The EBRD and Climate Change Financing
Climate Resilience in Ports

Dr Craig Davies, Head of Climate Change Adaptation, EBRD

Climate Change Adaptation for Ports and Navigation Infrastructure
PIANC Seminar and Workshop (co-promoted by CEDA)
London, 7th March 2016

European Bank
for Reconstruction and Development

Introduction to the EBRD

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The EBRD is a **triple-A** rated* bank with a capital base of **€30 billion**.

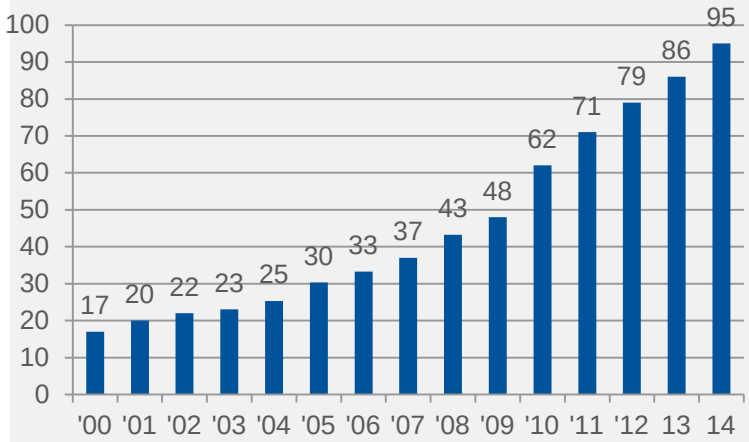
Operating in **36 countries** from central Europe to central Asia, the EBRD:

- Promotes transition to market economies
- Mobilises foreign direct investment
- Improves people's lives through enhancing municipal services
- Encourages sustainable development

The EBRD is owned by **65 countries** and two inter-governmental institutions.

* From all three main rating agencies (S&P, Moody's and Fitch)

The EBRD's annual business volume 2000-2014 (cumulative, EUR in billion)



Note: Unaudited as at 31 December 2014

Where the EBRD invests

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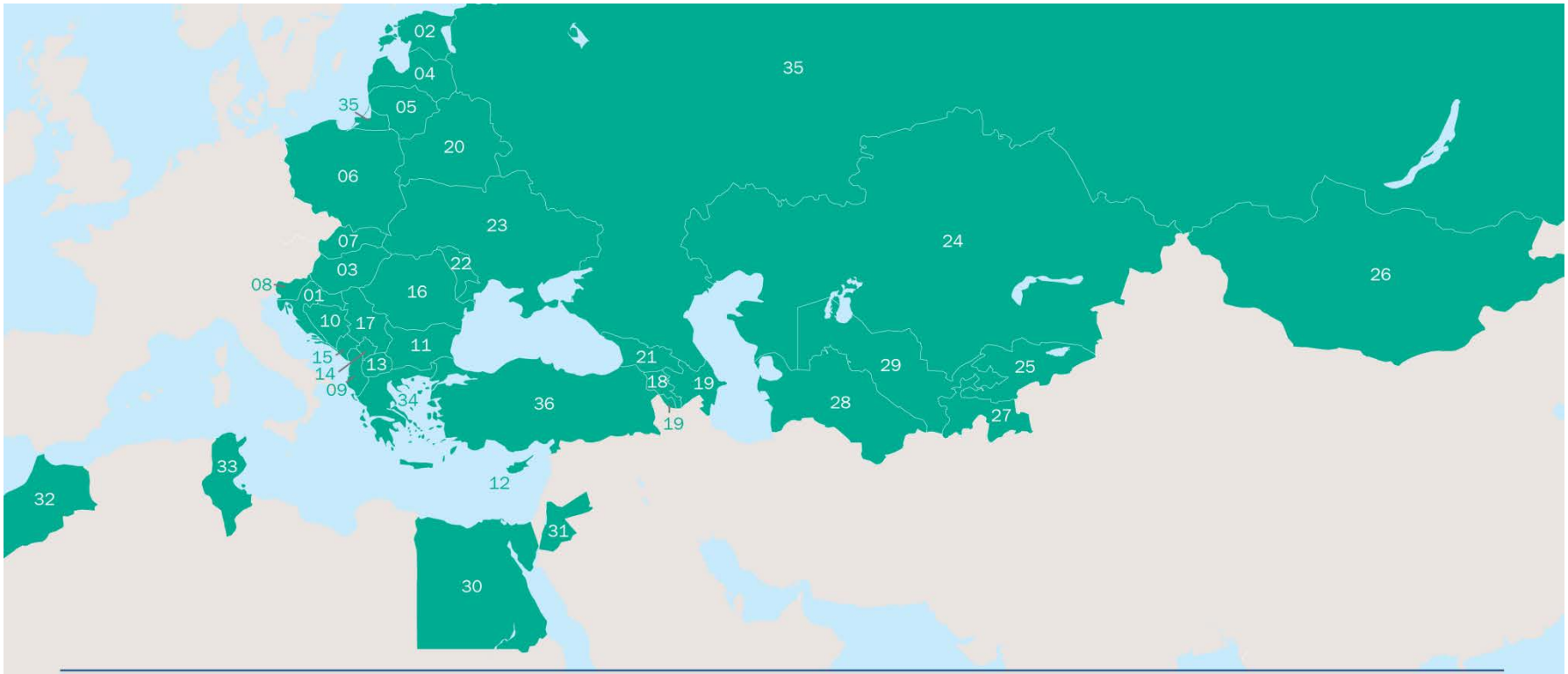

