CURRENT ISSUES
IN INTERNATIONAL CLIMATE FINANCING

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Note: views in this presentation reflect personal perspective and not those of the EBRD

PRESENTATION OBJECTIVES AND STRUCTURE

- Objectives
  - Outline climate financing challenge
  - Provide insights based on practical climate financing experience
- Structure
  - Financing and climate framework
  - Financing sources and channels
  - Scaling up climate financing in practice

FINANCING AND CLIMATE FRAMEWORK
COPENHAGEN GENERAL

Financing has moved up as a key element of the climate negotiations with the Copenhagen Accord stating that:

> Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries.

FINANCING AND CLIMATE FRAMEWORK
COPENHAGEN DETAIL

The Copenhagen Accord further states that:

> The collective commitment by developed countries is to provide new and additional resources… approaching USD 30 billion for the period 2010-2012 with balanced allocation between adaptation and mitigation.
>
> In the context of meaningful mitigation actions and transparency on implementation, developed countries commit to a goal of mobilizing jointly USD 100 billion a year by 2020 to address the needs of developing countries.

The amount to 2012 is commonly referred to as Fast Start.

FINANCING AND CLIMATE FRAMEWORK
OUTLOOK

Features of post Copenhagen climate financing context may include:

- a gradual implementation of a global agreement starting with a fragmented and incremental build up of the carbon market;
- a relatively weak and volatile carbon price in the short term rising over the medium term;
- need to develop 'early' or 'fast' start measures to compensate for and to ensure that climate change mitigation investment sufficiently scaled-up to achieve inflection of global carbon emissions within the next 10 to 15 years;
- as climate financing framework likely to be designed gradually, important to ensure that initial steps and instruments allow to develop as broad and effective a set of climate programmes and projects as possible.

FINANCING SOURCES AND CHANNELS
RANGE

Range of sources and channels for climate financing includes:

- Bilateral / developed countries budget
- Multilateral funds
- Multilateral development banks
- Carbon market
- Private sector
- Developing countries domestic resources

FINANCING SOURCES AND CHANNELS
BILATERAL FUNDING

Public financing from developed countries generally from national budgets.

Bilateral funds can be channelled direct to beneficiary developing country, through national international development agencies or through multilateral channels.

Pledges to date for FastStart close to $30 billion although additionality unclear.

About two thirds of Fast Start pledges from Japan and EU. Japan currently largest contributor with US and Norway accounting for around a fifth.

Around a third of amounts pledged to date in the form of loans instead of grant.

To date about 80% of funds to mitigation. Balance expected to move towards adaptation.

Funding channel constraint due to fiscal pressure.

FINANCING SOURCES AND CHANNELS

MULTILATERAL FUNDS: GLOBAL ENVIRONMENTAL FACILITY (GEF)

GEF-5 pledging for period 2010-2014 completed in May.

USD 3.5 billion raised, 54% up on GEF-4 pledges. Including investment income and carry-overs, GEF funding for period 2010-2014 at $4.3 billion.

Main donors are US, Japan and Germany with individual share above10% and combined share of 44%.

GEF coverage beyond climate including biodiversity, international waters, land degradation and forest management. $2.3 billion of GEF-5 counted as FastStart.

FINANCING SOURCES AND CHANNELS
CLIMATE INVESTMENT FUNDS

Climate Investments Funds (CIF) agreed in 2008 'designed to pilot … transformational change towards low-carbon and climate-resilient development through scaled-up financing channelled through the Multilateral Development Banks (MDBs)'.

The CIF includes a Clean Technology Fund (CTF) focused on mitigation financing and a Strategic Climate Fund (SCF) including a Pilot Program for Climate Resilience (PPCR), a renewable energy program for low income countries (SREP) and a Forest Investment Programme (FIP).

CIF contributions to date amount to $6.3 billion with contributions above $1 billion from the US, the United Kingdom and Japan.

