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

Mr. Vladimir Stenek
Senior Climate Change Specialist
International Finance Corporation (IFC), World Bank Group (WBG)

15 October 2015

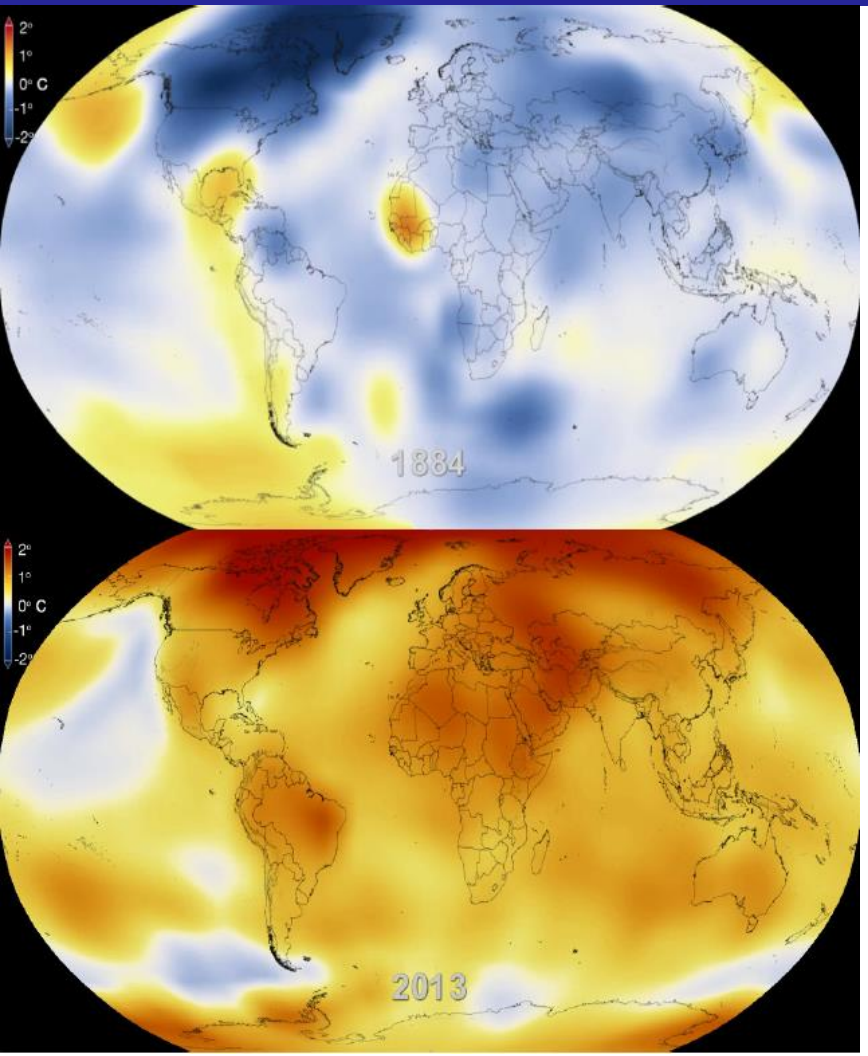
IFC International Finance Corporation
World Bank Group

