



INVESTING IN INFRASTRUCTURE FOR A CHANGING CLIMATE:

RESULTS AND KEY LESSONS FROM PPCR-SUPPORTED PROJECTS

This learning brief aims to draw lessons from CIF's over \$700 million portfolio of 11 infrastructure projects under the PPCR across the developing world.

It looks at the scope of support provided and progress made to date under these projects. Good practices and lessons with relation to project design, implementation, ongoing monitoring and support are synthesized. Through sharing these learning points, this learning brief endeavours to provide useful insights on how infrastructure investments could serve as instruments to drive resilience in communities and make a humble contribution to the world's momentous efforts to recover from COVID-19 in ways that are sustainable, inclusive, and resilient, including through investments in infrastructure.

QUICK FACTS

- Publication date: October 2021
- Relevant CIF program: Pilot Program for Climate Resilience (PPCR)
- Implementing agencies: African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-America Development Bank, International Finance Corporation, World Bank
- Relevant countries: Bangladesh, Bolivia, Haiti, Mozambique, Niger, Papua New Guinea, Samoa, Tajikistan, and Zambia

CONTEXT

Accessible and functioning infrastructure is the backbone of human well-being and economic development. In low- and middle-income countries, however, chronic underinvestment makes access to critical infrastructure for water, electricity, transportation, and telecommunications a regular struggle in the best of times. As climate change accelerates, images of flooded roads, deluged airports, and parched reservoirs have come to hit the headlines on a weekly basis. They are stark reminders that the current infrastructure, much of it designed and built a long time ago, is no longer adequate to cope with current extreme weather conditions, let alone the more frequent and severe events projected under a changing climate. Further, carefully designed infrastructure is an essential element of a toolbox for enhancing the climate resilience of vulnerable communities, economic sectors and the natural environment.

The Climate Investment Funds (CIF) fully recognizes the vital importance of infrastructure investment that is fit and helps build resilience for a changing climate. Working with multilateral development bank partners, donors, and recipient country governments, CIF's Pilot Program for Climate Resilience (PPCR) has

invested more than USD700 million in 11 projects focused on infrastructure, or with infrastructure components in various countries, across Africa, Asia and the Pacific, Central Asia, along with Latin America and the Caribbean. Designed as part of the national strategic programs for climate resilience, these projects have either been completed or are at the advanced stages of implementation.

As governments and financial institutions around the world work to recover and rebuild from the Covid-19 pandemic, this learning brief, drawing good practices and lessons learned from project design and implementation, aims to contribute to the global rebuilding efforts through efficient and effective investment in a new generation of infrastructure for a changing climate.

CIF INVESTMENTS IN INFRASTRUCTURE FOR CLIMATE RESILIENCE

Seeking to accelerate climate resilience and the transformation it brings, the PPCR investment in infrastructure projects does not only support the structural assets, but notable attention has been paid to ensure that the infrastructure delivers the resilience benefits. This entails the financing of not only the construction or rehabilitation of structures, but also a wide range of “upstream” and “downstream” activities (Figure):

- **Go upstream and create enabling conditions:** All PPCR projects included support for upstream activities creating the prerequisite conditions for project success. Upstream activities ranged from conducting climate risk assessment, developing relevant policies and plans such as land use planning and zoning, developing or updating design guidance or standards to factor

in changes in key design climate parameters, to creating a market value chain for climate resilience solutions such as drip irrigation.

- **Build for the future and for climate resilience:** The PPCR investments have backed a new generation of climate-resilient infrastructure, thereby expanding all-weather access to essential services. These investments in the construction and maintenance, restoration, and upgrading of critical existing infrastructure provide a lifeline for vulnerable communities and deliver immediate benefits, while building community resilience to climate change.

Figure
SCOPE OF CIF-SUPPORTED CLIMATE-RESILIENT
INFRASTRUCTURE PROJECTS

“UPSTREAM” SUPPORT

- Vulnerability and risk assessments
- Investment strategies and plans
 - Guidance and standards
 - Market development

INFRASTRUCTURE INVESTMENT

(roads, bridges, shelters, flood barriers, bio-slopes, mangroves etc.)