FINANCING SOURCES AND CHANNELS
CLIMATE INVESTMENT FUNDS

CIF implemented jointly by the African Development Bank, the Asian Development Bank, the EBRD, the Inter-American Development Bank and the World Bank Group.

CIF operating principles:

- equitable and balanced governance
- multi-stakeholder participation at governance and country levels
- demonstrate scale and transformation
- leverage public and private financing
- complementarity with other partners at country level

FINANCING SOURCES AND CHANNELS
ADAPTATION FUND

Established in 2007 by Parties to the Kyoto Protocol of the UNFCCC to finance adaptation projects and programmes in developing countries.

Eligible countries should be party to the Kyoto Protocol as well as being developing countries vulnerable to the adverse effects of climate change, namely low-lying coastal, arid and semi arid areas, areas liable to floods, drought and desertification; developing countries with fragile mountainous ecosystem.

Financed out of 2% levy from Certified Emission Reduction (CERs) issued for projects of the Clean Development Mechanism (CDM) as well as with funds from other sources, such as sovereign bilateral contributions.

The Adaptation Fund provides grant contributions.

As at April 2010, AF funds at around $100 million.

FINANCING SOURCES AND CHANNELS
MULTILATERAL DEVELOPMENT BANKS

Significant scaling-up of climate financing by MDBs. MDB climate mitigation financing has trebled from $5.4 billion in 2006 to $17 billion in 2009, significantly in excess of indicative objective of $9.4 billion for 2009 set out in report to G8 in Hokkaido.

Total projects/programs value has risen from $20 billion in 2006 to $55 billion in 2009.

Increase reflects increased recognition of the urgency and necessity of climate action to achieve sustainable development and transition objectives.

Broad range of MDB financing instruments including sovereign and sovereign guaranteed loans, sub-sovereign loans, non-sovereign loans, equity, guarantees, carbon financing, concessional financing and grant funded technical assistance.

Main activities include projects, country and sector policy analysis and dialogue, technical assistance, capacity building and knowledge sharing.

FINANCING SOURCES AND CHANNELS
CARBON MARKET

Global carbon market grew to $144 billion in 2009, up 6% from 2008 despite difficult economic climate.

Primary market halved due to reduced project access to financing, divestments, overexposed developers and post 2012 uncertainty.

Global CER/ERU supply potential decreasing due to project delays, production cuts and difficult access to financing or bank guarantees.

Carbon price has been around €15 with recent rise mainly driven by speculation on EU ETS III.

In shorter term carbon markets expected to provide around €10 billion based on expected CDM issues for period 2010-2012.

FINANCING SOURCES AND CHANNELS
PRIVATE SECTOR

Private sector already active in a broad range of climate related investments including for example industrial energy efficiency, renewable energy, power plant rehabilitation and low carbon technology development.

Private sector investment is primarily driven by risk-return considerations. The higher the risk, the higher the return expectation with risks including forex risk, country risk, policy risk or technology risk. Return expectation also higher for equity than debt due to higher risk.

Private climate related investment is affected by failure of public policy framework to internalise carbon externality, and even more, to remove subsidies on fossil energy.

Need for range of policy and risk mitigation measures to mobilise private investment including guarantees and insurance on policy and country risk, feed in tariffs, investment grants to compensate for policy gaps and technical assistance to overcome information gaps.

FINANCING SOURCES AND CHANNELS

DEVELOPING COUNTRIES/EMERGING MARKETS RESOURCES

Countries like Brazil, China and Mexico are increasing domestic resource expenditure in areas such as forest protection and management, renewable energy or urban public transport development.

Rising level of climate related finance coming from local sources either through budget, public investment programmes, public utilities revenues at national, regional and municipal levels or through investment by local private companies.

However, in most countries, domestic climate related financing very limited and linked to external financing or non-existent.

Organisational and institutional challenge of domestic climate financing due to limited capacity and fiscal pressure.

