Potential of the China-Mongolia-Russian Federation Economic Corridor
Transport routes of the China – Mongolia – Russian Federation Economic Corridor

Based on the Program for the establishment of China – Mongolia – Russia Economic Corridor, Tashkent, 2016

Depiction by V. Krechetova
Transport routes of the China – Mongolia – Russian Federation Economic Corridor

Also part of
- Belt and Road Initiative
- Central Asia Regional Economic Cooperation (CAREC) - corridor 4
- Greater Tumen Initiative - Siberian Land Bridge, Tumen and Suifenhe Corridors
- Organisation for Co-operation between Railways (OSJD) - Corridors 1, 11
- Euro-Asian Transport Linkages (EATL) - routes 1, 6
- Russian Federation - Primorye-1, Primorye-2 international transport corridor

Program for the establishment of China – Mongolia – Russia Economic Corridor

1. Connectivity along the 4 routes
   - Railway construction
   - Highway activation
   - International road transport facilitation
   - Modernization of border crossing posts
   - Communications infrastructure

2. Tourism industry development

3. Industrial development
4. Energy cooperation
5. Environment
6. Technologies and education
7. Agricultural cooperation
8. Public health
Traffic potential

Traffic potential

Cargos

Containers

Minerals

Passengers

Tourists
Traffic potential: Eurasian container block trains

Directions and route options

1. China – Europe – China
2. China – Russia, Belarus – China
3. China – Central Asia – China

Number of China Railway Express trains per border crossing

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Via China/Kazakhstan border</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>349</td>
<td>1,054</td>
<td>1,486</td>
<td>2,436</td>
</tr>
<tr>
<td>2. Via China/Mongolia border - CMREC</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>756</td>
<td>1,766</td>
<td>2,667</td>
<td>3,599</td>
</tr>
<tr>
<td>3. Via China/Russian Federation border</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>27</td>
<td>122</td>
<td>218</td>
</tr>
<tr>
<td>Manzhouli (China)/Zabaikalsk (Russian Federation)</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>1,294</td>
<td>2,842</td>
<td>2,927</td>
</tr>
<tr>
<td>Alashankou (China)/Dostyk (Kazakhstan)</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>691</td>
<td>1,023</td>
<td>2,041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>42</td>
<td>80</td>
<td>308</td>
<td>815</td>
<td>1,702</td>
<td>3,673</td>
<td>6,363</td>
<td>8,225</td>
<td>12,406</td>
</tr>
</tbody>
</table>

CMREC in Eurasian container railway transit

1. Share in trains number grows slower than total train number
2. Has lower share in Eurasian railway container traffic than alternatives
3. Has almost no China – Europe – China traffic: about 90% goes via China/Kazakhstan border
Traffic potential: Eurasian container block trains

Directions and route options

1. China – Europe – China
2. China – Russian Federation, Belarus – China
3. China – Central Asia – China

Directions

Route Options

1. Via China/Kazakhstan border
2. Via China/Mongolia border - CMREC
3. Via China/Russian Federation border

Analysis of potential demand

1. Eurasian railways carried 725,000 TEU of China – Europe – China cargos in 2019 (base year)
2. Total of potentially possible diverted cargos + existing railway container transit gives potential cargo base of 1.3-1.9 million FEU (or about 2.6-3.8 million TEU)

Capacity constraints

Accommodation of such number of containers might require throughout capacity of 30-43 trains/day for container trains only

Current capacity of UBTZ (Ulaanbaatar railway) 8-14 train pairs/day – insufficient

Analysis of current demand

1. CMREC might have 1/3 of China – Europe – China railway container train traffic
2. Total volume of China – Europe (EU28) – China railway cargos 1.6 million ton (2019)
3. This might mean +23,000 TEU to current container volume via Mongolia (149,000 TEU)

Estimates of volume of freight traffic China – Europe – China that might be diverted from sea lines to Eurasian railways