WHERE WE INVEST

Central Europe and the Baltic states
01 Croatia
02 Estonia
03 Hungary
04 Latvia
05 Lithuania
06 Poland
07 Slovak Republic
08 Slovenia

South-eastern Europe
09 Albania
10 Bosnia and Herzegovina
11 Bulgaria
12 Cyprus
13 FYR Macedonia
14 Kosovo
15 Montenegro
16 Romania
17 Serbia

Eastern Europe and the Caucasus
18 Armenia
19 Azerbaijan
20 Belarus
21 Georgia
22 Moldova
23 Ukraine

Central Asia
24 Kazakhstan
25 Kyrgyz Republic
26 Mongolia
27 Tajikistan
28 Turkmenistan
29 Uzbekistan

Southern and eastern Mediterranean
30 Egypt
31 Jordan
32 Morocco
33 Tunisia

34 Greece
35 Russia
36 Turkey

Carbon intensity in the EBRD region

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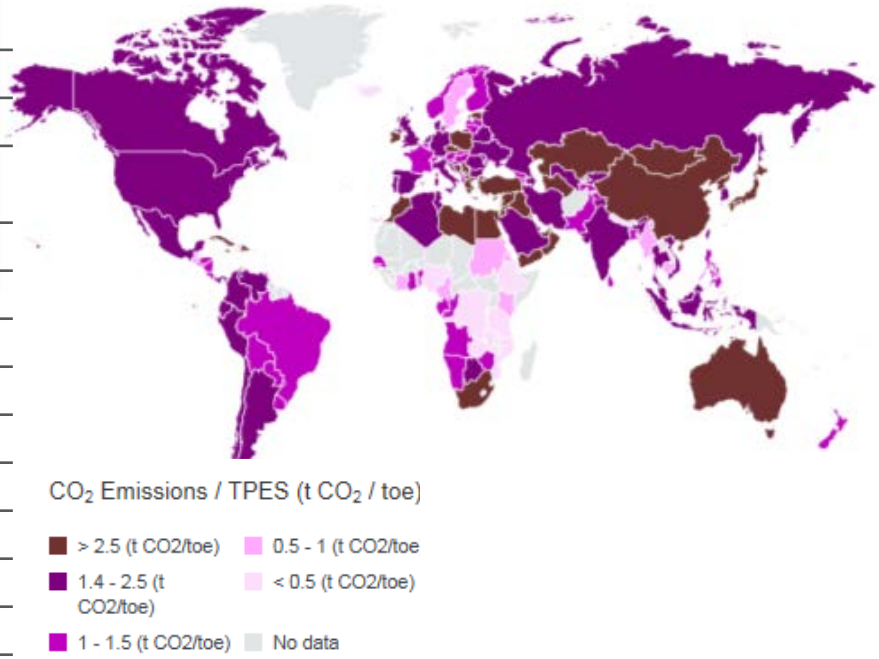
- 11 out of the 20 most carbon-intensive economies in the world are in the EBRD region due to the heavy reliance on fossil fuels in their energy mix. 9 out of those 11 are net-importers of fossil fuels.
- Reducing the energy and carbon intensity through energy efficiency and renewable energy deployment is in line with the national security and economic interest of the EBRD region.