FINANCING SOURCES AND CHANNELS
KEY CONDITIONING FACTORS

- The weaker the strength of the climate framework (particularly in terms of carbon price level and stability), the higher the need for concessional funding (ie funds from developed countries) to compensate for weakness of incentive frame and signals.
- Subsidies on fossil fuels are a major barrier to climate related investment.
- Policies can play a significant role in reducing investment requirements and pressure on public financing, for example through enhanced cost recovery.
- Business environment in developing countries is also a major determinant of private sector investment, including climate related investment.

EBRD CLIMATE FINANCING IN PRACTICE
EBRD SUSTAINABLE ENERGY INITIATIVE (SEI)

The SEI is the EBRD's strategy to address climate change mitigation and adaptation in its region of operations focusing on energy efficiency and renewable energy across all its sectors and countries of operations.

SEI Phase 1 was launched in May 2006 with the objectives to:

- scale up EBRD sustainable energy investments to €1.5 billion over period 2006-2008;
- strengthen the EBRD capacity to scale up delivery and "mainstream" climate and energy efficiency across the Bank's operations; and
- expand the market for sustainable energy technologies in the region.

CLIMATE FINANCING IN PRACTICE
SEI PHASE 1 ACTIVITY AREAS

- **Industrial EE** in large industries in energy intensive sectors
- **EE for small energy users** such as SME's and residential users
- **Cleaner power energy supply** including fuel switch and generation, transmission and distribution efficiency improvement
- **Renewable energy** including hydro, wind and biomass
- **Municipal infrastructure EE** including district heating, public transport and water network
- **Carbon market development**

CLIMATE FINANCING IN PRACTICE
SEI PHASE 2 OBJECTIVES

SEI Phase 2 launched and approved by the Board of Governors at the EBRD Annual Meeting in May 2009.

SEI Phase 2 targets:

- EBRD SEI financing: €3 to 5 billion over period 2009-2011 (total project value of €9 to15 billion)
- Carbon emissions reduction: 25 to 30 million tonnes CO2/annum
- Technical assistance grant funding mobilisation: €100 million
- Investment grant funding mobilisation: €250 million

CLIMATE FINANCING IN PRACTICE
SEI PHASE 2 ACTIVITY AREAS

Further scale-up investment in SEI Phase 1 activity areas

Develop activity in new areas:

- Building EE: dedicated financing schemes to pursue the vast opportunities in this field (buildings use 40% of final energy consumption in the region)
- Biomass: develop programmes to create markets for biomass suppliers and for penetration of biomass technologies
- Climate change mitigation investments in Natural Resources sector (gas flaring)
- Transport EE: development of urban public transport network, opportunities across integrated transport infrastructures (e.g. railway operators); traffic management system
- Adaptation: define approach to adaptation both in terms of climate-proofing and of operational activities, particularly in the water sector

CLIMATE FINANCING IN PRACTICE

SEI RESULTS BY SECTOR 2006-MID 2010

ACTIVITY	SEI PHASE 1 2006-2008		SEI PHASE 2 2009-MID2010		OVERALL SEI 2006-MID2010	
	EBRD Financing (€ million)	Number Projects	EBRD Financing (€ million)	Number Projects	EBRD Financing (€ million)	Number Projects
SEI 1 INDUSTRIAL ENERGY EFFICIENCY	679	56	401	42	1,080	98
SEI 2 SUSTAINABLE ENERGY CREDIT LINES	362	31	358	23	720	54
SEI 3 CLEANER ENERGY PRODUCTION	1010	19	887	18	1,897	37
SEI 4 RENEWABLE ENERGY	227	14	321	10	548	24
SEI 5 MUNICIPAL INFRASTRUCTURE ENERGY EFFICIENCY	388	46	196	25	584	71
TOTAL	2,666	166	2,163	118	4,829	284

CLIMATE FINANCING IN PRACTICE
SEI OPERATIONAL APPROACH

SPECIFIC PROJECTS AND INVESTMENTS

Projects with broad range of clients and financing instruments, public and private.

