GUIDE LINES FOR DEVELOPING COUNTRIES TO BUILD A SUSTAINABLE FREIGHT TRANSPORT SYSTEM

B. MANDUUL
INTERMODAL TRANSPORT

- LAND
  - ROAD
  - RAIL
- WATER
  - SEA
  - RIVER
- AIR
- PIPE LINES (OIL AND GAS)
<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>ROAD</th>
<th>RAIL</th>
<th>SEA</th>
<th>PIPELINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>CHINA</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONGOLIA</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LATIN AMERICA</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOUTH ASIA</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASIA PACIFIC</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## INTERMODAL SHARE

<table>
<thead>
<tr>
<th>COUNTRIES</th>
<th>ROAD</th>
<th>RAIL</th>
<th>SEA</th>
<th>PIPELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUSSIA</td>
<td>80%</td>
<td>74%</td>
<td></td>
<td>Oil and gas</td>
</tr>
<tr>
<td>Other CIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHINA</td>
<td></td>
<td>55%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONGOLIA</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LATIN AMERICA</td>
<td>60-90%</td>
<td>10-40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOUTH ASIA</td>
<td>70%</td>
<td>25%</td>
<td>5%</td>
<td>Oil and gas</td>
</tr>
<tr>
<td>ASIA PACIFIC</td>
<td>90%</td>
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</tbody>
</table>
MULTI MODAL TRANSPORT
5.1.2 Trans-Asian Rail Network

[Map of Trans-Asian Rail Network]

- Track Gauges
  - 1,676 mm
  - 1,520 mm
  - 1,435 mm
  - 1,067 mm
  - 1,000 mm
  - 1,000/1,435 mm
  - TAR Link - Planned/Under Construction
  - Potential TAR Link
  - Break-of-Gauge
  - Ferry Crossing

UNITED NATIONS 2003

DRAFT
LOGISTICS FREINDLINESS
(FROM ADB 2005 STUDY)

"Logistically easy to cope with"
Correlation coefficient = 0.821

Central Asian countries

GNI per capita 2002
Purchasing Power Parity
International dollars

The Baltic States
EU
Other accession countries
CIS
Other countries
TRANSPORT DEVELOPMENT POLICIES

- LAND USE AND SOCIAL DEVELOPMENT
SAFETY
• DEVELOPMENT PLAN

• ASSESSMENT OF ECONOMIC BENEFITS

• PREVALENCE OF MULTI PUBLIC AUTHORITIES

• DECENTRALISATION

• NATIONAL CONSULTATION
ENVIRONMENTAL PROTECTION
• BLENDING WITH THE NATURAL ENVIRONMENT
• PRIORITISATION OF PROJECTS
• RESOURCE MANAGEMENT AND WASTE UTILISATION
• SUSTAINABLE ENERGY SOURCES
• INTELLIGENT TRANSPORT SYSTEM
• INTERMODAL COMPATIBILITY
• DESIGN AND PLANNING TEAM
• SUPPORTING SECONDARY SERVICES
INTERNATIONAL BORDER CROSSING

- CONSENSUS ON MULTILATERAL AGREEMENT

- VEHICLE EMISSION REQUIREMENTS
  - EURO – 2 / GOST
AXLE LOAD AND VEHICLE DIMENSION
• TARIFFS
  – ROAD USER CHARGES
  – TRANSIT FEE
• TRAFFIC SAFETY
• PROVISION OF TRANSPORT SERVICES
CONCLUSIONS AND RECOMMENDATIONS

• COMPLEMENTARY AND VIABLE MULTIMODAL TRANSPORT SYSTEM
• PROJECT FORMULATION AND IMPLEMENTATION BY INTERNATIONAL EXPERT GROUP

• INTERNATIONAL CONVENTIONS
• REGULAR ASSESSMENT OF IMPACT OF TRANSPORT GROWTH BY AN INDEPENDENT AGENCY
• CO-OPERATE AND INTERACT WITH SPECIAL TASK FORCE CONSTITUTED BY THE INTERNATIONAL FUNDING AGENCIES
THANK YOU