The World's 30 most carbon-intensive countries	Carbon intensity rank* (tCO_2 emission /toe TPES)	Overall energy self-sufficiency (%)
Mongolia	2nd (3.61)	465%
Kosovo	3rd (3.38)	74%
Bosnia and Herzegovina	5th (3.18)	68%
Serbia	8th (3.05)	75%
Kazakhstan	9th (3.02)	220%
Poland	12th (3)	73%
Estonia	13th (2.96)	92%
FYR Macedonia	14th (2.93)	51%
Greece	16th (2.92)	39%
Cyprus	17th (2.9)	5%
Jordan	19th (2.85)	4%
Morocco	21th (2.76)	9%
Turkey	29th (2.59)	26%



Water stress in the EBRD region

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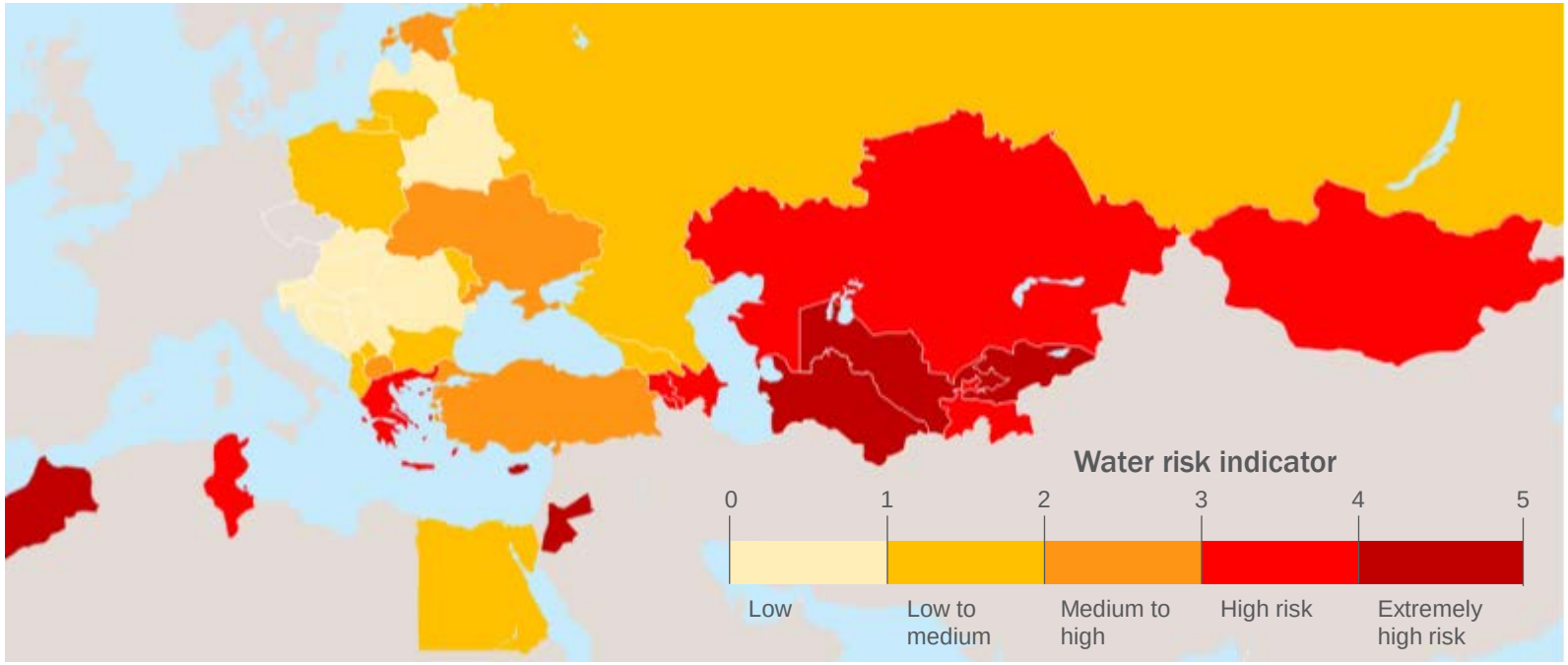
- Water efficiency is an important driver of business competitiveness, especially in the most water-scarce EBRD region such as SEMED and Central Asia.
- To mitigate the risks associated with water scarcity and the impact of climate change (e.g. variable precipitation), the EBRD invests in projects that promote water efficiency and support the introduction of innovative, water efficient technologies, with the focus on demand-side water efficiency improvements across a wide range of sectors.