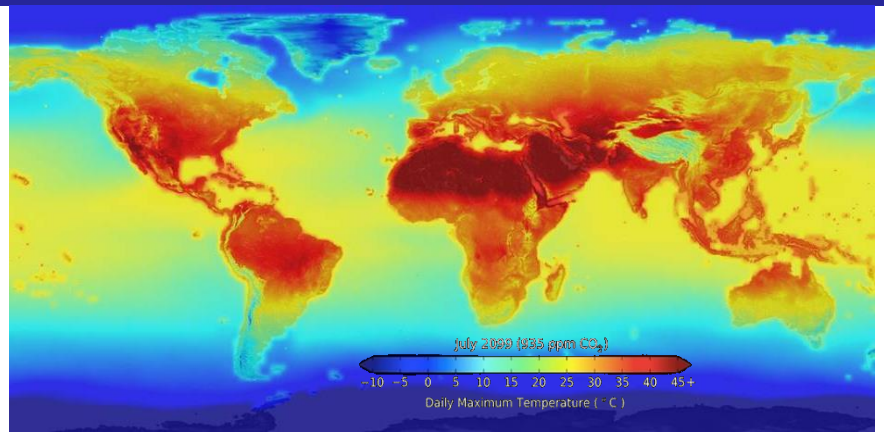
Climate, transport, finance

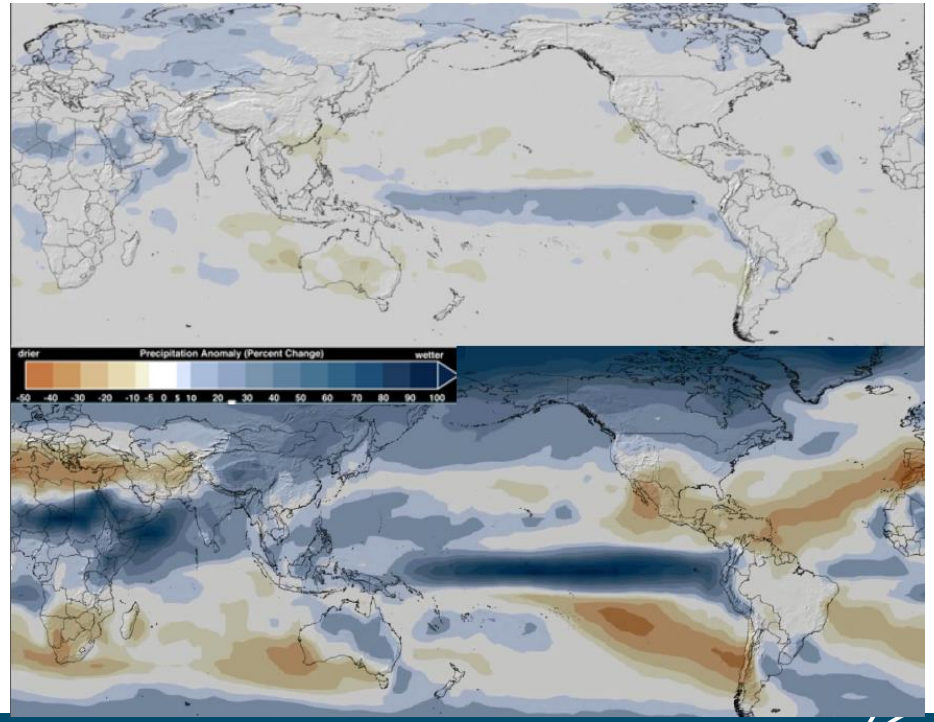
UNCTAD Multi-Year Expert Meeting on Sustainable Freight Transport
October 15, 2015

Vladimir Stenek
International Finance Corporation, World Bank Group

Changing climate conditions



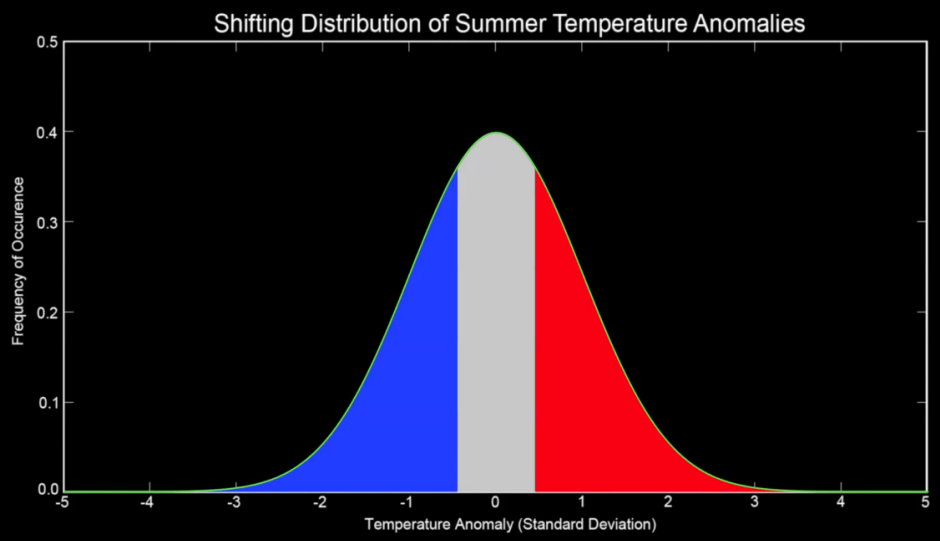


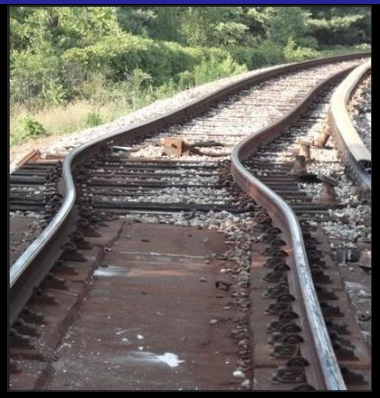


Observed yearly temperature anomalies (1884, 2013), projected July daily max. temp (2099)

