Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation
Sustainable Freight Transport Systems: Opportunities for Developing Countries
14-16 October 2015

CLIMATE, TRANSPORT, FINANCE

by

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Climate, transport, finance

UNCTAD Multi-Year Expert Meeting on Sustainable Freight Transport
October 15, 2015

Vladimir Stenek
International Finance Corporation, World Bank Group
Changing climate conditions

Observed yearly temperature anomalies (1884, 2013), projected July daily max. temp (2099)

New normals: financial, E&S sustainability in the changing climate

Incorporation of climate resilience in new infra-structure investments has approx. 1-2% of additional costs (range varies across sectors, regions, projects)

DC, July 2012: 10 consecutive days over 35 C

South Carolina, October 2015: 1:1000 year events

Sources: NASA 2012
Companies accelerate use of carbon pricing

The number of companies putting a price on their carbon pollution has risen sharply in the past 12 months as governments prepare to agree on tougher action to combat climate change this year.

The carmaker General Motors, mining company Glencore, and Cathay Pacific, the airline, are among 437 companies reporting the use of carbon pricing measures to CDP triple the number from last year.

The expectation that governments will strike a global accord limiting carbon dioxide pollution at a UN summit in Paris this December is one reason for the rise (…)

There is a growing awareness that there will be mandatory carbon limits, if not in Paris this year then soon”(…)”
Transport sector responsible for around 23% of global CO2 emissions and expected to rise without action to curb emission growth

Investment needs estimated at additional $3 trillion to increase the sustainability of existing and new transport systems and to mitigate climate change in 2015–35

Estimated needs—total climate finance for developing countries has projected annual requirements by 2030 of $30 to $100 billion for adaptation and $140 to $175 billion (with associated financing requirements of $265 to $565 billion) for mitigation

Source: WBG 2010, 2015; OECD 2015; IPCC 2014
Climate finance

Source: Climate Policy Initiative, 2014
Multilateral Development Banks, Climate Finance

MDB Resources for Total Climate Finance, 2014

<table>
<thead>
<tr>
<th>MDB</th>
<th>Adaptation Finance</th>
<th>Mitigation Finance</th>
<th>Total Climate Finance</th>
<th>MDB Finance</th>
<th>Total Climate Finance as a % of MDB Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>719</td>
<td>2,137</td>
<td>2,856</td>
<td>22,930</td>
<td>12%</td>
</tr>
<tr>
<td>AfDB</td>
<td>756</td>
<td>1,160</td>
<td>1,916</td>
<td>7,000</td>
<td>27%</td>
</tr>
<tr>
<td>EBRD</td>
<td>230</td>
<td>3,882</td>
<td>4,111</td>
<td>11,448</td>
<td>36%</td>
</tr>
<tr>
<td>EIB</td>
<td>130</td>
<td>5,083</td>
<td>5,214</td>
<td>22,856</td>
<td>23%</td>
</tr>
<tr>
<td>IDB</td>
<td>109</td>
<td>2,352</td>
<td>2,461</td>
<td>14,483</td>
<td>17%</td>
</tr>
<tr>
<td>IFC</td>
<td>18</td>
<td>2,540</td>
<td>2,558</td>
<td>17,495</td>
<td>15%</td>
</tr>
<tr>
<td>WB</td>
<td>3,106</td>
<td>6,122</td>
<td>9,229</td>
<td>40,843</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>5,069</td>
<td>23,276</td>
<td>28,345</td>
<td>137,055</td>
<td>22%</td>
</tr>
</tbody>
</table>

\*a MDB finance includes MDB own resources and external resources for all its financing (including non-climate commitments).

Source: MDB Climate Finance Report, 2015
### Multilateral Development Banks, Climate Finance

<table>
<thead>
<tr>
<th>Sector Grouping</th>
<th>Adaptation Finance (USD million)</th>
<th>Adaptation Finance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water &amp; Wastewater Systems</td>
<td>541</td>
<td>11%</td>
</tr>
<tr>
<td>Crop Production and Food Production</td>
<td>853</td>
<td>17%</td>
</tr>
<tr>
<td>Other Agricultural &amp; Ecological Resources</td>
<td>964</td>
<td>19%</td>
</tr>
<tr>
<td>Industry, Extractive Industries, Manufacturing &amp; Trade</td>
<td>238</td>
<td>5%</td>
</tr>
<tr>
<td>Coastal and Riverine Infrastructure (including built flood protection infrastructure)</td>
<td>847</td>
<td>17%</td>
</tr>
<tr>
<td>Energy, Transport, and Other Built Environment and Infrastructure</td>
<td>1,147</td>
<td>23%</td>
</tr>
<tr>
<td>Institutional Capacity</td>
<td>236</td>
<td>5%</td>
</tr>
<tr>
<td>Cross Sectors and Other</td>
<td>243</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>5,069</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mitigation Sector</th>
<th>Mitigation Finance (USD millions)</th>
<th>Total Mitigation Finance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Efficiency</td>
<td>5,019</td>
<td>22%</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>8,229</td>
<td>35%</td>
</tr>
<tr>
<td>Transport</td>
<td>6,316</td>
<td>27%</td>
</tr>
<tr>
<td>Agriculture, forestry and land-use</td>
<td>461</td>
<td>2%</td>
</tr>
<tr>
<td>Waste and wastewater</td>
<td>229</td>
<td>1%</td>
</tr>
<tr>
<td>Cross-sector activities and others</td>
<td>995</td>
<td>4%</td>
</tr>
<tr>
<td>Energy efficiency, renewable energy and other financing through financial intermediaries or similar</td>
<td>2,025</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>23,276</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: MDB Climate Finance Report, 2015
Green Bonds