The EBRD's climate actions

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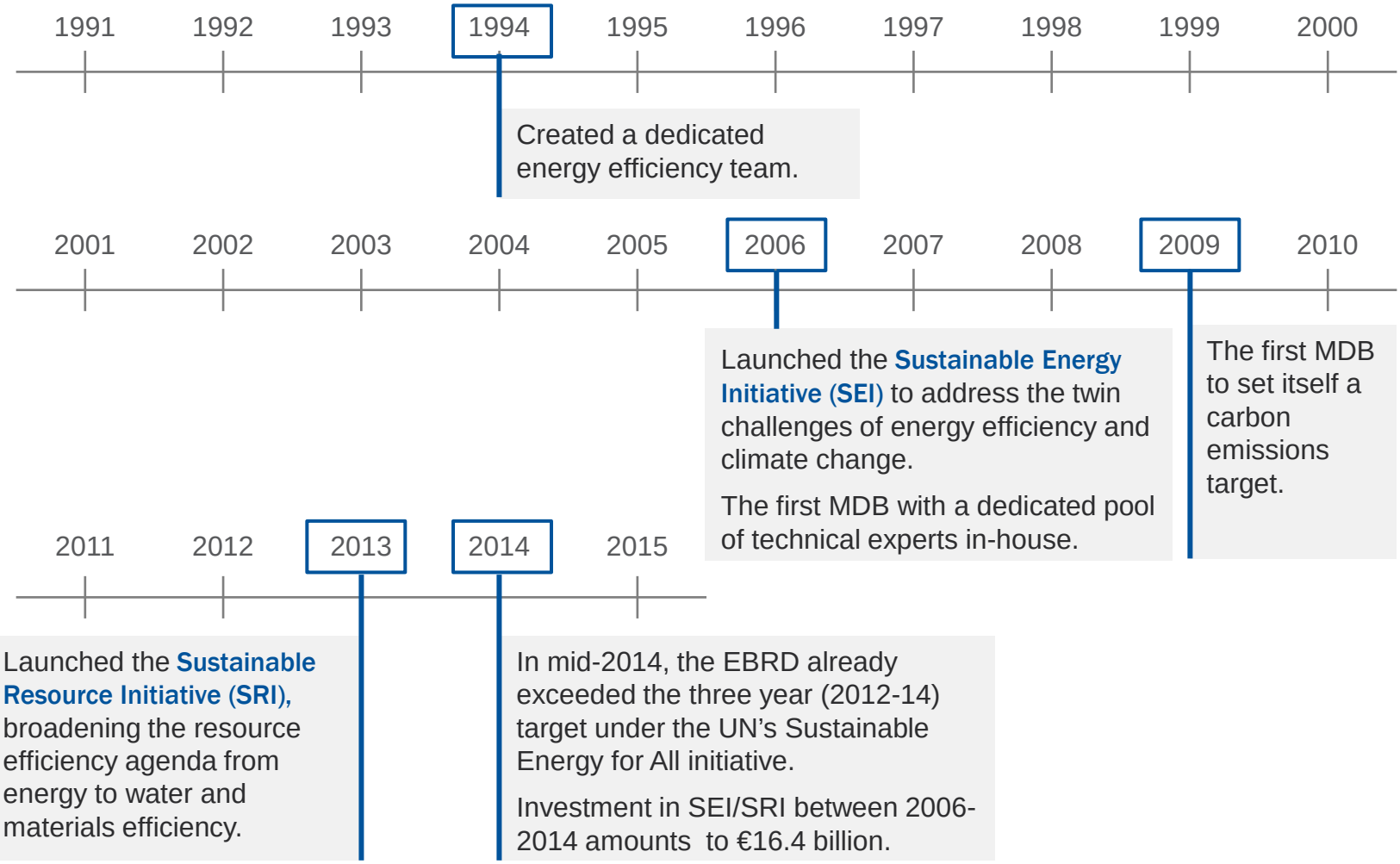