Source: NASA, 2014, 2015

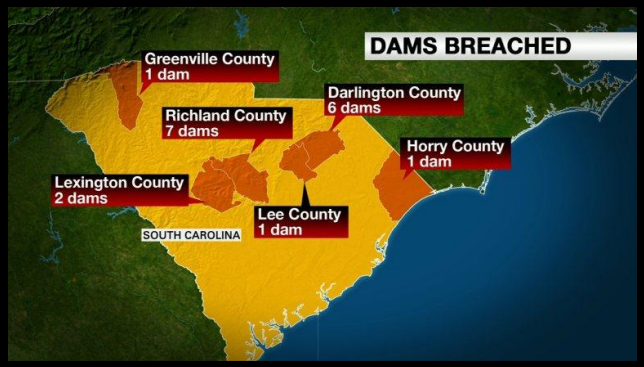
New normals: financial, E&S sustainability in the changing climate

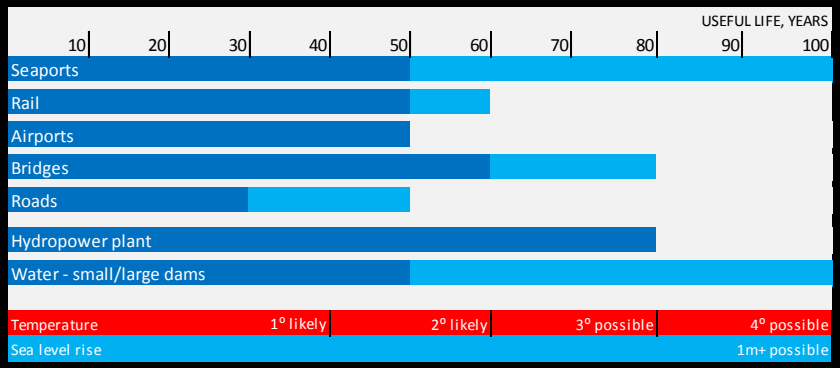




DC, July 2012: 10 consecutive days over 35 C

South Carolina, October 2015: 1:1000 year events





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

Sources: NASA 2012

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

Financial Times, September 20, 2015

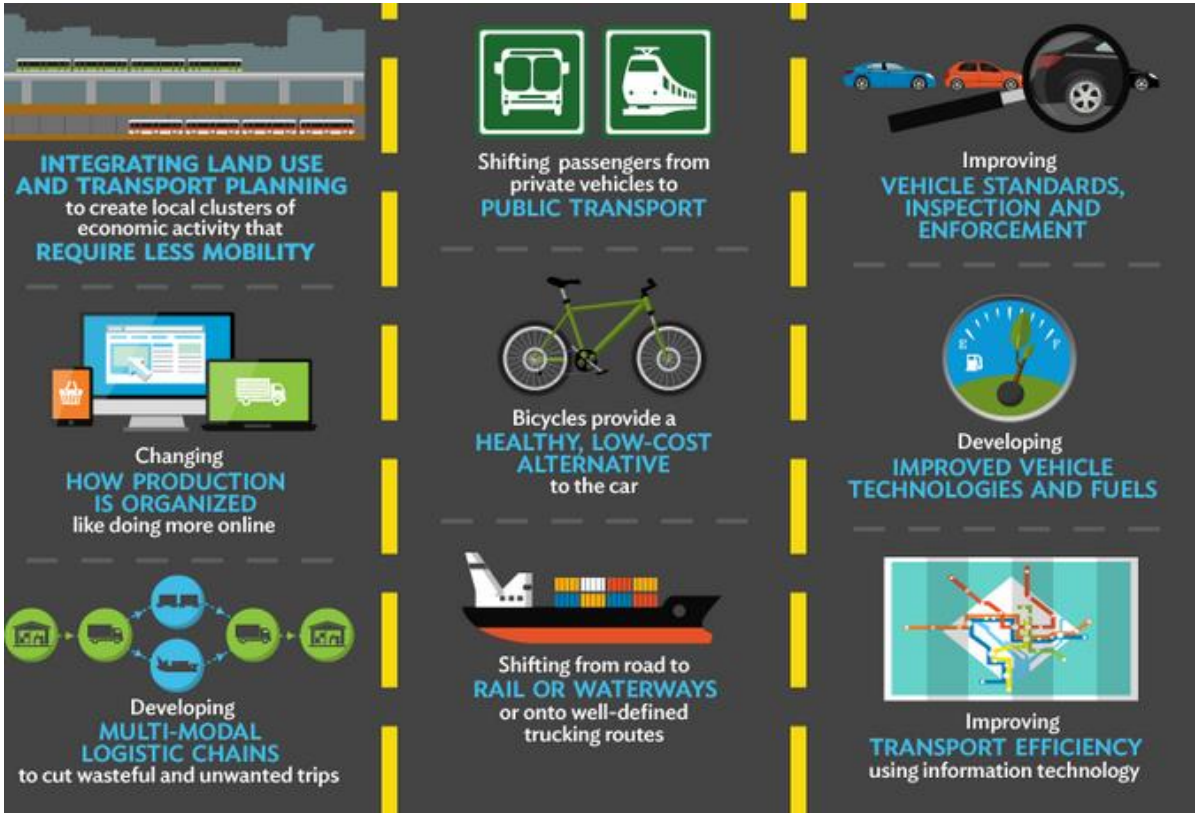
Companies accelerate use of carbon pricing

