Climate Change Adaptation for International Transport: Preparing for the Future

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Climate Resilient Transport Financing, Insuring, Investing and Partnering

Presentation by

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CLIMATE RESILIENT TRANSPORT
Financing, Insuring, Investing and Partnering

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World Bank Climate Finance

IBRD + IDA
(US$ millions)

FY16  FY17  FY18
Mitigation  3373  3877  7052
Adaptation  5100  5347  8050

Sectoral 2018

Agriculture
Digital Development
Education
Energy and Extractives
Environment and Natural Resources
Finance, Competitiveness and Innovation
Governance
Health, Nutrition and Population
Macroeconomics, Trade and Investment
Poverty and Equity
Social Protection and Labor
Social, Urban, Rural and Resilience
Transport
Water
“The integrated landscape management nexus brings together agriculture, forestry, environment, water, and transport to improve overall productivity and sustainability measured in economic and ecological terms. “

1. **Boost adaptation financing**
   
   The WBG will ramp up its direct adaptation climate finance to reach $50 billion over FY21–25. This financing level—an average of $10 billion a year—is more than double what was achieved during FY15–18. The WBG will also pilot new approaches to scale up private finance for adaptation and resilience.

2. **Drive a mainstreamed, whole-of-government programmatic approach**
   
   The WBG intends to help countries shift from addressing adaptation as an incremental cost and isolated investment to systematically managing and incorporating climate risks and opportunities at every phase of policy planning, investment design, implementation and evaluation.

3. **Develop a new rating system to create incentives for, and improve the tracking of, global progress on adaptation and resilience**
   
   A new rating system will be developed to promote public and private sector investments in adaptation. It will be designed to create incentives for donors and countries to engage in more and better adaptation; more effectively report on what the WBG and clients are doing; and aim to establish a global standard for financial markets and public procurement. The new system will be piloted over FY19-20 with an anticipated roll-out to projects in relevant sectors by FY21.
Risk Financing and Insurance

Market-Based Instruments
- Risk transfer for assets such as property insurance or agricultural insurance and risk transfer for budget management via parametric insurance, cat bonds/swaps

Contingent Financing
- Financial Instruments that provide liquidity immediately after a shock

Budgetary Instruments
- Reserve funds specifically designated for financing disaster-related expenditures, general contingency budgets, or diverted spending from other programs

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Indicative Costs (multiplier)</th>
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</thead>
<tbody>
<tr>
<td>Donor Support (relief)</td>
<td>0-1</td>
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<tr>
<td>Donor Support (recovery and reconstruction)</td>
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<td>Budget Contingencies</td>
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<td>Reserves</td>
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<td>Budget Reallocations</td>
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<td>Contingent Debt Facility (e.g., CAT CDO)</td>
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<td>Domestic Credit (bond issue)</td>
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<td>External Credit (e.g., emergency loans, bond issue)</td>
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<tr>
<td>Parametric Insurance</td>
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<td>ART (e.g., CAT bonds, weather derivatives)</td>
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<tr>
<td>Traditional (indemnity based) insurance</td>
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International Assistance (uncertain)

2018 Most Dangerous Emerging Risks

Climate Change as a Business Interruption Multiplier

Crumbling roads and bridges isolate companies and trigger business interruption losses.

By: Katie Dwyer | April 9, 2018 - 9 min read

WORLD BANK GROUP
Resilience Financing Across Infrastructure Lifecycle

RESILIENCE IN AN URBAN RAIL PROJECT LIFECYCLE

- System and Corridor Planning
  - Select a resilience strategy and appropriate measures
  - Adopt systems approach to urban rail planning
  - Complete vulnerability and criticality assessments
- Preliminary and Detailed Design
  - Set urban rail system performance requirements and design standards
- Procurement and Financing
  - Value resilience and allocate risks and responsibilities
- Construction
  - Ensure preparedness to events during the construction period
- Operations and Maintenance
  - Implement robust asset management and timely maintenance
  - Operational preparedness and emergency response and recovery

Methodology: Mainstreaming Climate Resilience in Road Transport Management in Serbia
### Risk Assessment: Strengthening Critical Infrastructure against Natural Hazards in Tajikistan

<table>
<thead>
<tr>
<th>Bridge</th>
<th>Glacial Lake Outburst</th>
<th>Flood</th>
<th>Landslide</th>
<th>Snow Avalanche</th>
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- Vanj River near Chikhok (Bridge B6)

### Risk Mitigation: Dedicated Freight Corridor Corporation of India Ltd.

- Continuous Welded Rails (CWRs)
- Re-Railing Ramps
- Guard Rails on all the Bridges
- Height Gauges on all Road Under Bridges (RUBs)
- Inspection Platform around Piers and Abutments
- Design of Structures taking into Seismic, Hydrological, Wind Forces Consideration
- Safety Fenders around Piers in Navigation Channels
- State of the Art Inspection and Monitoring Systems
- Safety Wall on Top of Cuttings and in Dense Habitation Area
WHO WE ARE

Housed by the World Bank, we are a global partnership platform of over 50 leading actors representing all modes of transportation with a shared ambition to achieve sustainable mobility.

OUR SHARED VISION

A world where the global mobility system is an important part of the solution to addressing 21st century global challenges:

- Climate change
- Poverty reduction
- Economic development and jobs
- Access to social services including education and health
OUR AMBITION

Transforming the global mobility system, across modes

POLICY GOALS

UNIVERSAL ACCESS
Connect all people, including women, and communities to economic and social opportunities.

EFFICIENCY
Optimize its predictability, reliability and cost-effectiveness

SAFETY
Drastically reduce fatalities, injuries, and crashes (SDG Target 3.6)

GREEN
Abate the environmental footprint of mobility (GHG emissions, noise and air pollution)

THANK YOU FOR YOUR ATTENTION!

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