SRI finance since 2006

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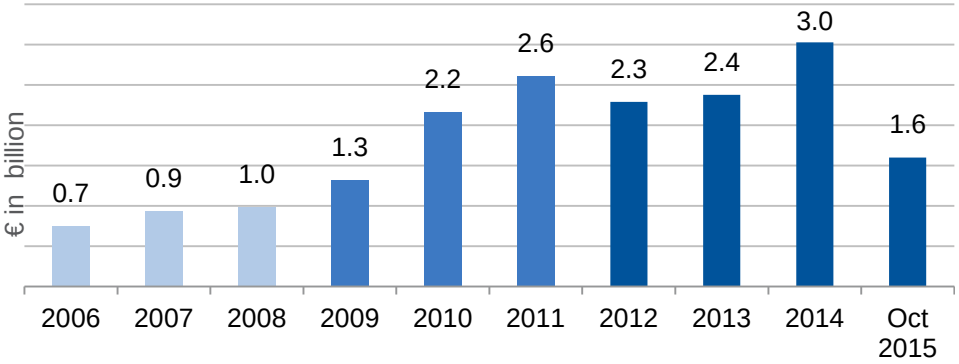
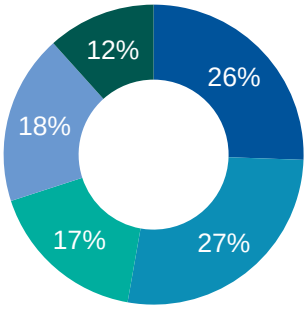
SRI ABV since 2006 (€ in billion)



€18 billion invested in **1,020 SRI projects** between 2006 and Oct 2015.

- **73 m tonnes CO_2/y** of emissions reduced
- **25 million m^3/y** of water saved
- **1 million tonnes/y** of waste avoided

SRI by business area (€ in billion)



Corporate energy efficiency	4.9
Cleaner energy production	4.6
Sustainable energy financing facilities	3.3
Renewable energy	3.1
Municipal infrastructure energy efficiency	2.1
Total	18

SRI by region (€ in billion)

Russia	3.2
South-Eastern Europe	3.3
Eastern Europe and the Caucasus	3.1
Central Europe and the Baltic	3.0
Turkey	2.7
Central Asia	1.4
South and Eastern Mediterranean (SEMED)	0.6
Regional	0.7
Total	18

EBRD's adaptation activities

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- Many of the EBRD's countries of operation are vulnerable to climate risks such as water scarcity, altered hydrology and flooding.
- Climate vulnerability is worsened by poor infrastructure, suboptimal technologies, poor policy context and lack of data, and limited access to appropriate finance.
- The EBRD helps clients undertake actions to adapt to climate change and make them resilient by identifying potential climate risks and providing both technical and financial support.

Our adaptation business tools include:

- Feasibility study methodology for climate-resilient water supplies
- Guidance on making ports and coastal infrastructure climate resilient
- Analytical tools for managing climate change risks to hydropower
- Industrial water efficiency audits

The EBRD's adaptation finance

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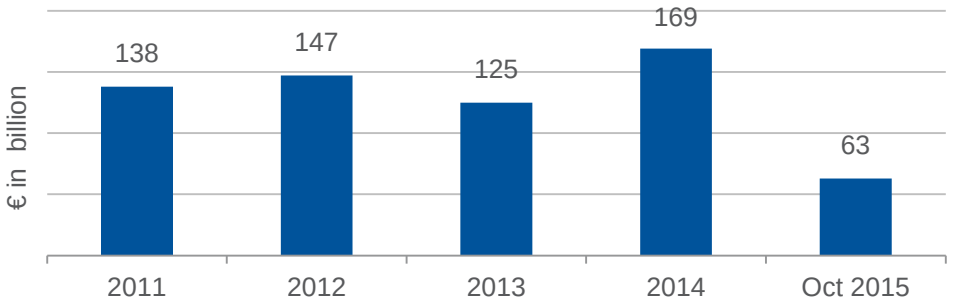
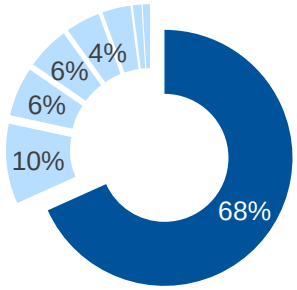
Climate resilience investment since 2011 (€ in million)



€641 million
invested since 2011.