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 (…)

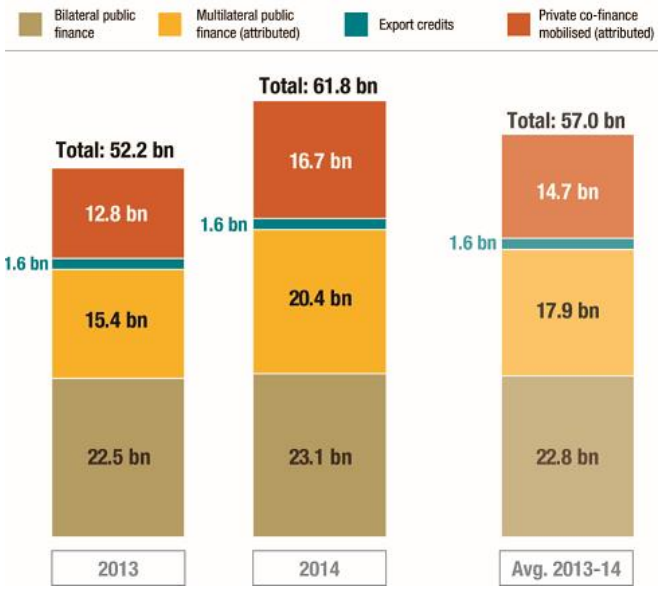
There is a growing awareness that there will be mandatory carbon limits, if not in Paris this year then soon"(…)"



