
Public-Private Finance for Climate Adaptation

Case Study: Adaptation Finance in Chile

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Brief Overview of BANCO BICE

- ⌚ 100% privately-owned Chilean bank
- ⌚ Two international ratings: BBB+ (S&P, Fitch)
- ⌚ ~ 3.0% loan market share (# 10 among 23 banks)
- ⌚ Total loan portfolio of ~ US\$ 6.1 billion, of which Renewable Energy represents 8%
- ⌚ CAGR ~ 14.3% for period 2003-2014
- ⌚ ROE: 17.7%
- ⌚ Basel Index: 13.4%



Setting the Scene – Climate Change in Chile



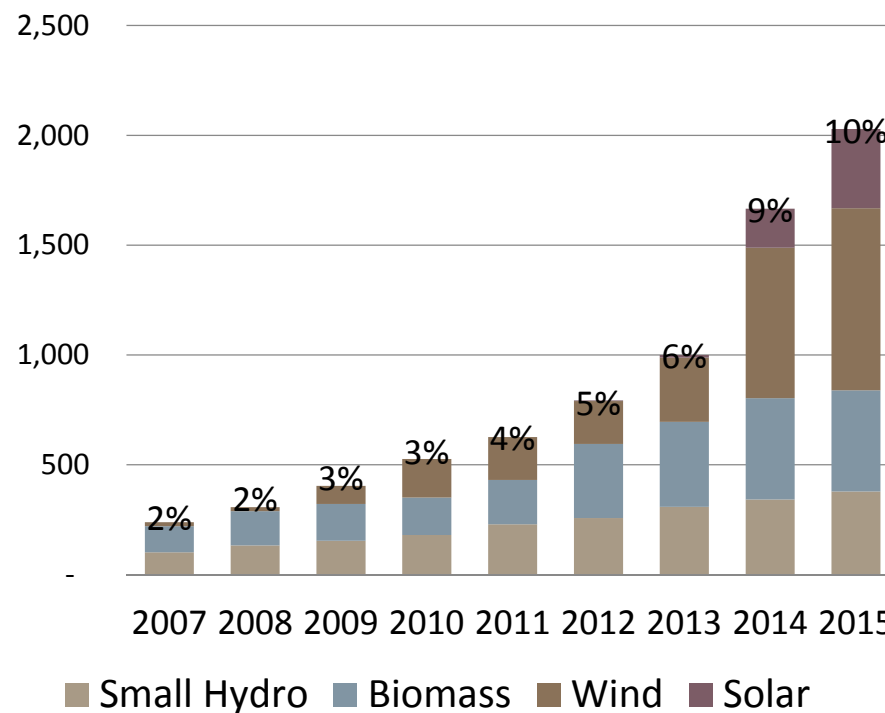
Source: CAF. (2014). Vulnerability index to climate change in the Latin American and Caribbean Region. Caracas: CAF. Retrieved from: <http://scioteca.caf.com/handle/123456789/509>

- Chile is vulnerable to the adverse effects of climate change with respect to its low-elevation coastal areas, arid and semi-arid areas, forested areas and areas liable to forest decay, areas liable to drought and desertification, and areas with fragile ecosystems, including mountainous ecosystems
- During the 2011-2030 rainfall is expected to decrease c. 15% in the central area, while the probability of extreme droughts will increase significantly so that by the end of the century this type of events will occur more than 10 times in 30 years (source: National Plan for Adaptation to Climate Change)
- As a collateral effects, agricultural products' prices have risen and hydroelectric generation has reduced dramatically while being replaced by fossil fuel based generation. Energy prices in the central and southern areas of Chile have increased significantly for regulated customers (2006: 65 US\$/MWh; 2013: 128 US\$/MWh)
- In 2008 the Chilean Government adopted the National Plan for Adaptation to Climate Change as the strategic guideline for policy planning and implementation with respect to climate adaptation and mitigation issues

Setting the Scene – Climate Finance in Chile

MITIGATION

- ⌚ In November 2008, the National Development Bank, CORFO, launched a successful US\$ 138.8 million program (“CORFO NCRE Loan Program”) aimed at providing long-term, low-cost USD funding to commercial banks in Chile for on-lending to RE Projects
- ⌚ The program was financed by kfW and the Chilean Treasury and was operational until mid 2011
- ⌚ Terms and conditions had a high level of concessionality: average interest rate of 4.3% in USD, average tenor 12 years
- ⌚ As a result, 15 RE projects received financing for up to US\$ 140 million (13 small-hydro, 1 biogas, 1 transmission line)
- ⌚ Only two banks participated in the program, Banco BICE (87%) and BCI (13%), but it helped kick-start the financing of RE projects in Chile