INVESTMENT RELATED GRANTS

Technical assistance to overcome barriers (market analysis, energy audits, training, awareness raising). Grant investment co-financing to provide appropriate incentives and address affordability constraints.

POLICY DIALOGUE

Working with governments to support development of strong institutional and regulatory frameworks that incentivise sustainable energy.

ORGANISATIONAL MAINSTREAMING

Energy efficiency and climate change internalised at strategic and operational levels with support of specialised energy efficiency and climate change team

LOOKING FORWARD
PROCESS

Significant work currently ongoing in the context of the High Level Advisory Group on Climate Finance (AGF) co-chaired by Prime Ministers of Norway and of Ethiopia.

AGF undertaking assessment of funding sources for climate financing at 2020 horizon with set of recommendations expected during second half of 2010.

Work in context of preparation of Cancun COP16.

MDBs have provided joint report on MDB climate financing outlining investment record to date and outlook.

MDBs continuing to build portfolio and experience of climate change mitigation and adaptation projects.

LOOKING FORWARD
ISSUES

Balance between mitigation and adaptation

Political, analytical and operational issues

Funding governance

Centralised, structured and direct access

Nature of funds

Concessionality level: grants vs loans

Economic context and fiscal pressure

Private sector role

APPENDIX

SELECTED EBRD CLIMATE RELATED PROJECTS AND ACTIVITIES

ENERGY EFFICIENCY IN SUGAR PRODUCTION
ASTARTA, UKRAINE

- €14.2 million loan with €10.7 million EE components identified through energy audit commissioned by the Bank
- Objective: Introduce energy efficiency improvements at each of the company's five sugar plants.
- Company to install equipment that uses less energy and assist the company in improving productivity whilst also consuming less energy (such as new drying equipment, new concentration upgrade of heat supply systems)
- Energy savings estimated at 25-30% with carbon emission reduction in period 2008-2012 estimated at >300 kton CO2
- Carbon finance: Signing of the first large carbon transaction under EIB/EBRD MCCF(150,000 tCO2e of carbon credits)
- EBRD has arranged Energy Management Training (EMT) for 20 Astarta engineers and specialists

INDUSTRIAL ENERGY EFFICIENCY
SEVERSTAL STEEL MILL, RUSSIA

- Largest energy efficiency loan:
  €600 million investment of which EBRD has financed €150 million syndicated to 3 major international Banks
- Russia's leading steelmaker, Severstal
- The programme consists of 11 specific EE investment projects that were identified and analysed in common work of the Bank's team and SeverStal's technical management
- Estimated to cut CO_2 emissions by 900,000 tonnes a year

RENEWABLE ENERGY BULGARIA

- Project finance for construction of a 156 MW wind farm contributing around 1% of Bulgaria's energy consumption.
- Total debt finance: €198 million senior debt provided by EBRD and IFC with a 15 year tenor.
- EBRD provided a senior loan under A/B structure with €70 million from own account and €56 million underwritten by UniCredit.
- Total project cost amounting to €270 million in which AES Corp provided 26% of the cost as equity.
- PPA 12 years and Government Support Undertaking.

MUNICIPAL INFRASTRUCTURE ENERGY EFFICIENCY

ODESSA DISTRICT HEATING PROJECT IN UKRAINE

- Odessa District Heating: €22 million loan.
- Objective: Reduction of natural gas consumption, improvement of the quality of service, and introduction of metering.
- Measures: Rehabilitation and modernisation of existing boiler houses, replacement of leaking pipes, introduction of individual metered heating sub-stations, energy efficiency investments in residential buildings and installation of small co-generation plants.
- Impact: Investments and institutional reforms are expected to achieve significant cost savings and greater efficiency with associated CO2 emission reduction estimated at 26,000 tonnes/year.