107 adaptation
projects signed

By business area (€ in million)



Municipal & environmental Infrastructure	439
Transport	65
Agribusiness	40
Power and Energy	35
Financial institutions	28
Natural Resources	23
Property and Tourism	6
Manufacturing and Services	7
Total	641

By region (€ in million)

South-Eastern Europe	278
Central Asia	98
Southern and Eastern Mediterranean	82
Turkey	60
Eastern Europe and Caucasus	44
Central Europe and Baltics	43
Russia	32
Regional	4
Total	641

MDB climate finance 2014
The EBRD's contribution

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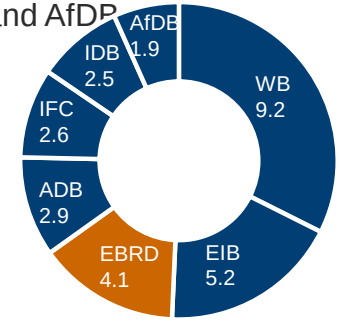
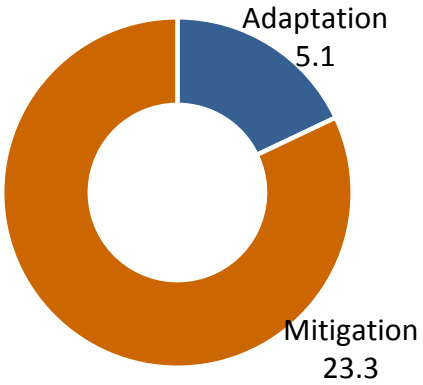
$28.3 billion

in climate finance provided by WBG, EIB, EBRD, ADB, IFC, IDB and AfDB



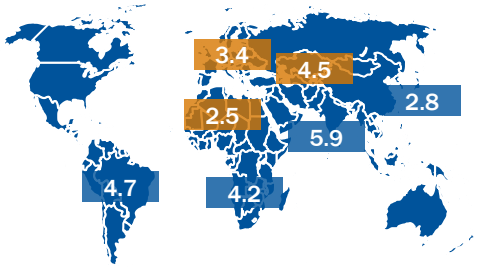
MDBs	USD in billions
WB	9.2
EIB	5.2
EBRD	4.1
ADB	2.9
IFC	2.6
IDB	2.5
AfDB	1.9
Total	28.3

By Sector (USD in billions)



Sectors (mitigation only)	USD in billions
Renewable energy	8.2
Energy efficiency	5.0
Transport	6.3
EE and RE financing through financial intermediaries	2.0
Cross-sector activities and others	1.0
Agriculture, forestry and land use	0.4
Waste and waste water	0.2
Total	23.3.

By Region (USD in billions)



Regions	USD in billions
Non EU-Europe and Central Asia	4.5
East Asia and the Pacific	2.8
EU 13	3.4
South Asia	5.9
Sub-Saharan Africa	4.2
Latin America and the Caribbean	4.7
Middle East and North Africa	2.5
Multi-regional	0.2
Total	28.3

EBRD in the Port Sector

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A portfolio of 50 projects and 1 bln EUR invested in 17 countries

To deliver Transition...

- Bridging the infrastructure gap
- Port Sector reform: Restructuring, Corporatization and Commercialization (tariff reform, institutional development, etc.)
- Active support of private sector participation

.... And tackle climate change

- More focus on port sector: Promotion of maritime/intermodal transport
- Identification of EE opportunities for greener ports (TC funds available)
- Introduction of green standards and requirements (eg. ISO 50000, carbon footprint)
- Mobilization of grants and incentives to overcome barriers
- Identification of project risks and support for climate resilience design

How to deliver Sustainable Ports?