Setting the Scene – Climate Finance in Chile

ADAPTATION



- ⊕ No similar programme has been made available by CORFO for Adaptation projects



ADAPTATION FUND

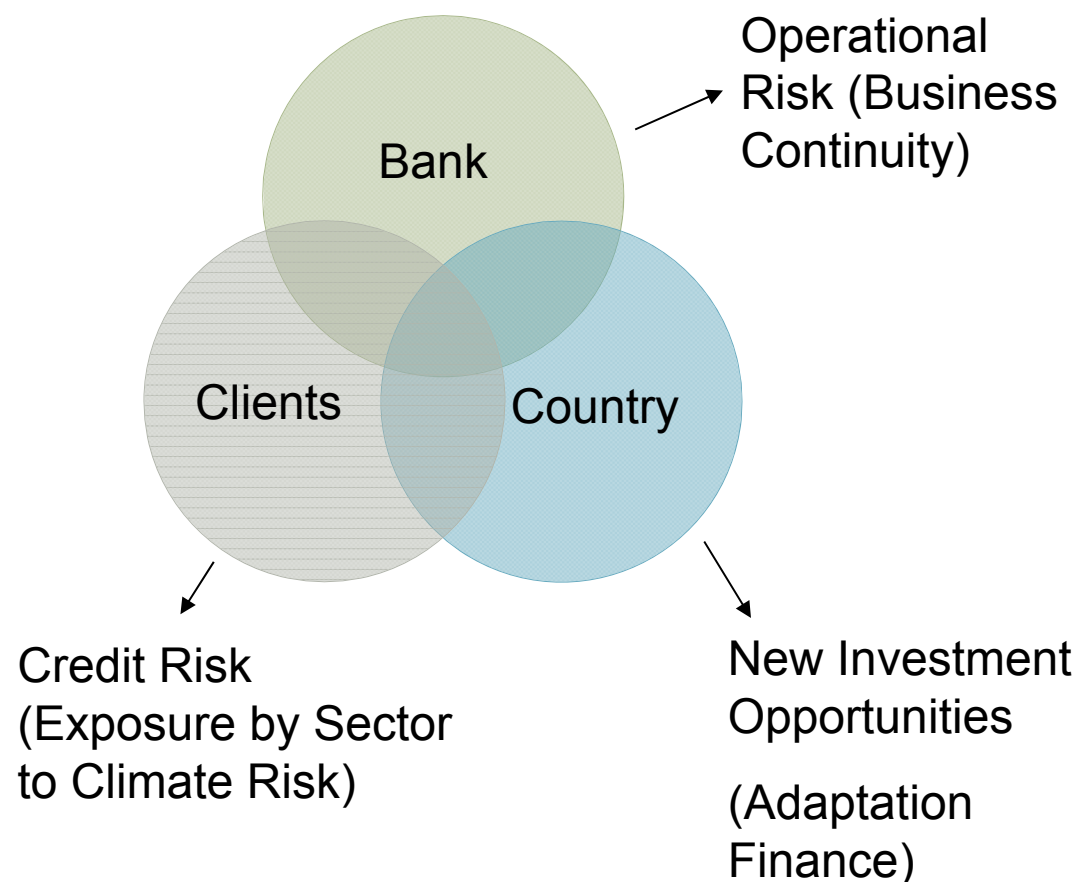
- ⊕ In late 2014, the Adaptation Fund Board decided not to endorse Chile's requested financing of US\$ 9,960,000 for its project "Enhancing resilience to climate change of the small agriculture in the Chilean region of O'Higgins", on the grounds of lack of clarity in terms of:
 - the expected climate change effects on rural farm communities in the O'Higgins region of Chile
 - How the proposed activities will deliver concrete adaptation benefits to smallholder and subsistence farmers to reduce their vulnerability to climate variability and climate change

