Green Logistics
An opportunity for rail

Rail transport from the Atlantic to the Pacific

Martin M. Magold
Outline of presentation

• What is sustainable transport?
• Are there green opportunity for railways?
• How can Governments support green rail?
• Challenges for Euro-Asian rail freight!
• What can the United Nations do?
Sustainable transport
- What is it? -

A definition

Carry out and adapt all activities and behaviors in such a way so as not to damage the prospects of future generations
Sustainable transport

Criteria

Access   Affordability   Safety   Emissions

Protection of habitats

economic   social   health + environment

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Sustainable and green transport

Green is only one aspect

Sustainable transport must ensure

- **Access**
- Opening up of remote and land-locked countries
- Mitigation of congestion
- **Affordability**
- Affordable mobility for all segments of society and economy
- **Safety**
- Significant reduction of traffic deaths and injuries (vision zero)
- **Emission control**
- Non-detrimental emission of noise and atmospheric pollutants for our health, flora and fauna
- Conservation of biodiversity and protection of habitats
- Reduced GHG emissions to sustainable levels
Sustainable and green transport
Reduction in atmospheric pollutants

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**EVOlUTION OF EMISSION LIMITS OF PASSENGER CARS**

**EMISSION LIMITS FOR HEAVY TRANSPORT VEHICLES**
Sustainable and green transport

CO₂ emissions by sector (EU 27)

CO₂ emissions by sector (2007)

- Transport (incl. intl bunkers): 28%
- Industry: 21%
- Households: 9%
- Services etc.: 4%
- Other: 2%
- Energy Industries: 36%

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CO₂ emissions from transport (EU 27)

CO₂ emissions from transport in the EU27 by mode (1990=100)

- Road
- Railways
- Air (incl. intl bunkers)
- IWW and Maritime (incl. intl bunkers)
- Other transportation

CO₂ emissions from transport (2007)

- Road 71%
- IWW and Maritime (incl. intl bunkers) 15%
- Air (incl. intl bunkers) 12%
- Other modes 1%
- Railways 1%

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CO₂ emissions from transport (non EU countries)

Source: ITF
Are there green opportunity for rail?

Yes … , but do not forget the basics

Green (helps to) sells
- Develop business models
- Increase green visibility

But criteria for modal choice remain
1. Price
2. Quality (reliability)
3. Transport time
4. Service
5. Flexibility
6. Transparency
7. Green
Role of Governments
How can they support green rail freight?

Fields of action

- **Governments**
  - Public sector
  - Transport policy
  - Rail infrastructure

- **NGOs and rail interest groups**
  - Education
  - Innovation
  - Awareness

- **Industry**
  - Railway companies
  - Supply chain management
  - Seamless rail freight

Fields of action

Source: Adapted from German Logistics Masterplan

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# Improving the carbon footprint

**Who should do what?**

<table>
<thead>
<tr>
<th>Factors influencing CO₂ emissions</th>
<th>Rail infrastructure managers</th>
<th>Railways</th>
<th>Industry and logistics providers</th>
<th>Governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport demand</td>
<td>-</td>
<td>-</td>
<td>Better distribution/supply chain management</td>
<td>Decouple GDP and transport demand? Improve land-use policies?</td>
</tr>
<tr>
<td>Modal split</td>
<td>Open access, improve network performance</td>
<td>Increase productivity</td>
<td>Marketing of “green” transport</td>
<td>Establish a level playing field within and between modes</td>
</tr>
<tr>
<td>Fuel type</td>
<td>-</td>
<td>Increase and decarbonize electricity production</td>
<td>-</td>
<td>Set incentives for use of renewable sources of energy</td>
</tr>
<tr>
<td>Fuel efficiency</td>
<td>Enhance traffic flow and capacity</td>
<td>Increase vehicle and traffic efficiency</td>
<td>Better traction, rolling stock and IT technology</td>
<td>Support research in diesel, hydrogen, hybrid technologies</td>
</tr>
</tbody>
</table>
Role of Governments
Establishing a level playing field

• **Competition**
  – among rail operators (if applicable)
  – between modes

• **Taxation** (internalization of externalities)

• **Infrastructure** (access, tariffs, performance)

• **Border crossings** (outside EU)

• **Interoperability** (technical, administrative, legal)

• **Coordination of policies** (national and international)
Euro-Asian rail freight
A challenge for business and Governments
Euro-Asian rail freight
Where is the market niche?

Benchmark for business models
• Interregional rail transport
  – Maritime (container) transport
  – Air cargo
• Pan-European rail transport
  – Road transport

Business problems
• Unbalanced freight (container) flows
• Availability of adequate rolling stock
• Maintenance of infrastructure
• Tariffs (not really transparent and flexible)
• Gauge transshipment requirements
• Many borders, authorities and rail operators
Euro-Asian rail freight
Role of Governments

Establishing a level playing field

• Global
  – Maritime (inclusion of GHG emissions into global reduction system)
  – Air (inclusion of GHG emissions into global reduction system)

• Inter-regional
  – Border crossings (facilitate and harmonize rail border control procedures)
  – Infrastructure (harmonize rail network development and infrastructure standards)
  – Operation (establish benchmarks for seamless rail operations)
  – Rail freight (establish single railway law and liability system)
Euro-Asian rail freight
UN Regional Commissions cooperate
UNECE-UNESCAP Euro-Asian Links Project
RAIL ROUTES

Euro-Asian Rail Routes Legend
- Routes Group 1
- Routes Group 2
- Routes Group 3
- Routes Group 4
- Routes Group 5
- Routes Group 6
- Routes Group 7
- Routes Group 8
- Routes Group 9

Note: The routes shown are indicative and are subject to change. The map is not to scale. The map is for general information only and should be used in conjunction with other sources of information.

Data Sources:
- EAP-UNESCAP
- WorldMap Version 4.2, USA (www.adcworldmap.com)

New Annex 9 on international rail transport

- Visa procedures (train crews, border personnel, etc.)
- Border and control infrastructure and facilities
- Cooperation of inspection personnel
- Coordinated inspection mechanisms
- Acceptable time limits and delays
- Documentation (incl. CIM/SMGS consignment note)

Adopted in February 2010 – coming into force in 2011
Euro-Asian rail freight
Uniform rail transport law

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Thank you!

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