<table>
<thead>
<tr>
<th>Potential container rate (USD/FEU)</th>
<th>Share of diverted sea trade volume</th>
<th>Potential diverted sea volume, million ton</th>
<th>Potential diverted sea volume, million FEU</th>
<th>Railway container rate as share of volume-weighted average price of goods per FEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,500</td>
<td>36%</td>
<td>42.01</td>
<td>1.59</td>
<td>2.6%</td>
</tr>
<tr>
<td>10,000</td>
<td>22%</td>
<td>25.67</td>
<td>0.97</td>
<td>3.4%</td>
</tr>
</tbody>
</table>
Traffic potential: Minerals

In 2019, 31.6 million ton of coal were exported by road and 10.2 million ton of various cargos by railway. Current capacity of the UBTZ (Ulaanbaatar railway) is about 30 million ton/year, less than needed. UBTZ Modernization Plan promises carrying capacity 54 million ton/year by 2030, which is less than potential export volume by that time.

Analysis of potential demand

1. Total of mining production plans, expansion plans and new development plans gives ≈110 million ton/year mining output reached between 2025-2035
2. This translates into reaching 75-80 million ton/year of export of minerals and products between 2025-2035
3. To compare, maximum of export bulk in recent years ≈47 million ton/year
Traffic potential: Tourism

Inbound short term trips by foreigners to Mongolia by purpose of visits, trips, 2019

Outbound tourist trips, million, 2019

Potential tourism market segments

Multi-destination tourism

Self-driving tourism

Number of tourism arrivals in Mongolia tripled between 2010 and 2019

Number of small private vehicles in all CMREC countries grew in the last decade (2010-2019/2020): China 4.5 times (to 2.05 billion in 2019), doubled in Mongolia, +44% in the Russian Federation
Corridor infrastructure
**CMREC hard infrastructure: railways**

**Status of railway lines of the three routes of CMREC**

**Issues and challenges**

1. Missing links at Western route, Northern route, Eastern route
2. Break-of-gauge China 1,435mm/ Mongolia, Russian Federation 1,520mm
3. Central route is single-tracked non-electrified along Jining – Erenhot (China)/ Zamyn Uud (Mongolia) – Sainshand – Ulaanbaatar – Sukhbaatar (Mongolia)/Naushki (Russian Federation) – Ulan Ude
4. Deteriorated tracks, aged rolling stock at UBTZ both at Central and Eastern routes

**Actions to take to create needed railway capacity**

1. Upgrade rolling stock and locomotives at UBTZ (Mongolia)
2. Commissioning the new railway link Zuunbayan – Tavan Tolgoi – Gashuun Sukhait (Mongolia)/ Ganqimaodu (China) border crossing as branch of Central route
3. Central route upgrade (Mongolia): Laying second track and electrification of UBTZ
4. Construction of the section of Northern route (Mongolia) Art Suuri – Erdenet – Salkhit
5. Construction of the sections of Eastern route (Mongolia) Choibalsan – Bichigt section; Choibalsan – Arshan section (Tumen Corridor); Connection to the Central route Khuut – Baruu-Urt – Sainshand
6. Modernization of sections of Eastern route Choibalsan – Ereen tsav (Mongolia) Solovievsk – Borzya (Russian Federation)
CMREC hard infrastructure: other issues to address

### Status of sections of Asian Highway of the three routes of CMREC

<table>
<thead>
<tr>
<th>Quality of the Asian Highways sections</th>
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</thead>
<tbody>
<tr>
<td>Primary or mix of Primary and Class I</td>
</tr>
<tr>
<td>Class I or mix of Class I and Class II, Primary</td>
</tr>
<tr>
<td>Class II</td>
</tr>
<tr>
<td>Class III or mix of Class I, Class II with sections of Class II or below</td>
</tr>
<tr>
<td>Below Class III or mix of Class III and below Class III</td>
</tr>
</tbody>
</table>

- **Central route**: Ulaanbaatar-Sukhbaatar, Mongolia
- **Eastern route**: Kyakhta – Ulan Ude, Russian Federation
- **Northern route**
- **Western route**

#### Actions to take

**Bring roads to AH Class II and higher:**
- Central route
  - Ulaanbaatar-Sukhbaatar, Mongolia
  - Kyakhta – Ulan Ude, Russian Federation
- Eastern route
- Northern route
- Western route

