

Ad Hoc Expert Meeting on

**Climate Change Adaptation for  
International Transport:  
Preparing for the Future**

16 to 17 April 2019

**Experience from a multilateral development  
bank of integrating climate resilience into  
financing transport infrastructure**

Presentation by

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# Experience from a multilateral development bank of integrating climate resilience into financing transport infrastructure

*Climate change adaptation for international transport: preparing  
for the future*

UNCTAD Ad Hoc Expert Meeting, Geneva  
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**Background to the EBRD**



## What is the EBRD?



European Bank  
for Reconstruction and Development



## Climate change adaptation is part of the Bank's Green Economy Transition (GET)



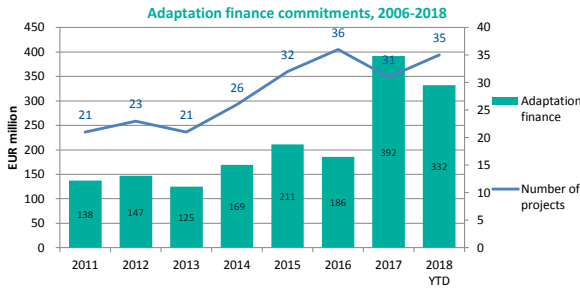
European Bank  
for Reconstruction and Development

Climate change mitigation	Climate change adaptation	Other environmental areas
<ul style="list-style-type: none"> <li>• Energy efficiency measures across all sectors</li> <li>• Renewables in electricity, heating &amp; cooling, transport</li> <li>• Promoting carbon markets</li> </ul>	<ul style="list-style-type: none"> <li>• Access to water resources and water efficiency</li> <li>• Improved land management and agricultural value chain</li> <li>• Reducing infrastructure vulnerability</li> </ul>	<ul style="list-style-type: none"> <li>• Resource efficiency measures</li> <li>• Waste management and recycling</li> <li>• Water quality and wastewater treatment</li> <li>• Combating air pollution</li> </ul>

# EBRD's adaptation finance 2011 – 2018



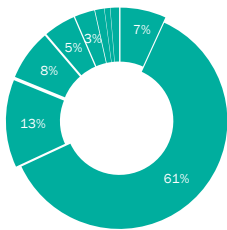
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**€1,700 million** since 2011 invested in dedicated GET adaptation finance.

**225 projects** signed with **€6.3 billion** of total ABI made more climate resilient

By sectors (€ in million)



Financial institutions	116
Municipal & Environmental Infrastructure	1,041
Power and Energy	223
Transport	129
Agribusiness	81
Natural Resources	51
Property and Tourism	23
Manufacturing and Services	14
ICT	22
<b>Total</b>	<b>1,700</b>

By region (€ in million)

Central Asia	441
Central Europe and the Baltic states	44
Eastern Europe and the Caucasus	101
Russia	32
South and Eastern Mediterranean (SEMED)	388
South-Eastern Europe	396
Turkey	266
Cyprus and Greece	26
Regional	5
<b>Total</b>	<b>1,700</b>

## Three main climate resilience business areas



European Bank  
for Reconstruction and Development

### Infrastructure ~80%



Helping long-lived fixed assets to cope with shifting climate conditions over long lifespans. Typical sectors include transport, energy, urban and water.

### Corporates ~15%



Helping business to manage climate risks to resource availability and value chains. Typically agribusiness, manufacturing & services and extractive industries.

### Financial Institutions ~5%

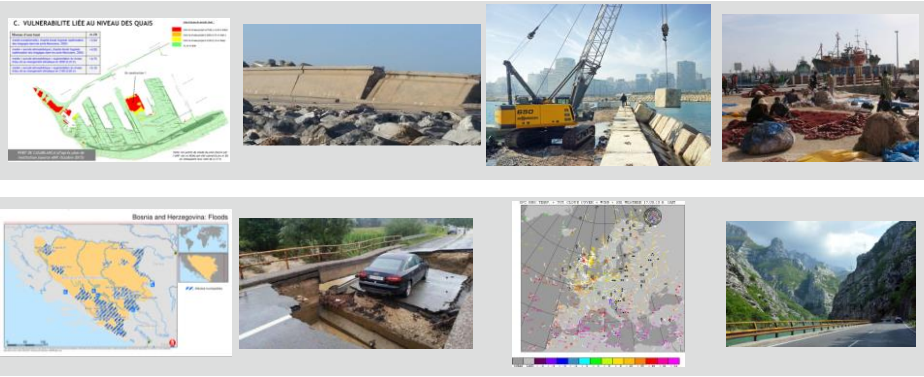
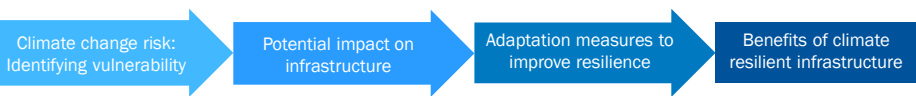


Helping Financial Institutions to develop climate resilience financing products, through "Green Economy Financing Facilities".

