Climate Finance Development
Jan-Willem van de Ven

Clima South Seminar, Bonn, 29 September 2014

European Bank
for Reconstruction and Development

What is the EBRD?

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for Reconstruction and Development

International financial institution, promotes transition to market economies in 35 countries from central Europe to central Asia

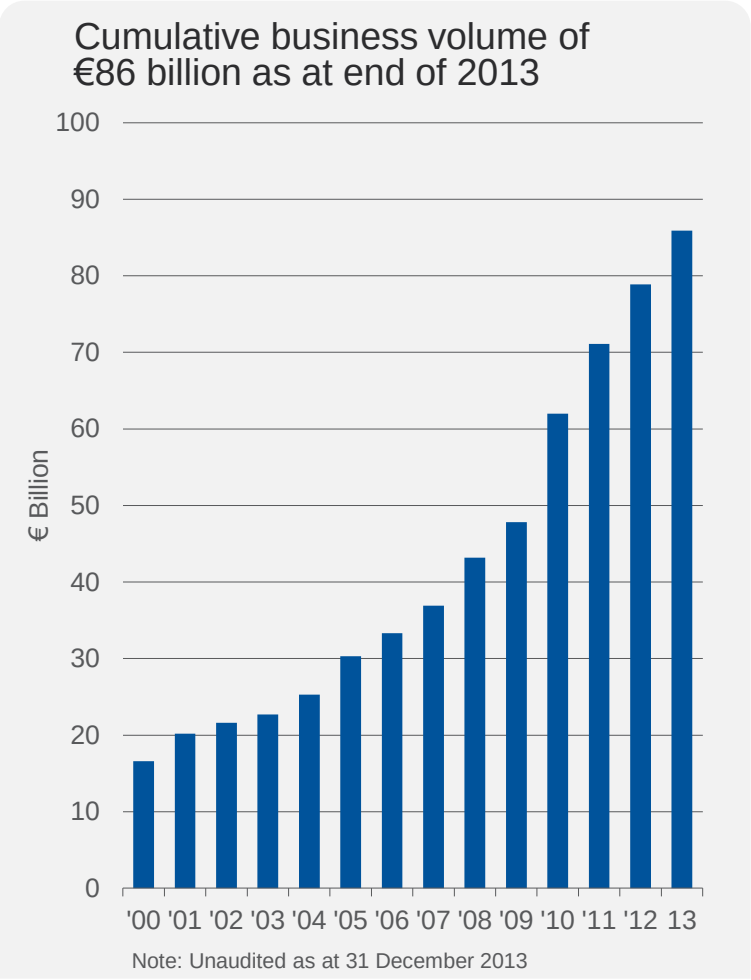
In 2011, the Bank expanded its operations to include Egypt, Morocco, Tunisia and Jordan (Southern and Eastern Mediterranean – SEMED region)

In 2014, the EBRD welcomed Cyprus and Libya as a recipient country and member respectively.

Owned by 65* countries and two inter-governmental institutions

Capital base of €30 billion

*Libya is yet to become a fully ratified member of the EBRD



EBRD: Shareholding Structure and triple-A rating

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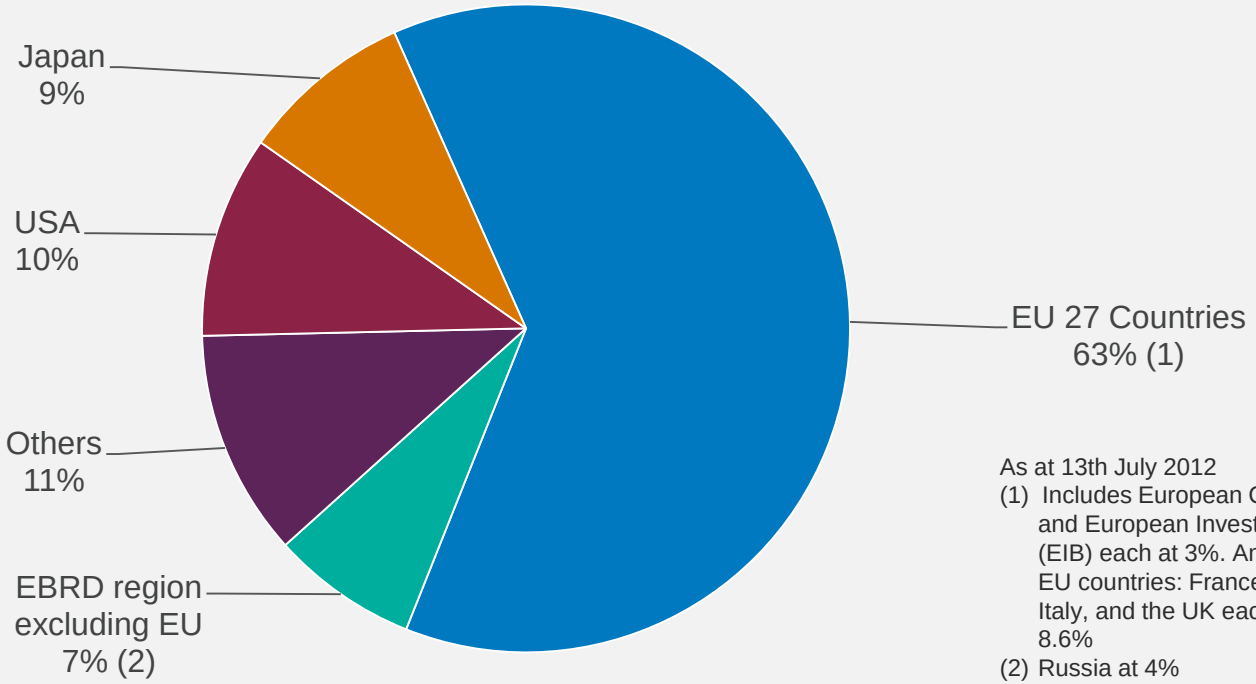
The EBRD has a triple-A rating from all three main rating agencies (S&P, Moody's and Fitch)