**AH Class II standard**: 2 lane road with asphalt or cement concrete pavement

- Modernize in terms of equipment, layout and capacity the border crossings
- Create needed inland logistics terminal capacity at Mongolia’s section

*Depiction by V. Krechetova*
## Corridor soft infrastructure

<table>
<thead>
<tr>
<th>Trilateral agreements</th>
<th>Customs cooperation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intergovernmental Agreement on International Road Transport along the Asian Highway Network</td>
<td>1. All signed respective Customs mutual assistance and cooperation agreements</td>
</tr>
<tr>
<td>Agreement between the Federal Customs Service (Russian Federation), General Administration of Customs of the People’s Republic of China and Customs General Administration of Mongolia on Mutual Recognition of the Results of Customs Control on Selected Goods</td>
<td>▪ Secure transit based on secure locking mechanism</td>
</tr>
<tr>
<td>Road transport</td>
<td>▪ Electronic exchange of data on goods, inspection results, etc., across borders</td>
</tr>
<tr>
<td>Moscow, 2016</td>
<td>▪ Mutual recognition of inspection results both on bilateral and trilateral basis</td>
</tr>
<tr>
<td>Tashkent, 2016</td>
<td>Infrastructural development and economic cooperation</td>
</tr>
<tr>
<td>Customs cooperation</td>
<td>2. Work on four-country Authorized Economic Operators (AEO) mutual recognition scheme under the umbrella of the Greater Tumen Initiative</td>
</tr>
<tr>
<td>Memorandum of Understanding on Establishing a Trilateral Mechanism coordinating implementation of China-Mongolia-Russia Economic Corridor Program (The Working Group held first meeting in 2020.)</td>
<td>3. Bilateral mutual recognition of AEO status only between China – Mongolia</td>
</tr>
<tr>
<td>1. All CMREC countries are OSJD members</td>
<td>4. Joint Customs Control at Erenhot (China)/ Zamyn Uud (Mongolia)</td>
</tr>
<tr>
<td>2. All CMREC counties implement CIM/SMGS Consignment Note</td>
<td>Issues</td>
</tr>
<tr>
<td>3. All CMREC counties signed TAR agreement</td>
<td>1. Joint Customs control limited to one border crossing</td>
</tr>
<tr>
<td>4. Mongolia has agreements on sea ports access in China (1991) and Russian Federation (1992)</td>
<td>2. Lack of full scale single window services for international trade and respective ecosystem in Mongolia limits digitalization of business processes in international transport across CMREC at full length</td>
</tr>
<tr>
<td>5. Mongolia and Russian Federation agreed on transit of cargos by rail (2018)</td>
<td>For instance, this might limit opportunities for UBTZ to join INTERTRAN endeavor of Russian Railways, UIC and ESCAP, that interfaces and interlinks all the information systems involved across service providers at all modes involved, at all controlling authorities involved and businesses to provide single intermodal digital product.</td>
</tr>
<tr>
<td>6. China Railways and Russian Railways have strategic cooperation agreement (2016)</td>
<td>3. Limitations in use of electronic signatures in Mongolia cause some documents to be issued in both hard copies and digital form (ex., for empty wagons exchange at border with the Russian Federation)</td>
</tr>
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<table>
<thead>
<tr>
<th>Railway agreements</th>
<th>Road agreements</th>
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<tbody>
<tr>
<td>1. All CMREC counties are OSJD members</td>
<td>1. All CMREC countries are parties to TIR convention</td>
</tr>
<tr>
<td>2. All CMREC counties implement CIM/SMGS Consignment Note</td>
<td>2. All CMREC countries are parties to AH Agreement</td>
</tr>
<tr>
<td>3. All CMREC counties signed TAR agreement</td>
<td>3. Founding parties to Agreements on international road transport on AH Network</td>
</tr>
<tr>
<td>4. Mongolia has agreements on sea ports access in China (1991) and Russian Federation (1992)</td>
<td>4. All signed bilateral road agreements</td>
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