from Dry Port Birgunj to New Delhi for onward connection to Pakistan, Iran and/or Turkey in cases of needs at much economical costs.
Country Status of Connectivity to TAR (Pakistan)

- On Pakistan’s west side, the ITI link is already operationalized though the frequency of train runs is very low due to non-materialization of adequate traffic.

- On other side, with India, the rail connectivity is only at two locations, out of which only 1 is active for freight -
  1. Attari - Wagah: Active
  2. Khokhrapar - Munabao: Active only for passenger

- Attari – Wagah – Mirzaveh – Zahedan is the nominated TAR link.

- Pakistan has 13 Dry ports, out of which many including Lahore are rail connected.
Country Status of Connectivity to TAR (Sri Lanka)

• Sri-Lanka is located ideally for a direct maritime or short sea connectivity with many countries in the region.

• Connectivity to Indian ports can be through regular feeder services operating between Colombo and the Gateway ports of Chennai, Valarpadam, Tuticorin, Ennore, etc.

• Connection can also be via Karachi, upcoming Chabahar in Islamic Republic of Iran, or directly at Bandar Abbas.

• Sri Lanka has 2 upcoming Dry ports at Peliyagoda and Telangapata, both in Colombo.
Country Status of Connectivity to TAR (Turkey)

» In Turkey, the ITI link is already operationalized through the Gul Train - the international freight train service covering 6500 km between Istanbul and Islamabad via Teheran in 16 days. However, frequency of runs is very low due to non materialization of adequate traffic.

» Connectivity is there to the two existing dry ports at Geleman (Samsun) and Kazan (Ankara).

» Regular Trans-Asia-Europe railway also connects Istanbul to China (Lanzhou) via Islamic Republic of Iran, Turkmenistan, Uzbekistan and Kazakhstan.

» There is also a train ferry service across Lake Van in eastern Turkey.
Cost & time Analysis-1

» ICD Delhi – ICD Dhaka via Colombo

– Pre Carriage Charge ICD
  Delhi- Mumbai (JN Port) 700/915 USD

– Ocean freight Mumbai-
  Colombo-Chittagong 750/1150 USD

– On Carriage Charge
  Chittagong-ICD Dhaka 500/785 USD

– TOTAL COST (ICD-ICD) 1950/2850 USD

Likely charges via land route
(around 1800 km) 900/1350 USD

Likely transit advantage
(5 to 6 via-a-vis 25 to 27) 20 to 21 days
Delhi – Lahore via Mumbai/Karachi

- Pre Carriage Charge ICD
  Delhi- Mumbai (JN Port)  
  700/915 USD

- Ocean freight Mumbai-
  JNPort-Karachi
  100/200 USD

- On Carriage Charge
  Karachi-ICD Lahore
  1017/1477 USD

- TOTAL COST (ICD-ICD)
  1817/2592 USD

Likely charges via land route
(around 541 km)
400/600 USD

Likely transit advantage
(2 to 3 via-a-vis 17 to 18)
around 15 days
Cost & time Analysis-3

» Delhi – Teheran via Mumbai/Bandar Abbas

– Pre Carriage Charge ICD
  Delhi- Mumbai (JN Port) 700/915 USD

– Ocean freight Mumbai-
  JNPort-Bandar Abbas 160/480 USD

– On Carriage Charge
  Bandar Abbas-Teheran 1281/1373 USD

– TOTAL COST (ICD-ICD) 2141/2768 USD

Likely charges via land route
(around 3986 km) 1730/2595 USD

Likely transit advantage
(10 to 11 via-a-vis 22 to 23) around 12 days
User Cost and Time comparisons in nutshell...