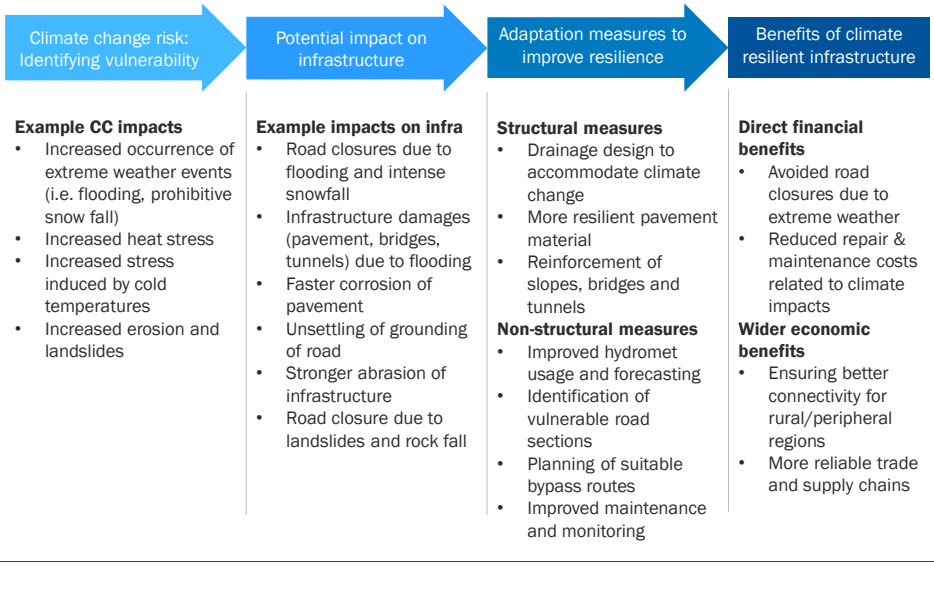
# Integrating climate resilience into our operations



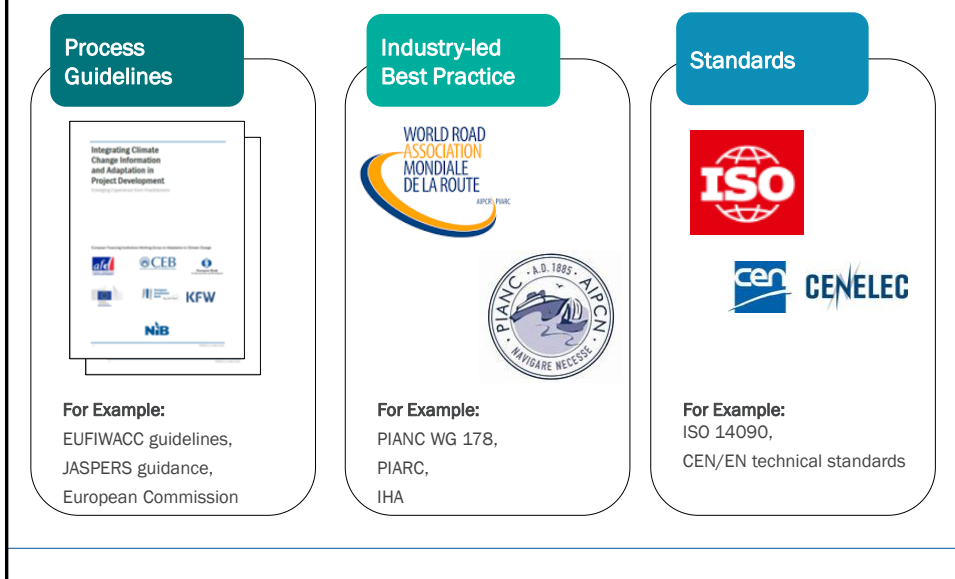
## Integrating climate resilience in EBRD investments



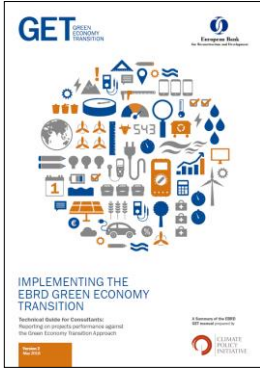
## Climate resilient road infrastructure