Shareholding Structure



As at 13th July 2012
(1) Includes European Community and European Investment Bank (EIB) each at 3%. Among other EU countries: France, Germany, Italy, and the UK each holds 8.6%
(2) Russia at 4%

The EBRD and its objectives

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Objectives:

- To promote transition to **market** economies by investing mainly in the private sector
- To **mobilise** significant foreign direct investment
- To support **privatisation**, restructuring and better municipal services to improve people's lives
- To encourage environmentally sound and **sustainable** development

EBRD finances diverse range of enterprises

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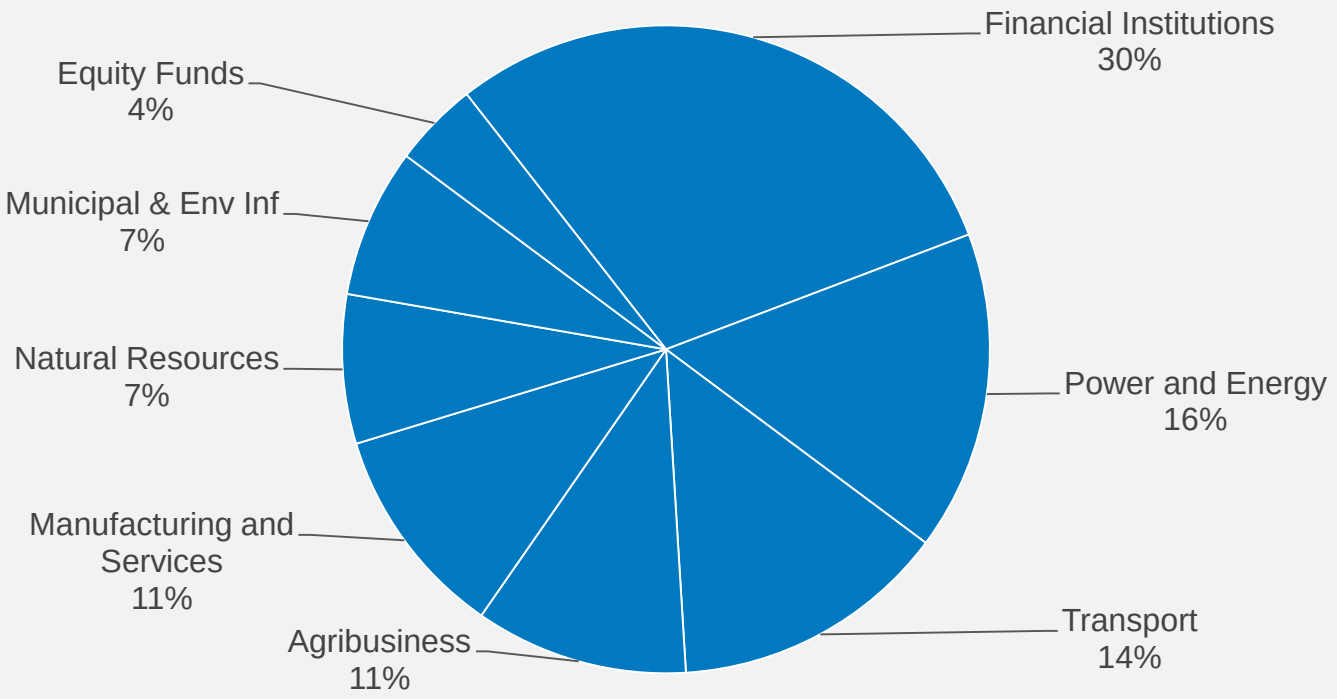

