

Private sector and adaptation: EBRD case studies

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Rationale for private sector action on adaptation

Barriers and drivers

EBRD case studies

- Port facility (Georgia)
- Copper mine (Mongolia)
- Small-scale agriculture (Macedonia)

Issues for SPCRs

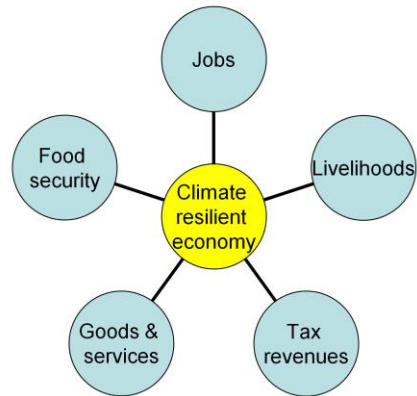
- Information
- Regulation
- Financing instruments

Adaptation is not just a challenge for the public sector

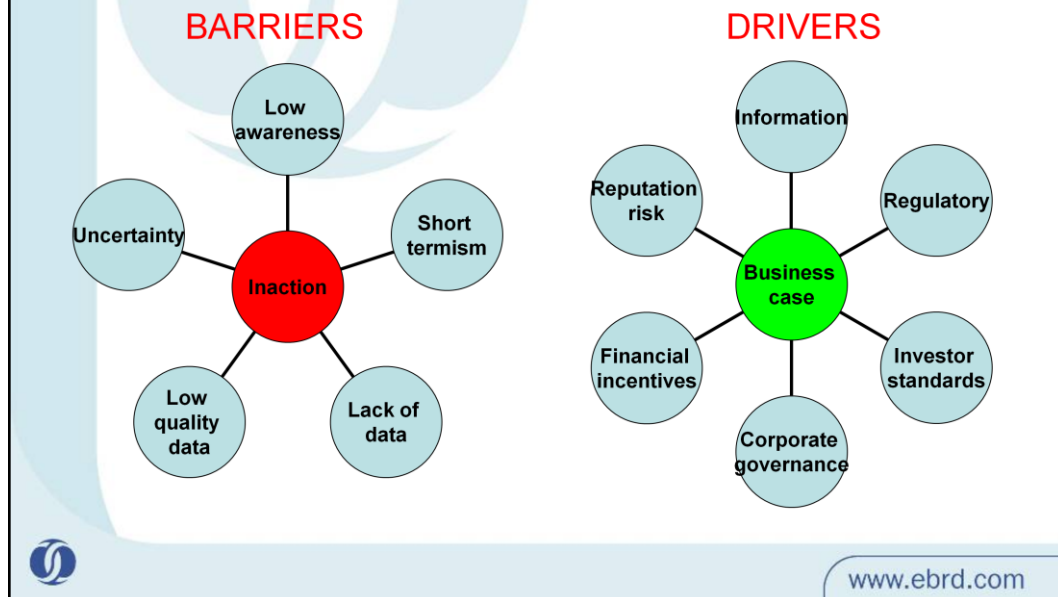
Public actions alone will not be enough to achieve climate resilience: entire economies must be transformed

Businesses need to ensure that their assets and operations are resilient to climate change

Huge adaptation financing needs cannot be met by public budgets alone



Private sector action on adaptation: barriers and drivers



BARRIERS

- Perceived long-term nature of the risks vs. short-termism, private sector discount rates
- Low awareness among clients of the need for action
- Lack of reliable observed climate data in EBRD countries
- Poor availability of climate data at suitable spatial scale for project-level decision-making
- Difficulty making decisions on whether/how to achieve adaptation in the light of uncertainties about climate impacts

DRIVERS

- Information: businesses need to know about risks and opportunities
- Regulatory: legislation that requires action: e.g. ESIA
- Investors' standards/conditions: e.g. IFC, Equator Banks
- Financial incentives: e.g. climate finance mechanisms
- Corporate governance: e.g. shareholder pressure, pension funds, ratings agencies
- Reputational risk management: e.g. Coca Cola and groundwater abstraction

ULTIMATE GOAL IS TO BUILD A BUSINESS CASE FOR ADAPTATION

Case studies of EBRD projects



**Port facility
(Georgia)**

**Copper mine
(Mongolia)**



**Small-scale agriculture
(Macedonia)**



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These are all from the EBRD region: so they are all MICs and have no SPCRs – but there are still transferable lessons, which we will discuss later.

These case studies have been anonymised and in some cases aspects of more than one project have been merged into a single case study.

Port expansion (Georgia)

- One of the two most important commercial ports in the country
 - Huge economic significance – handles all non-oil imports/exports
 - Owned and operated by a private company
- Vulnerability to climate change
 - Sea level rise - flooding
 - River hydrology & sedimentation
- Significance to national climate resilience:
 - Essential for trade (exports/imports)
 - Agriculture, manufacturing and industry depend on ability to export/import
 - Port closure due to climate events has severe economic impacts



Port expansion (Georgia)

How can we work with the company to address climate resilience?

- Integrating a climate change impact assessment into the design of the investment (Environmental & Social Impact Assessment)
 - Significant climate change risks identified: flooding and sedimentation
- Identification of 'soft' adaptation measures
 - Better flood monitoring and emergency response strategies
 - Better sedimentation monitoring and dredging capacity
 - Integrated into EBRD loan conditionality
- Identification of 'hard' adaptation measures
 - Re-dimensioning of vulnerable aspects of port infrastructure to minimise flood risk (road and rail links) and sedimentation impacts (breakwater)
 - Additional financing being negotiated with EBRD



Georgia port: how could an SPCR have supported these actions?