Sources: ADB 2015, FT 2015

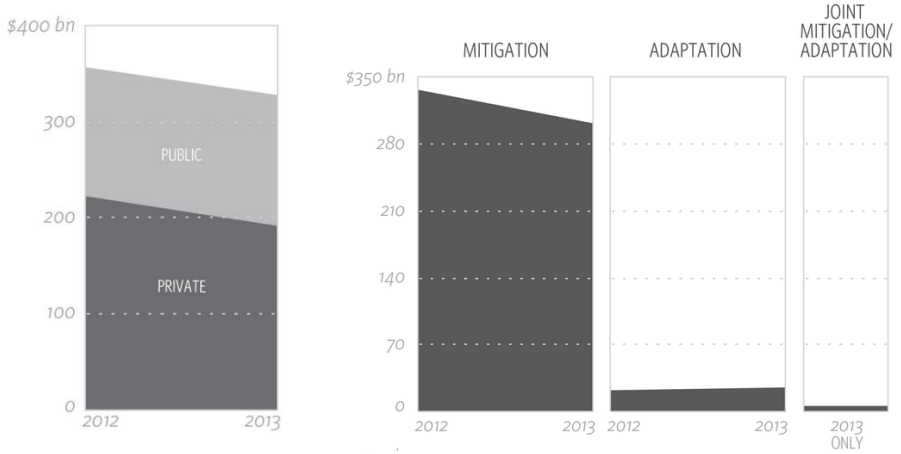
Climate finance, transport

- 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

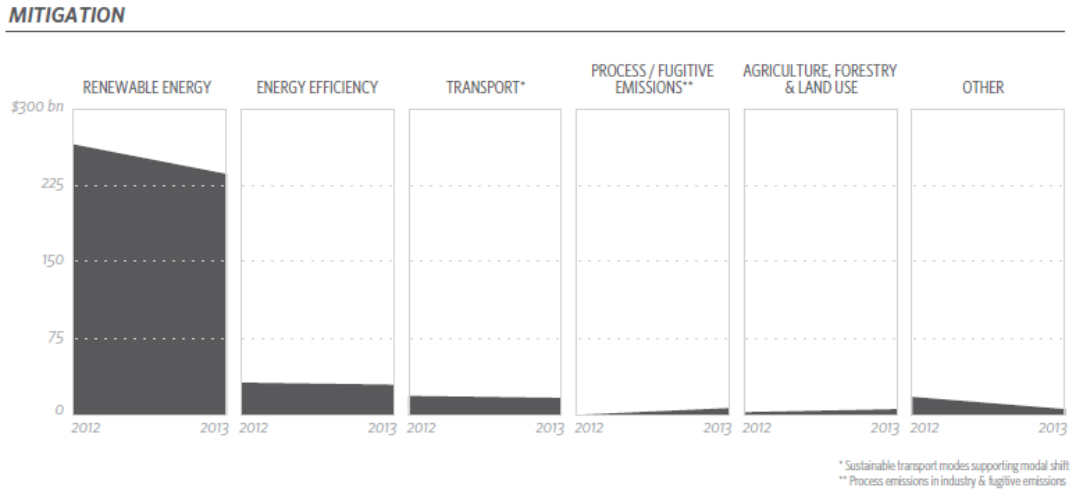


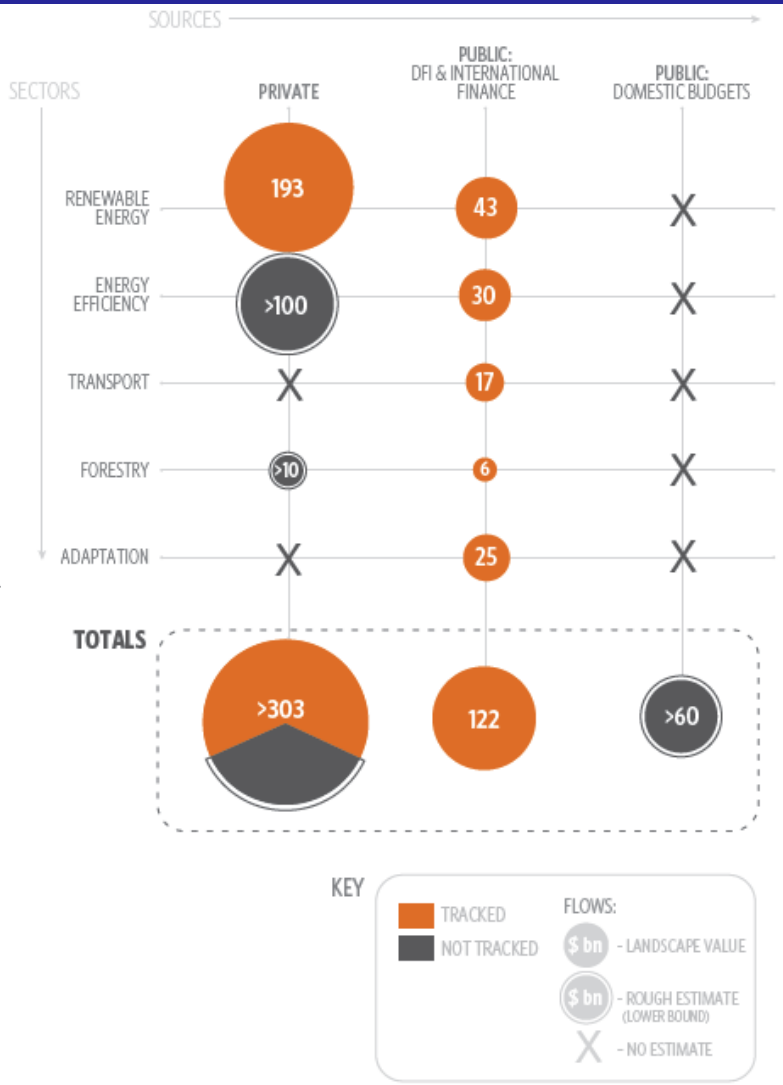
Source: WBG 2010, 2015; OECD 2015; IPCC 2014

Climate finance



Uses of mitigation finance (USD billion)