Note: Unaudited as at 31 December 2013

EBRD and Climate Finance

Implementing Sustainable Resources and Sustainable Energy Initiatives (SRI/SEI)

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Barriers to sustainable energy investments

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Credit-related risks

- high perceived credit risks
- long pay-back period for investments in energy supply and utilities
- commercial loans not readily available

Behavioural and technology-related

- information barriers: consumers have a high discount rate for decisions on EE investments (based on first costs rather than lifecycle savings)
- limited market availability of energy efficient technologies

Pricing and policy

- limited policy support, capacity and expertise
- energy tariffs not reflective of the costs of generation externalities
- low collection rates (ETCs)
- reforms to support renewable developers inadequate in some CoOs
- unclear carbon pricing signals
- inadequate pace of industrial restructuring

MDB Climate finance in 2013 Results Joint Report

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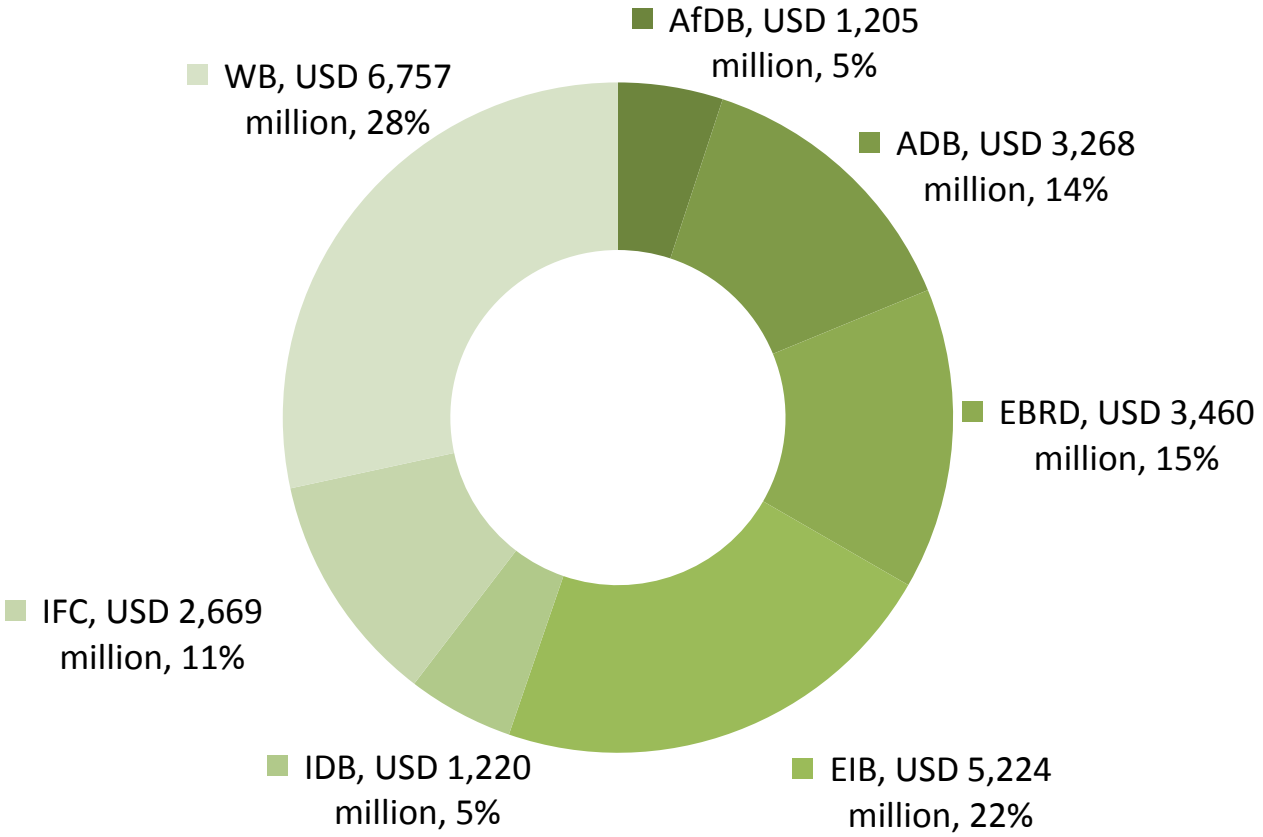

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Sustainable Resource Initiative

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Sustainable Resource Initiative (SRI) an umbrella initiative that was launched in 2013 that includes

- the current Sustainable Energy Initiative (SEI) focussed on:
  - energy savings
  - renewable energy production
  - GHG emission reduction
  - adaptation, and
- materials efficiency and water efficiency

The Sustainable Energy Initiative

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- The EBRD has been engaged in sustainable energy finance since its establishment.
- In 2006, the EBRD launched the SEI to address the twin challenges of energy efficiency and climate change.
- The EBRD was the first MDB with a dedicated pool of technical experts in-house.
- In 2009, the EBRD became the first MDB to set itself a carbon emissions target.
- In mid-2014, the EBRD has already exceeded the three year (2012-14) target under the UN's Sustainable Energy for All initiative.