<table>
<thead>
<tr>
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<th>Ocean based route</th>
<th>Land based route</th>
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<tbody>
<tr>
<td></td>
<td>Current costs per 20’/40’ (US$)</td>
<td>Current transits (No. of days)</td>
</tr>
<tr>
<td>ICD Dhaka-ICD Delhi</td>
<td>1950/2850</td>
<td>25-27</td>
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<tr>
<td>ICD Delhi-ICD Lahore</td>
<td>1817/2592</td>
<td>17-18</td>
</tr>
<tr>
<td>ICD Delhi-Teheran</td>
<td>2141/2768</td>
<td>22-23</td>
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</table>
Likely Trade Impact

- Savings in costs and transits are likely to give boost to inter regional traffic and have potential to alter significantly the proportion of trade within countries of the region, hence giving solid push to growth too.

- As can be seen in slides following, current trade between different countries and SSWA block countries is very meagre. India, for instance, gets only 2.86% of its imports from SSWA block, with rest coming from other countries. For Pakistan, this figure is only 6.06%. For exports, the shares are slightly better at 9.65% and 14.85% respectively.

- Cost optimizations following improved connectivity of transport are sure to result in lowering of logistics costs and give impetus to production as well as trade in all countries of SSWA block.
## INDIA - SSWA TRADE (MILLION USD)

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<td>390,745</td>
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<tr>
<td>AFGHANISTAN</td>
<td>120</td>
<td>318</td>
<td>505</td>
<td>534</td>
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<td>201</td>
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<td>1,016</td>
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<td>3.49</td>
<td>2.86</td>
<td>6.42</td>
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### PAKISTAN - SSWA TRADE (MILLION USD)

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<tr>
<td>TOTAL PAKISTAN TRADE</td>
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<td>43,990</td>
<td>25,344</td>
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<td>AFGHANISTAN</td>
<td>200</td>
<td>390</td>
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<td>INDIA</td>
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<td>9</td>
<td>17</td>
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<tr>
<td>TURKEY</td>
<td>160</td>
<td>205</td>
<td>756</td>
<td>235</td>
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<td>SRILANKA</td>
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<td>72</td>
<td>348</td>
<td>260</td>
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<td>TOTAL SSWA BLOCK TRADE</td>
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<td>2,664</td>
<td>5,146</td>
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<td>% SSWA BLOCK TO TOTAL</td>
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<td>6.06</td>
<td>20.30</td>
<td>14.85</td>
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<tr>
<td>TOTAL BANGLADESH TRADE</td>
<td>41,222</td>
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<td>INDIA</td>
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<td>ISLAMIC REPUBLIC OF IRAN</td>
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<tr>
<td>% SSWA BLOCK TO TOTAL</td>
<td>15.60</td>
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THANK YOU
Three Asia-Europe Continental Land Bridges
## Assessment of Infrastructure

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<th>Overall Infrastructure</th>
<th>Road</th>
<th>Rail</th>
<th>Port</th>
<th>Air</th>
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<td><strong>World</strong></td>
<td>4.3</td>
<td>4.0</td>
<td>3.1</td>
<td>4.3</td>
<td>4.7</td>
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<td><strong>G7</strong></td>
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<td>5.69</td>
<td>5.3</td>
<td>5.39</td>
<td>5.74</td>
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<tr>
<td><strong>South &amp; South West Asia</strong></td>
<td>3.83</td>
<td>3.66</td>
<td>2.93</td>
<td>3.86</td>
<td>4.17</td>
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</tbody>
</table>

Score: 1- underdeveloped, 7- best developed

(Source: Kalegama & Abayasekara, Regional Economic cooperation and connectivity in south and south west asia)
Barriers in Connectivity

- **Physical Barriers like**
  - Lack of standardization in technologies, operation and maintenance practices including different types of gauges, braking systems, incompatibility of rolling stocks
  - Missing links at places, load restriction on bridges, capacity constraints in certain sections of identified corridor/s
  - Inadequate physical infrastructure at interchange points

- **Non physical barriers including**
  - The lack of multilateral rail transport agreement/s,
  - Absence of uniform documentation practices,
  - Different Customs practices and timings,
  - Restrictions on types of stocks and commodities, etc.
Specific suggestion of ESCAP is to develop Southern Corridor over TAR network as a Trunk Transport Corridor and operationalize DKD (Delhi-Kolkata-Delhi) route in continuation to already operational ITI route till missing links of South East Asia are developed.