- World Bank Green Bond raises funds from investors to support lending for eligible projects that mitigate climate change or help adapt to its impacts.
- Response to investor demand for AAA rated fixed income product for projects addressing climate change challenge.
- Transport contributes about 23% of global greenhouse gas emissions. With motorization on the rise, expected high increases.
- Transport improvements that shift to low-emission modes also generate 'co-benefits' in terms of reducing congestion, local air pollution, oil dependency, transport safety risks.
- 34% of the Green Bond eligible projects focuses on transportation efficiency and urban mass transit solutions.

Source: WBG, 2015
<table>
<thead>
<tr>
<th>#</th>
<th>Link to more information</th>
<th>Project name (number</th>
<th>year/s loans approved) and description</th>
<th>A/M</th>
<th>Target results</th>
<th>Committed US$ mil</th>
<th>IBRD share</th>
<th>Allocated US$ mil</th>
</tr>
</thead>
</table>
| 29 |                         | Brazil - Sao Paulo State Sustainable Transport (P127723 | FY13): improve transport efficiency and safety, increase the share of waterway transport, and improve resilience to climate change and natural disasters. | Both | ● 50% reduction of road fatalities in the 100 most critical spots.  
  ● Increase waterway transportation.  
  ● Expanded automatic station network to monitor climate risk.  
  ● Increased number of municipalities with disaster risk mapping. | 300.0 | 70% | 179.4 |
| 40 |                         | China - Yunnan Honghe Prefecture Diannan Center Urban Transport (P101525 | FY14): improve the safety, accessibility, and efficiency of transportation in core urban areas by building new infrastructure, staff training and education campaigns. | M | ● Reduced average travel time for public transport users.  
  ● Double access to transport services to reach 742,000 people.  
  ● Increased ridership to 153,400 trips per day.  
  ● Reduced the number of transport related fatalities. | 150.0 | 43% | 0.4 |
| 41 |                         | Colombia - National Urban Transit Program (P117947 | FY10, FY12): reduce carbon emissions and improve public transportation efficiency and safety. | M | ● Reduced average travel time for low income riders.  
  ● Reduced accidents and pollution (including greenhouse gases) associated with bus transport services.  
  ● Increased access to the disabled and other commuters with special needs. | 587.9 | 47% | 304.0 |
| 42 |                         | Ecuador - Manta Public Services Improvement Project (P143996 | FY14): improve transport services and the quality and sustainability of water and sanitation. | M | ● 71,000 residents benefit from water investments.  
  ● Improved mobility and accessibility of street network including pedestrian facilities and cycling paths. | 100.0 | 87% | 5.0 |
| 43 |                         | India - Eastern Dedicated Freight Corridor - II (P131765 | FY14): increase the capacity and quality of freight rail service. | M | ● 1,133 kms of new freight-only rail.  
  ● Axle-load limit raised from 23 to 25 tons increasing speeds.  
  ● 12.8 million tons of CO2 eq. emissions reduced over a 30 year period. | 1,100.0 | 67% | 0.3 |

Source: WBG, 2015
PPPs, climate change

- Opportunities, but also some challenges that need to be addressed:
  - Long-term, usually not very flexible contracts, spanning periods of significant expected change in climate
  - Optimization of risk allocation
  - Completeness and symmetry of information
  - Key performance indicators, contracts and agreements, transfer
  - Force majeure: foreseeability, likelihood
  - Insurance: availability, cost, insurability
  - Change of law: legislation and regulation
- Enabling environment:
  - Develop infrastructure design standards specific to national conditions
  - Risk mitigation instruments
  - Regulatory and legal environment that recognizes challenges, incentivizes participation
  - Information, awareness raising
Going forward

- Increase in the size and number of investments, instruments for sustainable, climate resilient and low emissions projects

- Announcements for increased financing for climate change, including (Oct. 2015):
  - WBG to increase climate finance by 33% to 16 billion by 2020
  - ADB to double climate finance to $6 billion/year by 2020
  - AfDB to triple climate finance to $5 billion/year by 2020
  - EBRD to increase climate finance, $18 billion over 5 years
  - EIB to lend $100 billion to climate related projects by 2020

- Conference of Parties 21, Paris, December 2015:
  - Finance – mobilization, sources, flows; emissions goals
  - Green Climate Fund
  - Private sector

Source: Bloomberg, Businessgreen, Finchannel, 2015
Thank you!

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