The EBRD's engagement in the context of its countries of operations:

- high share of heavy industry
- ageing infrastructure
- high energy intensity
- a lack of market-based pricing for energy

SEI business model

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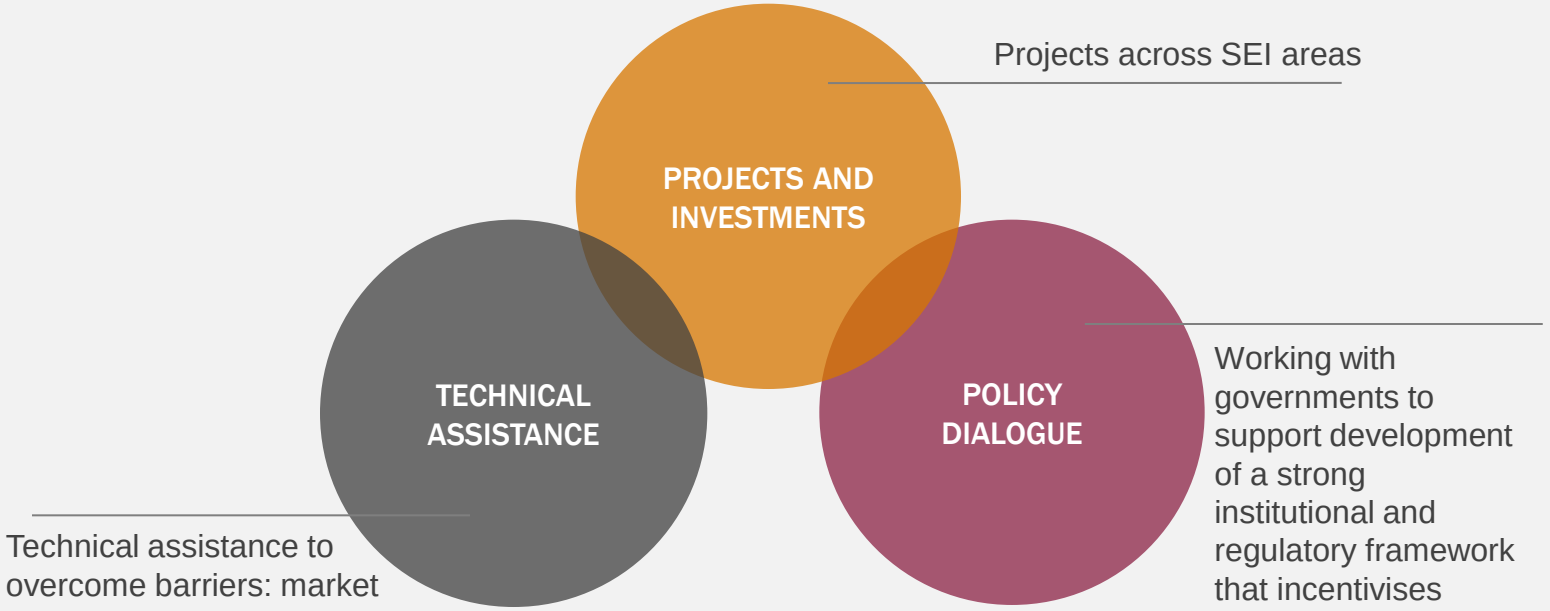

Projects across SEI areas

Technical assistance to overcome barriers: market analysis, energy audits, carbon asset development, training awareness raising, grant co-financing to provide appropriate incentives and address affordability constraints

Working with governments to support development of a strong institutional and regulatory framework that incentivises sustainable energy, efficient use of resources and carbon market

SEI / SRI business areas

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CORPORATE ENERGY EFFICIENCY

Making energy efficiency investments in energy-intensive industrial processes such as steel manufacturing, aluminium smelting, cement and glass production, as well as major transport investments, such as in railway operating companies.

SUSTAINABLE ENERGY FINANCING FACILITIES

Financing facilities through local financial institutions in countries of operations to support industrial energy efficiency in small and medium-sized enterprises, small-scale renewable energy and building energy efficiency projects.