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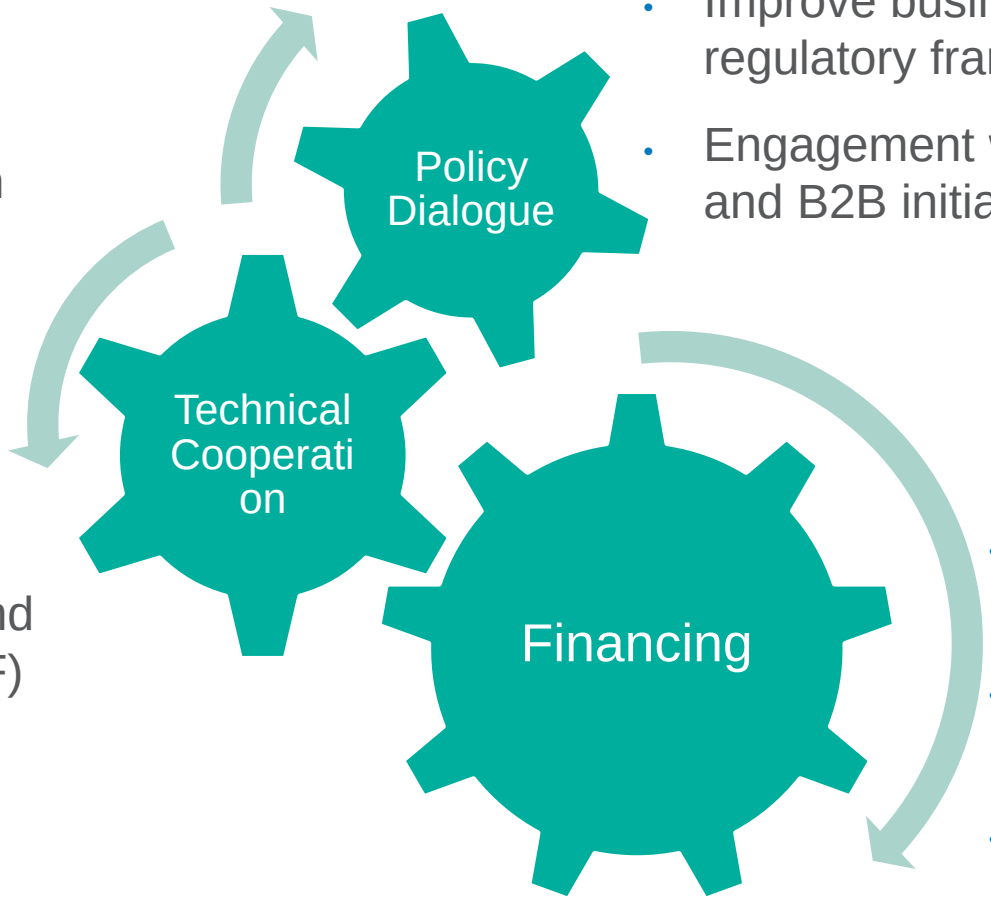
- Over EUR 18 mln p.a. mobilized to support sector reforms and challenges
- TCs for project identification (eg. Energy Audits) and preparation (IPPF)



- Improve business environment and regulatory framework
- Engagement with MDBs, donors and B2B initiatives (eg. PIANC)

- Tailored financing options
- Risk mitigation – catalyst (IFI status)
- Mobilize climate funds

EBRD investments in sustainable ports

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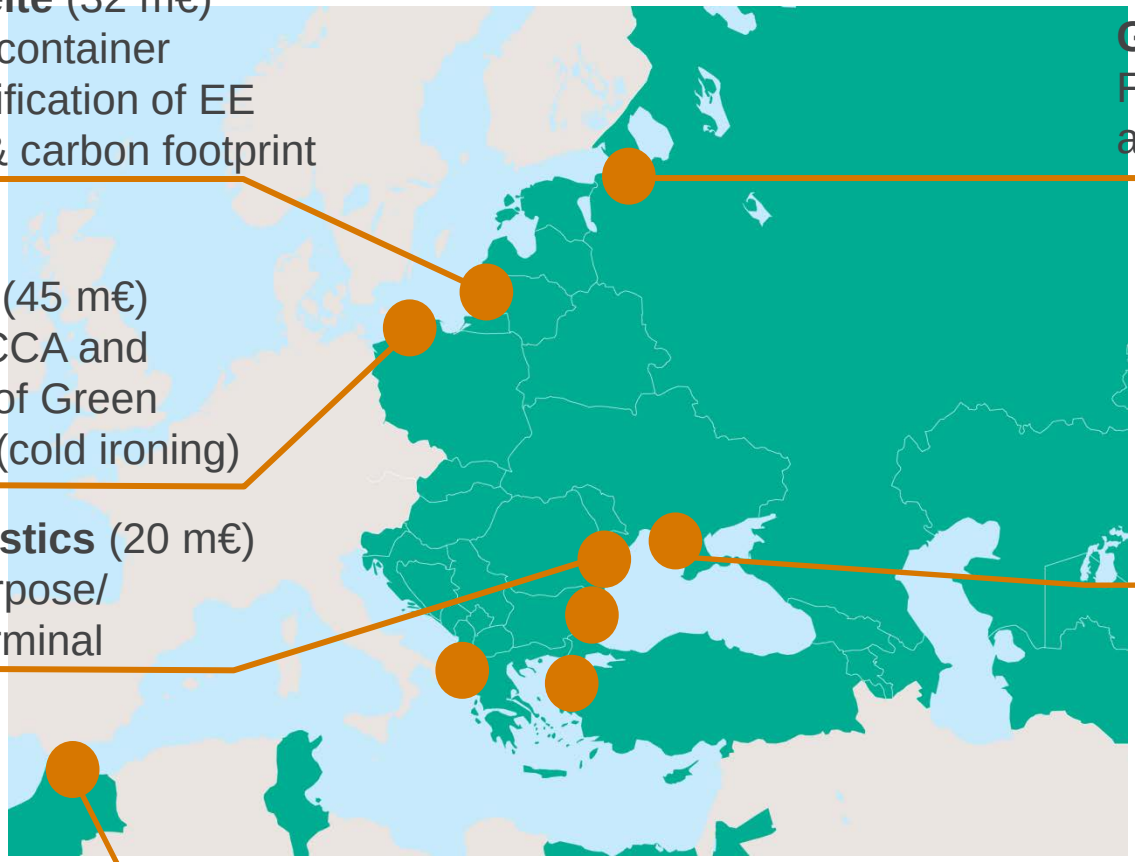
Klaipeda Smelte (32 m€)
Transhipment container terminal: Identification of EE opportunities & carbon footprint