This will facilitate train runs between Dhaka (Bangladesh) and Istanbul (Turkey) through Gede - Darshana (India-Bangladesh border), Kolkata, Delhi, Attari-Wagah (India-Pakistan border), Lahore, Islamabad, Quetta Taftan, Mirjaveh (Pakistan-Islamic Republic of Iran border), Zahedan, Teheran, Razi-Kapikoy (Islamic Republic of Iran-Turkey border) right upto Kapikul.

The route would have links to Central Asia besides the feeder routes through Capital to capital links of SSWA countries and the feeder routes of seaports of Bandar Abbas, Bandar-E-Emam Khomeini, proposed route from port of Chabahar (INSTC connection), Gwadar, Karachi, Colombo, various Indian ports and Chittagong, thus providing reliable and cost effective connectivity within and between SSWA and CA countries.

In this context, we examine individual country’s status in following slides.
Way Forward...

» Demonstration Run of Container train has been completed between Istanbul-Tehran-Islamabad. Demonstration Run between Islamabad-Delhi-Dhaka is pending. Steps need to be taken to expedite it.

» India is already operating Container trains between India and Dry port Birgunj (Nepal) regularly. But Container Interchange protocols between India-Pakistan and India-Bangladesh are yet to be finalised and signed. These need to be expedited.

» India and Nepal have signed Rail Service Agreement (RSA) that gives the detailed procedure to be followed for bilateral and third country cargo movement between India & Nepal. It elaborates in detail the procedure to be followed for Customs examination and clearance. It also gives details about maintenance of wagons, joint mechanical examination of rolling stock, composition of trains, movement of dangerous goods, safety & security of trains and personnel, loading restrictions, movement rationalization, transport documents, freight charges, detention charges etc. A standard agreement could be developed for extending same features universally so that uniform practices are followed at all border crossing points.
Mission: Container train on TAR route

» Similar to RSA, Agreements between India-Pakistan and India-Bangladesh may be finalized and signed to get the process started. Subsequently, one could move to Inter-regional agreements, as and when they are finalised.

» This will provide faster and economical transit of cargo between India-Pakistan and India-Bangladesh.

» This will also provide an alternative route of container movement between Asia and Europe, besides Sea route.

» There can be a Container train that can work as aggregator/ de-aggregator for various Dry ports enroute.

» This will boost trade ties between countries enroute.

» The Container train can be run either by respective Railway organizations of various countries involved or by some other International Freight Forwarding Agency which could act as a neutral player on the lines it is happening in other TAR corridors.
Key Issues in facilitation of International Transport and the Way Forward

» Strengthening cross border infrastructure by developing Integrated Check Posts (ICPs) for smooth border crossings. For instance, India has planned setting up of total 20 ICPs: 1 with Pakistan, 7 with Nepal, 1 with Myanmar, 1 with Bhutan and 10 with Bangladesh. Five are already operational. Two under construction.

» Participation in International Railway Organizations like OSJD and OTIF for standardization of operating rules and tariff structures. This will also address issue of varying legal regimes and facilitate use of international conventions based sub-regional agreements as against bilateral agreements. Countries could also consider adopting and following Intergovernmental agreement on dry ports of international importance, and the Intergovernmental agreement on Asian Highways Network.

» Tackling of difficulties with break of gauge as the region has four different type of gauges namely, 1676 mm (South Asia), 1520 mm (Central Asia), 1435 mm (Iran and Turkey), and 1000 mm (some parts of Bangladesh) by using efficient Cross Border Transfer models. Focus should also be on standardisation of technical requirements.

» Harmonisation of documents and simplification of procedures for crossing borders by using models like ESCAP model on Integrated Controls at Border Crossings.