ENERGY EFFICIENCY IN THE ENERGY SECTOR

Improving energy efficiency of transmission networks and thermal power stations. The ageing energy infrastructure includes a large number of plants with low generation efficiency, high running costs, and excessive pollution and carbon emissions.

MUNICIPAL INFRASTRUCTURE ENERGY EFFICIENCY

Upgrading neglected municipal infrastructure to provide efficient district heating, public transport networks and water supply systems.

RENEWABLE ENERGY

Supporting the development of renewable energy sources by providing project finance and technical assistance to shape the institutional and regulatory frameworks for renewable energy investments.

CLIMATE CHANGE ADAPTATION

Developing approaches to integrate climate risk management and adaptation into project appraisal and development with a particular focus on the private sector.

SRI / SEI instruments

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- Policy dialogue
- Capacity Building
- Technical Assistance
- Concessional / Donor Co-financing
- Carbon Market Development
- Monitoring, Reporting and Verification

Integrated approach; from policy and regulatory developments to delivery of concrete investment projects!

EBRD project cycle

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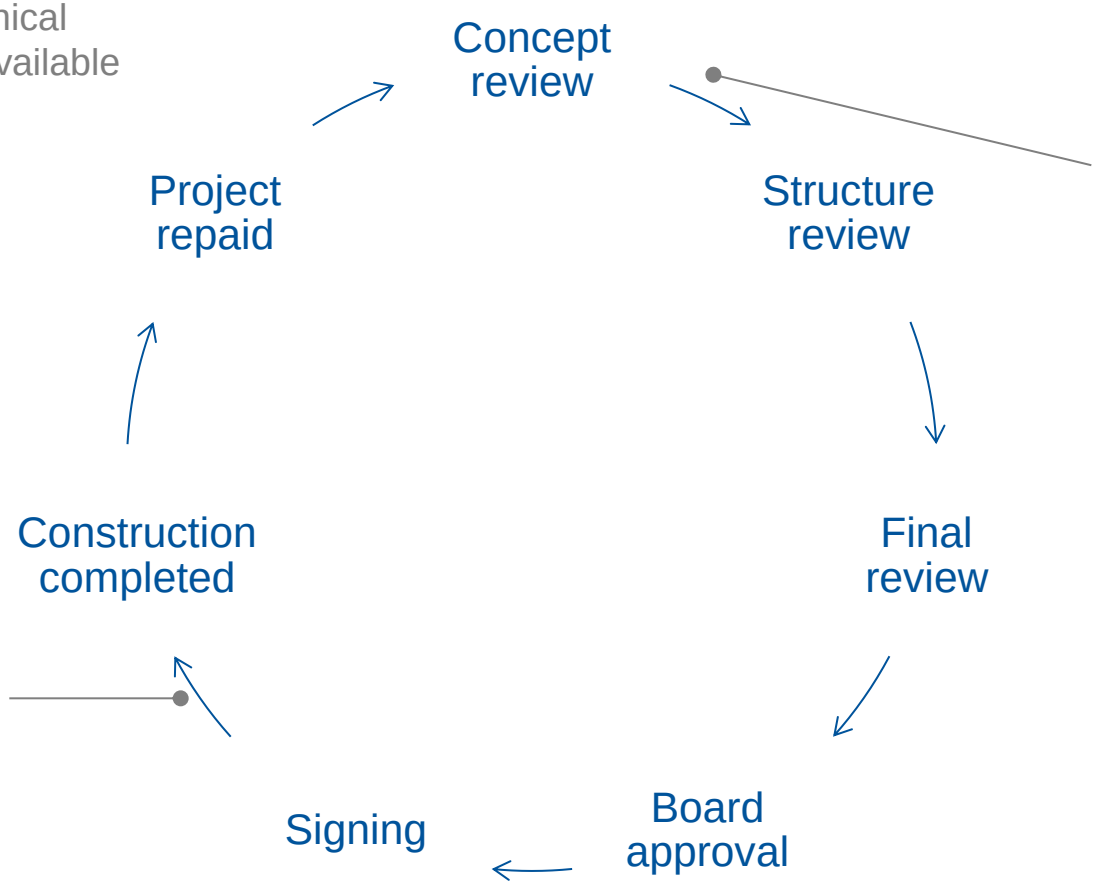
Along the project cycle,
Stages at which technical assistance is made available



Technical assistance
- Feasibility study
- Energy audits
- Investment plan review

Technical assistance
- Implementation
- Validation

The role of concessional finance

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1. Concessional finance addresses specific barriers
   - lack of CO_2 pricing
   - cost of technology due to lack of availability
   - capital gaps
   - risks.
2. It rewards energy and CO2 savings.
3. It protects clients as the complexity of climate finance is absorbed by the EBRD (e.g. reporting, MRV, co-benefits).