- Operation and maintenance
- Policy and engagement
- Livelihoods and skills

“DOWNSTREAM” SUPPORT

- **Follow downstream:** To ensure that the infrastructure provides sustained and comprehensive benefits to communities, the PPCR projects incorporated critical downstream activities to support technical and institutional capacities for ongoing operation and maintenance. These activities were designed to assure continued improvements in livelihood opportunities and quality of life.

KEY LESSONS

Through the experience in designing and implementing the PPCR projects over the past 10 years, a set of early lessons have emerged on the factors for successes and challenges. These can be broadly categorized as follows:

- **Stakeholder engagement matters in ensuring relevance, effectiveness, and lasting benefits.** For investments in building climate resilience, an inclusive and participatory process helps ground interventions on the best available information as well as the needs and values of beneficiaries. The engagement of key project stakeholders can also reduce the risks of future conflict, avoid negative unintended consequences, identify a strong pool of options, increase support for the measures chosen, and ensure the sustainability of project outcomes.
- **Data and analytics are foundations for sound project planning, design, and delivery.** Planning, designing, constructing, operating and maintaining infrastructure to support life and livelihoods amid a changing climate, require critical data, science, and analytics. PPCR-supported projects have invariably included upstream analyses of climate vulnerability hotspots, analytical tools, in-depth feasibility studies, and market analyses for promoting resilience solutions.

- **Blended finance holds the key to scaling up private sector engagement.** Private sector financing is key to filling in the considerable infrastructure finance gap in middle- and low-income countries. But meaningful private sector engagement is not yet occurring in many developing countries, due to a host of well-documented challenges. A key barrier is the perception of high risks from investing in uncertain and challenging markets. As the PPCR experience underlines, strategically deploying blended concessional finance represents an important and effective solution to remove this barrier.
- **Flexibility helps as a response to the unexpected and delivers results.** As experienced in some PPCR projects, national priorities and implementation conditions (such as those triggered by the onset of the Covid-19 pandemic) can change during the course of project implementation. Flexibility and pragmatism are needed to help address emerging implementation challenges and deliver intended project outcome for beneficiaries. This may entail, among others, re-orientating the project in line with emerging priorities, adjusting project scope and implementation arrangements to suit the new realities on the ground.

MOVING FORWARD

To address the glaring infrastructure gap in developing countries, particularly infrastructure that is fit for purpose and builds resilience under a changing climate, concerted efforts are needed from a broad range of stakeholders. These include:

- **Adopting a human-centric, integrated approach:** This is essential to ensuring precious resources put into infrastructure development deliver social, economic, and environmental dividends in the short and long terms. But there are barriers to the adoption of this approach, particularly barriers related to planning, inclusive and effective public participation, along with transparency.
- **Developing and mainstreaming climate resilience standards:** As underlined by the experience from the PPCR projects, consistent climate resilience standards underpin efforts to make infrastructure resilient to climate change. Such standards will also help mobilize capital where it is needed most.
- **Strengthening the knowledge base and technical expertise among all stakeholders:** As demonstrated across PPCR-supported projects, knowledge and technical expertise are crucial to enable making and implementing better infrastructure decisions in the face of a changing and uncertain climate.
- **Scaling up investment:** The COVID-19 crisis has put public finances under enormous strain, particularly in low- and middle-income countries. But the pandemic recovery also presents a unique opportunity for scaling up investments from the public and private sectors in green and climate-resilient infrastructure.

THE CLIMATE INVESTMENT FUNDS

The Climate Investment Funds (CIF) was established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. 14 contributor countries have pledged over US\$8.5 billion to the funds. To date CIF committed capital has generated an additional US\$61 billion in co-financing for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. CIF's large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. It tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance. The CIF is one of the largest active climate finance mechanisms in the world.



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