## Guidance and standards to reduce transaction costs and improve replicability



# EBRD Green Economic Transition Guide

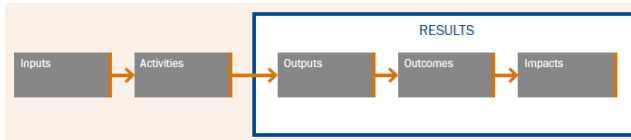


## CLIMATE RESILIENCE OUTCOMES

EBRD considers that there are six types of intended physical climate resilience outcomes that matter for its investment operations:

- i. Increased water availability in the face of increasing climatic variability;
- ii. increased energy availability in the face of increasing climatic variability;
- iii. Increased agricultural potential in the face of increasing climatic variability;
- iv. Increased human health & productivity in the face of increasing climatic variability;
- v. Reduced weather-related disruption; and
- vi. Reduced weather-related damage.

A project must be able to demonstrate at least one of these outcomes in order to be considered as a GET climate resilience project and for GET adaptation finance to be reported.



## Transport sector project examples



## Bosnia & Herzegovina Roads: flood repair and upgrade



### CLIENT AND PROJECT

A €65 million loan provided to the Bosnian Roads Company for the repair and upgrade of 34 road sections that were heavily damaged by the unprecedented floods of 2014.

### CLIMATE RESILIENCE MEASURES

The feasibility work for the project assessed the design of vulnerable road section using climate change projections. The following climate resilience measures were recommended:

- the enhancement of drainage systems
- strengthening of vulnerable slopes, bridges and tunnels and deepening bridge abutments
- the installation of rock mattresses and other practices to reduce long-term erosion risks
- Widening and improving bypass roads

### FINANCIAL STRUCTURE

EBRD loan	€65 million
(of which adaptation)	(€35 million)
World Bank loan	€50 million
EIB loan	€50 million



### TECHNICAL ASSISTANCE

Supported with funds from the Central European Initiative, experts from the Swedish Transport Agency work together with the Road Company on:

- Strengthening collaboration and analysis of climate data with the Hydromet Institute & Sava River Basin agency
- Assessment of major climate risks and mapping out vulnerabilities in the road network
- Analysis of road design and best international practice

## Kazakhstan Atyrau - Astrakhan: road repair and upgrade



### PROJECT VULNERABILITY CONTEXT

The section of the Road to be reconstructed is located in the south-western part of Atyrau region. In the project area, increasing mean temperatures in the order of 2-3 degrees celsius over the lifetime of the project (and associated increase in number of extreme temperature days) was identified as the main climate change risk. If road pavement specifications do not incorporate this shift in temperatures, increased longitudinal cracking, rutting and fatigue cracking are expected.

### CLIMATE RESILIENCE MEASURES

The project specific climate risk assessment recommended the follow measures:

- Structural Measures
  - pavement and bridge joint specifications addressing anticipated shifts in temperature
- Non-Structural Measures
  - Enhanced information gathering
  - Enhanced maintenance practices
  - Restrictions on heavy vehicles





## Investing in climate resilient ports in Morocco: Nador West Med



### CLIENT AND PROJECT

Sovereign-guaranteed loan for the NWM project, which consists of a new deep-water port in Northern Morocco. Climate change adaptation measures have been / will be included in tender documents in both the construction and operation phase.

### CLIMATE RESILIENCE MEASURES

- Installation of surfacing, mechanical and electrical equipment designed to withstand projected temperature extremes (>40 C)
- Installation of surface drainage design able to cope with extreme rainfall and overtopping
- Installation of storage facilities able to withstand extreme temperatures and weather
- Emergency Response Plan for extreme weather events.
- Coastal Erosion Monitoring Scheme for the local area (to provide early warning of climate-related impacts).
- Structured Asset Maintenance Programme



### FINANCIAL STRUCTURE

TOTAL:	€943mn
Sponsor Contribution:	€468mn (in MAD)
EBRD:	€200mn
African Development Bank:	€100mn
Arab Fund/FADES:	€175mn (in KWD)



## Investing in Climate Resilient Ports in Morocco: ANP Port Upgrade



### CLIENT AND PROJECT

'la houle exceptionnelle' of January 2014 has further raised awareness of climate risks to port infrastructure in Morocco.

EBRD is preparing a loan with ANP, Morocco's Ports Agency for a Priority Investment Programme.

### FINANCING

- In addition to the EBRD Loan, the GEF Special Climate Change Fund has awarded USD 6 million grant resources to co-finance innovative investment in port sector climate resilient upgrades in Morocco, as well as fund a large institutional support programme.

### TECHNICAL ASSISTANCE

- Capacity Building: Moroccan port authorities will be supported to benefit from emerging PIANC guidance (PIANC Working Group 178 on Climate Change Adaptation for Ports and Navigation Infrastructure).



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## Contact



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