The EBRD uses concessional finance from a range of sources:

- European Commission
- Clean Technology Fund
- Global Environmental Facility
- bilateral donors, including Fast Start Finance

SEI finance volumes by regions

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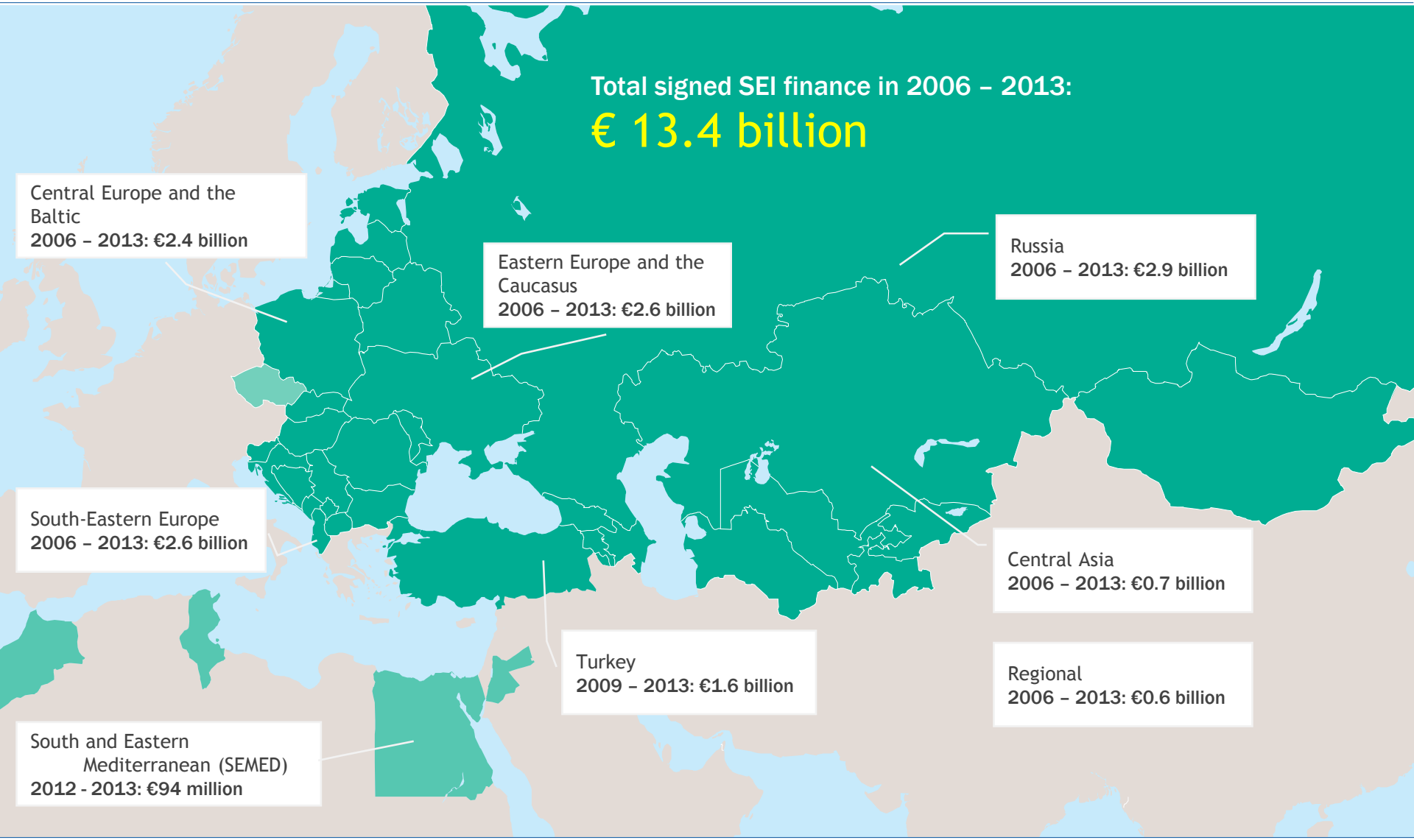