Barriers to Private Sector Engagement in Adaptation in Chile

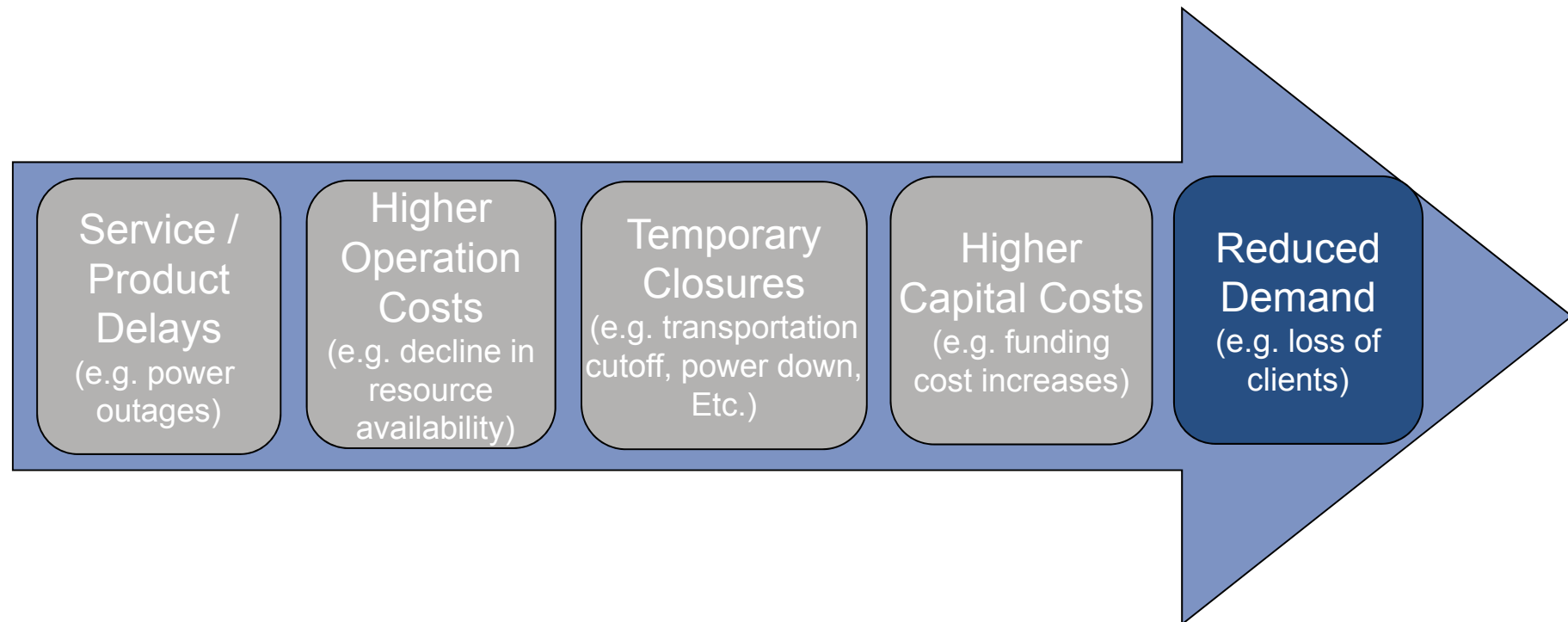
- ④ Readiness: past experience with the AF suggests that there is a shortfall in the level of preparedness at the national level in order to understand how to plan for, access, deliver, and monitor adaptation finance in the country
- ④ Awareness: in contrast to the situation in developed countries, extreme weather events in Chile are not still regarded as a business risk and adaptation efforts are not still widely understood nor seen as an imminent threat to business continuity
- ④ Knowledge: business community in general lack a preventive approach towards climate risks due to poor knowledge of the economic consequences (losses) of climate related events
- ④ Policy: no significant public policy incentives are (still) in place for the Private Sector to investment in vulnerability reduction or for taking resilience enhancing measures (e.g. building codes; green infrastructure)
- ④ Private Role: the National Plan to Adaptation to Climate Change does not highlight sufficiently the importance of engaging the Private Sector as a partner (only 5 mentions in 54 pages), although it recognizes private sector resources as one of the key sources of financing for adaptation activities in Chile