BULGARIA ENERGY EFFICIENCY AND RENEWABLE ENERGY CREDIT LINE

EBRD Credit Line: €155 million

- Financially intermediated by 8 local Bulgarian banks

KIDSF Grant Support (over 95% EU contribution): €35,2 million

- Technical Assistance: €13.5 million
- Incentives to Sub-Borrowers and Banks: €21.7 million

Results to date

- Number of sub-loans: 121
- Total disbursements: €82.7 million
- Average size of sub-loans: €683,000
- Electricity equiv. saved: 868,000 MWh/year
- CO_2 emissions reduction: 553,000 tons /year

UKRAINE ENERGY EFFICIENCY PROGRAMME
CREDIT LINE

UKEEP: Credit line for private sector investment in energy efficiency or renewable energy projects

- Initial Framework amount €100 million (increased to €150 million)
- Technical Assistance funds provided by Sweden and Austria for programme implementation (project identification and preparation)

Results so far:

- Financially intermediated through 4 participating banks
- 39 sub-projects approved totalling €73 million
- Energy savings: 1.9 GWh/year
- Emission reduction 450k tCO2/year
- Programme has been very successful and potential for expansion to SME and residential sectors.

SLOVAK SUSTAINABLE ENERGY FINANCING FACILITY
EE, RE AND RESIDENTIAL HOUSING ASSOCIATIONS

Slovak Credit Line: €60 million of EBRD loans to local banks for on-lending to enterprises and housing associations to make better use of their energy resources.

Eligible projects include

- residential energy efficiency, addressing housing associations
- energy efficiency investments in industry
- renewable energy projects

Results

- Financially intermediated through four participating banks
- Portfolio of projects €34 million with pipeline of €20 million (under preparation)
- 208 residential energy efficiency projects
- 17 industrial energy efficiency and/or renewable energy projects

Estimated Impact

- ~11,000 standard flats refurbished and 33,000 people benefiting from lower energy bills and better thermal comfort;
- Average estimated energy savings of 30%. Savings equivalent of providing an extra month of pension per year
- 129,860 MWh per year of primary energy savings and 26,760 tCO2 emission reductions per year;

Grant Support from Bohunice International Decommissioning and Support Fund (BIDSF) of €15 million
financing technical assistance (€2.5 million), incentives to sub-borrowers (€ 10 million) and participating local banks (€2.5 million).

UKRAINE SEI POLICY DIALOGUE

- MoU on Sustainable Energy Action Plan (SEAP) between the Government of Ukraine and EBRD signed in June 2009
- Renewable Energy Development Framework (for Ministry of Fuel and Energy, National Electricity Regulatory Commission):
  - Initial study is now completed recommending revised feed-in tariff legislation and outlining required support package
  - New TA programme to assist the NERC with development of secondary legislation and workable framework for support of renewable energy development in Ukraine launched in April 2009
- Ukraine Carbon Market Facilitation Programme (National Environmental Investments Agency)
  - Development of a model to evaluate GHGs
  - Improvement of JI framework and procedures
  - Development of a pilot Green Investment Scheme transaction with the MCCF
- Policy dialogue with the Ministry of Housing and Communal Services on energy efficiency in public and residential buildings

KAZAKHSTAN SEI POLICY DIALOGUE

Sustainable Energy Action Plan (SEAP) for Kazakhstan signed between the Bank and the Kazakh Government in June 2008.

Objective: Assist Government of Kazakhstan in reducing energy intensity of Kazakh economy by:

- improving framework of energy legislation and regulation; and
- investment in power generation, T&D, industrial energy efficiency and renewable energy.

SEAP priority activities include:

- Draft laws review and improvements
- Strengthening of regulatory agencies and specialised bodies
- Tariff levels, metering and methodology improvements
- Focusing on priority investments and financings.

Expected outcomes:

Link top priority policy objectives of the Government of Kazakhstan to EBRD financing instruments.

Creating an enabling environment in which related investments can achieve maximum impact.