SEI finance by business areas

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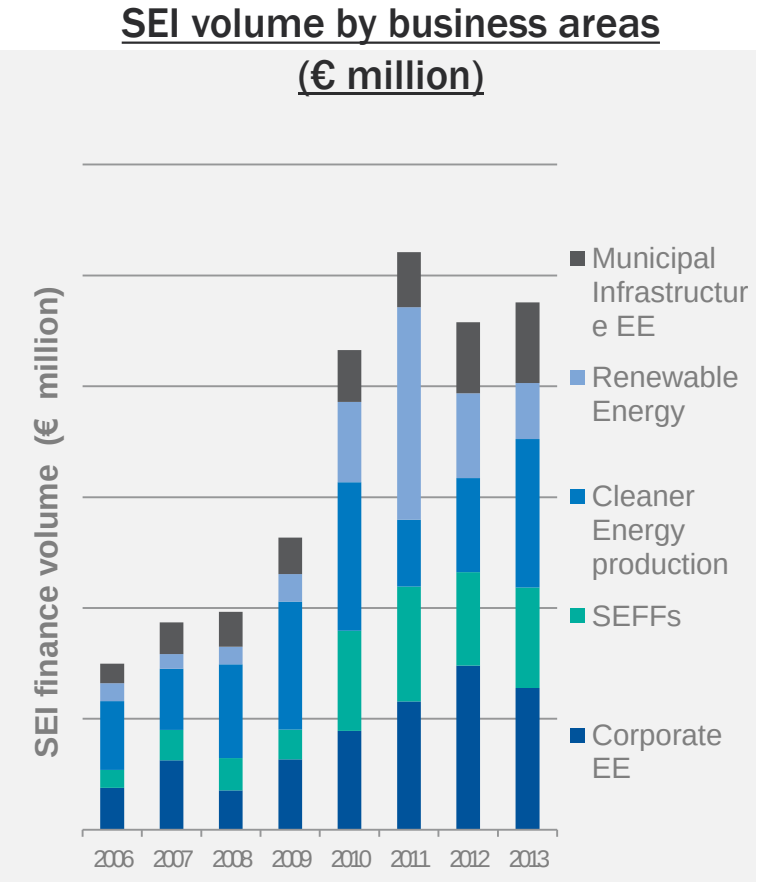
- From 2006 to 2013, SEI finance amounts to €13.4 billion.
- SEI business volume has shown an increasing trend since 2006, with a peak in 2011 (€2.6 billion).
- Cleaner energy production and corporate EE account for the bulk of SEI investments since 2006.
- Since 2006, the share of SEFFs and renewable energy projects has increased significantly.



Climate Finance Applied

Examples

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SEFFs

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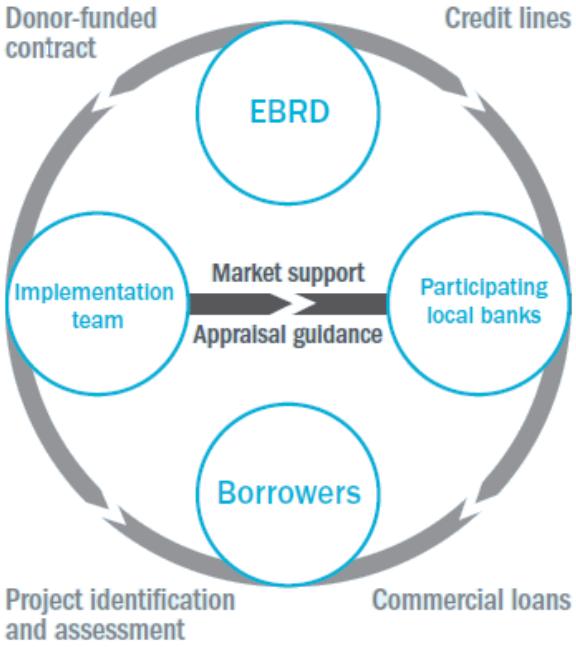
- Through SEFFs the EBRD extends credit lines to local financial institutions.
- Local financial institutions on-lend funds to small and medium-sized businesses, corporate and residential borrowers.
- Finance is provided for energy efficiency and small-scale renewable energy projects.
- SEFFs establish project implementation teams who support local financial institutions and their clients.

SEFFs are effective in reaching a wide range of small and medium-sized business and residential clients



MIDSEFF

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FACILITY

The Mid-sized Sustainable Energy Financing Facility (MidSEFF) provides Turkish banks with credit lines for sustainable energy sub-loans, with sub-loan values of €10-40 million. Following the successful co-operation with the first three Turkish banks, EBRD launched an extension framework operation.