Case Study: Banco BICE

Impact Levels of Climate Change Risk



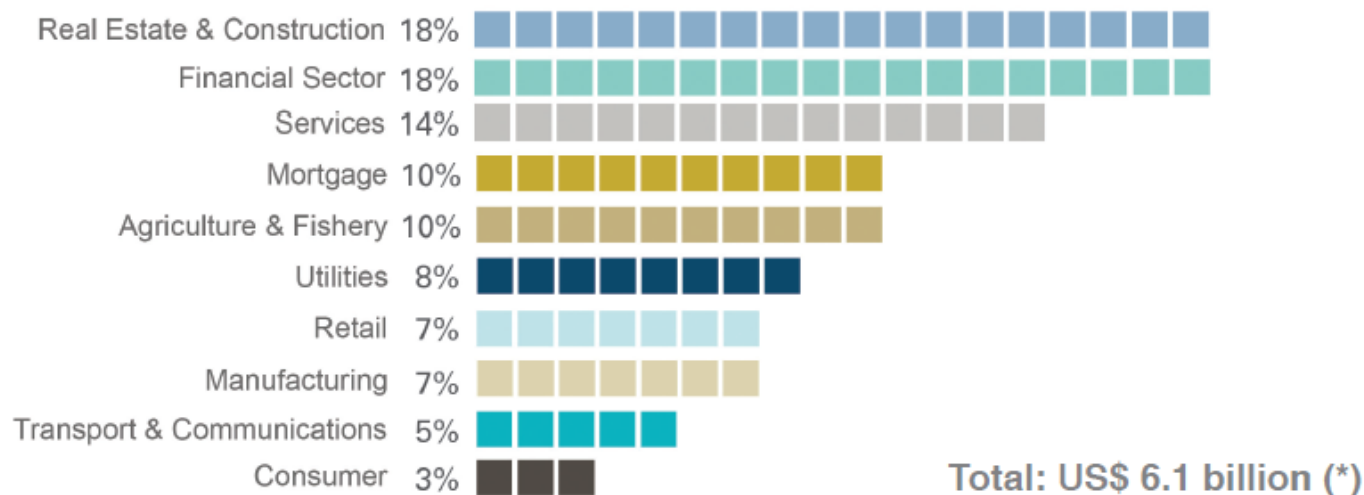
Operational Risk / Business Continuity



Source: C2ES, Oxfam, Center for Clean Air Policy

How Exposed is the our Loan Porfolio to Climate Change Risk?