DCT Gdansk (45 m€)
Assessment CCA and incorporation of Green Technologies (cold ironing)

Danube Logistics (20 m€)
New multi-purpose/ intermodal terminal



Nador West Med (200m€)
Review of opportunities for Sustainability and CCA

Globalports (80 m€)
Financing EE programme across four terminals

Port Odessa
(various)
Export Capacity for Grain with greener technologies

EBRD internal guidance on climate resilience in port investments

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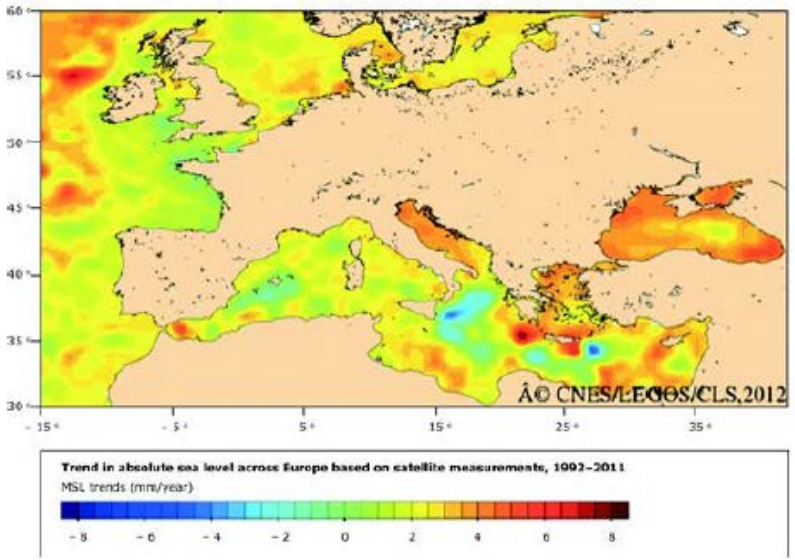
Internal technical guidance developed by EBRD in 2013

- A 'first step' intended to pilot approaches and build experience
- Subsequently applied on a number of port sector investments

1. Introduction to climate change impacts
2. Geographical Location
3. Physical Site
4. Infrastructure Type
5. Adaption Measures
6. Further Work



Port Expansion: Poland

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Key climate risks:

- Changes in sea ice (positive)
- Sea level rise
- Changes in rainfall intensity
- Changes in wave conditions

Adaptation measures adopted:

- Quayside structures designed to cope with sea level rise of approximately 6-10mm per year over the next 100 years
- Communication channel established with the Port Authority to receive relevant information about sea level extremes and wave overtopping of port structures

New Port Facility: Morocco

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Key climate risks:

- Sea level rise
- Increased storminess
- Increased extreme heat events

Adaptation measures adopted:

- Analyse breakwater design taking into account expected sea-level rise over the design life of the Port
- installation of surfacing, mechanical and electrical equipment designed to withstand
- projected temperature extremes (>40 degrees C)
- Installation of surface drainage design able to cope with extreme rainfall and overtopping events
- Installation of storage facilities able to withstand extreme temperatures and extreme weather events
- Adoption of Emergency Response Plan and Coastal Erosion Monitoring Scheme

Contacts

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For all further enquiries, please contact:

Craig Davies

Associate Director

Head of Climate Change Adaptation

Energy Efficiency and Climate Change Team

email: daviesc@ebrd.com

Marcial Bustinduy

Principal Sustainable Transport Specialist

Transport

email: bustindm@ebrd.com

EBRD

One Exchange Square

London EC2A 2JN, United Kingdom