FINANCIAL STRUCTURE

EBRD loans (2010)	€ 400 million
Extended EBRD loans (2011)	€ 300 million
of which SEI	*€ 700 million*
EIB co-financing (2010)	€ 300 million
Total facility volume	€ 1,000 million

EU-FUNDED TECHNICAL ASSISTANCE

- €2.5 million for consultants to monitor and appraise sub-projects
- €2 million for the development of voluntary carbon market

PARTICIPATING BANKS

AKBANK, Garanti, VakıfBank, DenizBank, TÜRKİYE İŞ BANKASI, FİNANSBANK, YapıKredi

ESTIMATED IMPACT

- MidSEFF supported 500 MW of new wind, hydro, solar and geothermal generation capacity.
- Emission reductions: 730,000 tCO_2/year

SUSTAINABLE ENERGY FINANCING FACILITIES
LOCAL BANK FINANCE IN TURKEY

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FACILITY

Turkish Sustainable Energy Financing Facility (TurSEFF) provides local banks with credit lines for sustainable energy investments in the residential, industrial and commercial sectors (sub-loans of up to €5 million).

TECHNICAL ASSISTANCE

- €2.4 million provided by the Climate Investment Funds and €7.5 million from the EU were used for project implementation support.
- This included supporting partner banks with pipeline development, loan appraisals, energy audits, promoting the facility and training.

INNOVATIVE FINANCIAL MIX

EBRD loans	$222 million
of which SEI	*$222 million*
CTF concessional loan	$47 million
JBIC loans	$ 20 million
Total facility value	$ 289 million

TURSEFF

5 PARTICIPATING BANKS

AKBANK
DenizBank
Garanti
TÜRKİYE İŞ BANKASI
VakıfBank

ESTIMATED IMPACT

Over 370 sub-projects financed through five partner banks by the end of 2012 are estimated to result in:

- Energy savings: 3,300 GWh/year
- Emission reductions: 645,210 tCO_2/year

Egypt – Power Sector Energy Efficiency Project

European Bank
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Signed 31 March 2014

CLIENT

- Arab Republic of Egypt.

PROJECT

- The Bank supports the conversion of two existing open-cycle power plants to combined-gas turbines:
  - the 500 MW Damietta West plant
  - the 1,000 MW El Shabab plant

FINANCIAL STRUCTURE

SEI: 144.2 m€
ABI: 144.2 m€
TPV: 677.1m€

EXPECTED IMPACT

- 1,500 MW gas fired facilities: **Improving efficiencies from 35% to 49%**.
- Energy savings: 57,360 GWh per year
- Emissions reductions: 3,000 tCO_2 per year
- Annual CO2 savings are equal to CO2 content of 1630 billion cans of Coca Cola. If these cans are thrown on the street, they will cover an area twice the size of London.
- Energy production: 750 MW

Ukraine Renewable Energy Direct Lending Facility "USELF"
Eco-Optima Wind Farm

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CLIENT

- Eco-Optima LLC established in 2004 for the development of renewable energy projects in Ukraine, including the construction of wind farms and small hydropower plants.

PROJECT

- The projects supports the construction and operation of five turbines with a total capacity of 12.5 MW in the Staryy Sambir region in Western Ukraine.

FINANCIAL STRUCTURE

- Total project value: EUR 20.5 million
  - EBRD loan EUR 9.5 million
  - CTF loan EUR 3.8 million
  - Other co-financing EUR 7.2 million

EXPECTED IMPACT

- Energy savings: 25,416 GWh per year
- Emissions reductions: 26,940 tCO_2 per year
- Energy production: 12.5 MW

TECHNICAL ASSISTANCE

- The USELF has been supported by EUR 6.62 million technical assistance programme funded by the Global Environmental Facility ("GEF").

- The Eco-Optima project benefitted from the support of the three technical assistance programmes, financed by the USELF:
  - Project Support Unit
  - Regulatory Assistance
  - Strategic Environmental Assessment.

Qairokkum HPP - Integrating Climate Resilience into Tajikistan's Hydropower Sector

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Power & Energy
CO2e red.: 105 kt/yr
Signed 25 July 2014

Project

Financing for rehabilitation of two units at the Kairakkum hydro power plant. This will increase capacity of the plant from 126MW to 142MW, increase the safety level and strengthen the plant's resilience against the projected impacts of climate change.

TECHNICAL ASSISTANCE

EBRD's Special Shareholder Fund, the government of Austria and the UK provided an additional USD4.7mln

- Rehabilitation of hydro power plant to make its operation more climate-resilient
- TC: Integrate climate resilience information into the design of the upgrade by modelling future hydrology outcomes under a range of climate change scenarios

Financing package: collaboration between EBRD, CIF and donors

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Preparatory phase: climate change and hydrological modelling (2010 – 2012)

- Funded by $300K grant from CIF PPCR

Implementation phase: investment design & implementation (2012 onwards)

Feasibility Study

- Funded by €800K grant (Austria)

Implementation to be financed by EBRD and PPCR

- USD 47 million loan (EBRD)
- USD 4 million technical cooperation grant (EBRD, UK DFID)
- USD 11 million grant and USD 10 million concessional finance (CIF PPCR)