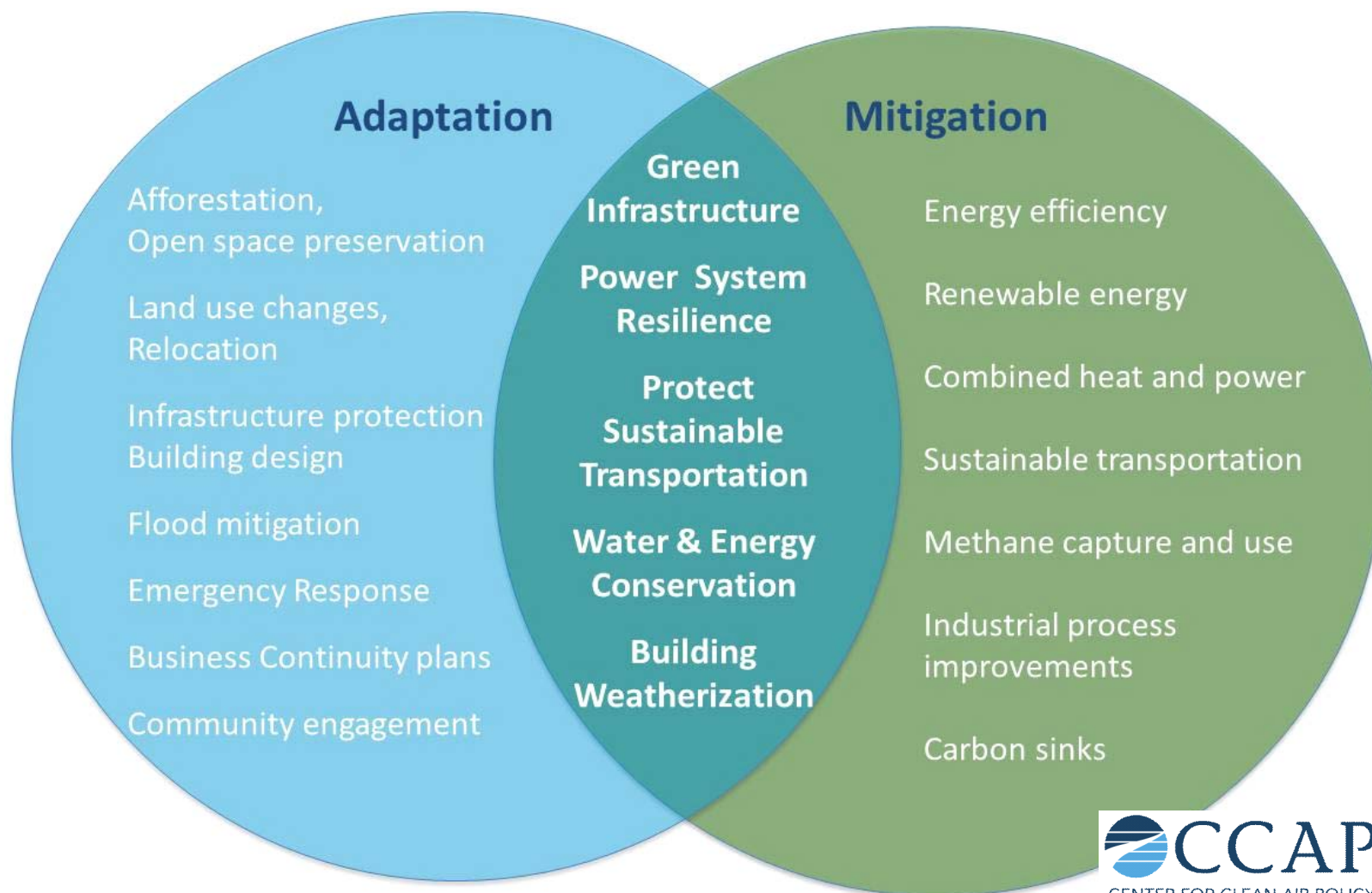
Loans by economic sector



Note: Figures are expressed in US\$ at the exchange rate as of 31st December 2014
 (*) Loan position before provisions

Action Needed: in order to start creating awareness on the business community, Banks could request clients to disclose climate change related exposure and adaptation measures as part of the bank's routine risk analysis procedure

What Investment Opportunities are out there for the Private Sector? Thinking Outside the Box



What Investment Opportunities are out there for the Private Sector? Thinking Outside the Box

Green Infrastructure:
Mitigate urban heat and
stormwater



Building Weatherization:
Improve energy efficiency
& storm resilience

**Micro Grids & Distributed
Renewables:** low-carbon, resilient
power systems



Elevate Subway Grates:
Protect Low-Carbon Transit from
Flooding

Water Efficiency:
Reduce Pumping Energy Use &
Prepare for Declining Supplies



Examples for the Energy Sector

Micro-Grids

- ➔ Micro-grids can incorporate energy efficiency, distributed renewables, CHP and smart grid technologies to provide reliable, low-carbon power that can withstand and recover from extreme weather events. Micro-grids can improve grid stability by increasing reliability, decreasing vulnerability to disruptions, and maintaining business continuity

CHP

- ➔ Combined heat and power (CHP), which generate both electric power and thermal energy from a single source, can reduce GHGs and help keep the lights on in hospitals, commercial and residential buildings during extreme weather events that produce power outages

Final Remarks

- ③ Political forces in countries like Chile seem to be more focused on short-term concerns (mitigation) rather than long-term imperatives (adaptation), a situation that must change
- ③ Hence the importance of policymakers and regulators to clearly signpost the country's future adaptation strategy and set coherent, predictable, long-term and transparent policy and regulatory frameworks that are business-friendly to the private sector
- ③ Public-private finance could help fund adaptation investment opportunities. The GCF and other sources of climate finance can play a major role in helping to un-lock private sector investments in adaptation where financial barriers are significant
- ③ NDBs must work closely with the local banking sector to understand which instruments are needed to engage local banks in Adaptation Finance and help reduce/remove barriers for deployment of a diversified portfolio of projects
- ③ The opportunities to attract private sector investments in adaptation projects and programs in Chile clearly exist, provided there is: (i) a bankable pipeline of adaptation projects; and (ii) an adequate balance between risk and reward



Thank You