Information

Include the ports sector in national-level analysis of climate change vulnerability and adaptation priorities

Build public capacity for better climate modelling and forecasting so that the private sector can access better climate data and make better decisions about managing climate risks

Regulation

Build capacity for a regulatory framework that requires port operators to consider climate change in planning, infrastructure design and management of port facilities

Financing

Grants for climate change analyses during project design (if regulation is not an effective incentive)

MDB loan conditionality used to make port operators adopt and employ effective adaptive management strategies (soft adaptation) - ideally reinforcing national legislation

Targeted concessional loans to remove barriers to investment in additional climate resilience features (hard adaptation)



Copper mine (Mongolia)

One of the largest copper mines in the world

- Owned and managed by a private company
- Produces 126,700 tons of copper annually
- Provides the majority of Mongolia's hard currency income: 13.5% of GDP and 7% of tax revenues



Climate change risks

- Increasing water scarcity is the most serious climate change concern in Mongolia
- Huge amounts of water are used in ore processing and tailings disposal
- Surface water is extremely scarce in Mongolia – company is currently 'mining' irreplaceable groundwater
- Competition with other water users (nomadic agriculture)

Why does this matter for national level climate resilience?

- Climate change/water availability concerns may halt mining
- Mine is of huge national economic importance
- Business-as-usual mining could destroy the climate resilience and livelihoods of traditional communities by depleting groundwater reserves



Copper mine (Mongolia)

How can we work with the company to address climate resilience?

- Providing technical cooperation to understand the implications for groundwater resources and other water users
- Funding a water use efficiency audit to identify where water savings could be made in the company's operations
- Providing loan finance for water efficient technology to reduce water consumption in the mine's operations
 - e.g. dewatering tailings, water recycling



There is a growing use of the practice of dewatering tailings using vacuum or pressure filters so the tailings can then be stacked.

This saves water, reduces the impacts on the environment in terms of space used, leaves the tailings in a dense and stable arrangement and eliminates the long-term liability that ponds leave after mining is finished.

Mongolian copper mine: how could an SPCR have supported these actions?

Information

Include the mining sector (and its impacts on water resources) in national-level analysis of climate change vulnerability and adaptation priorities

Build public capacity for better modeling and forecasting of climate and water availability including groundwater so that the mining companies can access better data and make better decisions about managing climate risks

Regulation

Build capacity for a regulatory framework that requires mining companies to consider climate change, water availability and impacts on other water users in the planning and management of mining operations (especially in water-scarce locations)

Financing

Grant support for national authorities to analyse the implications for groundwater resources and other water users

Incentives for water audits of mining operations to raise awareness and illustrate the potential for water savings (ideally in support of national legislation)

Targeted concessional loans to remove barriers to investment in water-efficient technology



Supporting agricultural production (Macedonia)

Provision of agricultural finance facility to increase agricultural production

- 18.3% of the workforce is involved in agriculture
- Agriculture accounts for 12.6% of GDP
- Especially significant in poorer parts of the country



How is agriculture vulnerable to climate change?

- Risks of increased water scarcity due to increased temperatures (especially in summer)
- Risks of more variable precipitation
- Rain-fed agriculture much more vulnerable than irrigated agriculture

Why does this matter for national level climate resilience?

- Threats to rural livelihoods and incomes
- Threats to food security



Supporting agricultural production (Macedonia)

How can we work with farmers to address climate resilience?

- Consultation and analysis to identify possible adaptive responses (e.g. irrigation, drainage, crop varieties, better fertiliser use)
- Economic analysis to identify adaptation actions that are economically sustainable – with high potential benefit-cost ratios
 - Irrigation systems for rain-fed vegetable production (\$42,000 - \$83,000 per hectare)
 - Promoting water-efficient irrigation in irrigated maize (\$48,000 - \$72,000 per hectare)
- Helping farmers to overcome barriers to accessing finance for adaptation measures
 - Developing new financing instruments such as credit lines
 - Working with local banks to improve access to credit for adaptation measures
 - Technical support and extension services to farmers and loan officers



Macedonian agriculture: how could an SPCR have supported these actions?

Information

Include agriculture in national-level analysis of climate change vulnerability and adaptation priorities

Build public capacity for better climate modeling and weather forecasting so that the farmers can access more reliable weather forecasts and make better decisions about managing climate risks

Agricultural extension services to raise farmers' awareness of climate change risks and opportunities and adaptation options

Regulation

Build capacity for a regulatory framework that incentivises farmers to invest in pro-adaptation measures such as irrigation facilities, better crop varieties etc

Put in place an effective regulatory framework for the provision of agricultural finance that reaches the smallest and most vulnerable farmers

Improved water sector governance so that small farmers have more equitable access to water/irrigation services

Financing

Grants for technical advice to farmers, agricultural extension services and training for local banks

Use of concessional finance to develop credit lines for pro-adaptation agricultural improvements such as irrigation facilities



SPCR toolkit: information, regulation & financing

Information

- Information => better business decisions (including adaptation)
- Including the private sector in SPCRs can send powerful messages to businesses and policymakers

Regulation

- Effective regulation can be a powerful driver
- But what do we do when the legislation/capacity is not there?

Financing

- Why do we need financial instruments – why aren't good information and effective regulation sufficient?
- When can grants for the private sector be justified?
- When is it appropriate to use concessional finance as opposed to non-concessional finance?



Regulation

Poor regulation: possibly more of a challenge in LICs than MICs

This strengthens the case for more emphasis on capacity building in LICs

Financing

Use of grants:

- When they are used to provide a public good that indirectly benefits the PS (e.g. better weather forecasting)
- Possibly when very small and very targeted!
- When there are no regulatory levers that can be used

Use of concessional finance:

- When a pro-adaptation investment at market rates would not make business sense based on standard discount rate
- When income levels and debt repayment capacity are lower (i.e. LICs versus MICs)