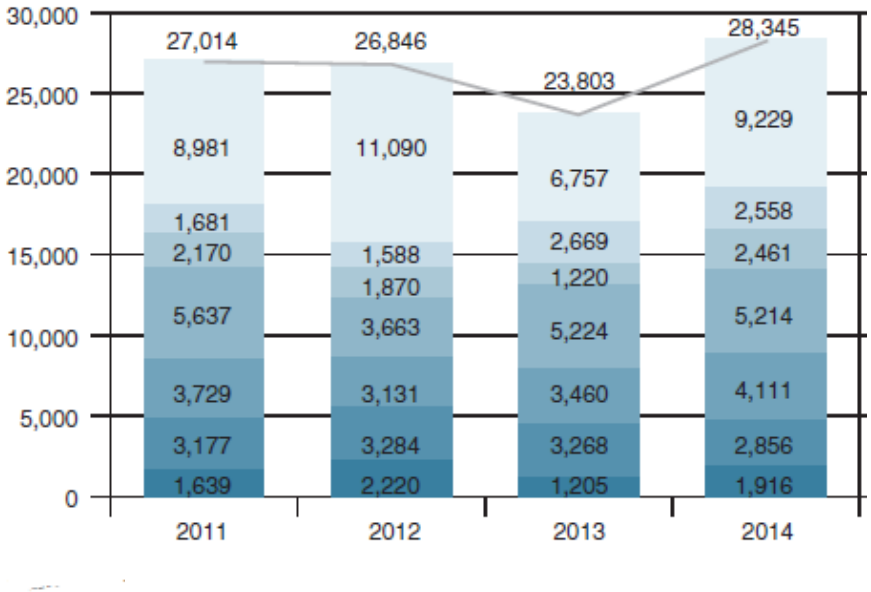


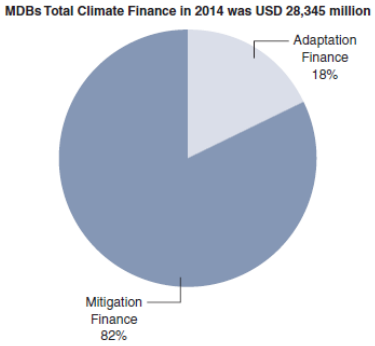


Tracked and not tracked parts of the climate finance landscape in 2013

Source: Climate Policy Initiative, 2014

Multilateral Development Banks, Climate Finance





MDB Resources for Total Climate Finance, 2014

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

/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

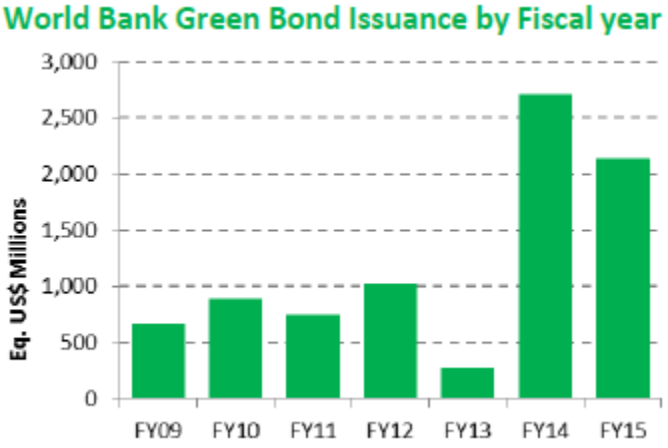
Sector Grouping	Adaptation Finance (USD million)	Adaptation Finance (%)
Water & Wastewater Systems	541	11%
Crop Production and Food Production	853	17%
Other Agricultural & Ecological Resources	964	19%
Industry, Extractive Industries, Manufacturing & Trade	238	5%
Coastal and Riverine Infrastructure (including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

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

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 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.



Amounts in Eq. US$ billion (may not add up due to rounding)	Committed[1/]		
	Mitigation	Adaptation	Total
Renewable Energy and Energy Efficiency	5.2	0.0	5.2
Transport	4.6	0.0	4.6
Water, Wastewater, and Solid Waste Management	0.2	1.1	1.3
Agriculture, Land Use and Forestry	0.4	1.1	1.6
Resilient Infrastructure, Built Environment and Other	0.3	0.7	1.0
Total	**10.7**	**3.0**	**13.7**
	78%	22%	100%

Source: WBG, 2015

Green Bonds, examples from the transport sector

#	Link to more information	Project name (number | year/s loans approved) and description	A/M	Target results	Committed US$ mil	IBRD share	Allocated US$ mil
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 CO_2 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!

Vladimir Stenek
vstenek@ifc.org