

Transformational Change in the Climate Investment Funds

Summary of Findings from
an Independent Evaluation
and Evidence Synthesis

Climate Investment Funds
Evaluation & Learning Initiative
Transformational Change Learning Partnership





A FARMER IN SOUTHERN MOZAMBIQUE REALIZING HIGHER CROP YIELDS BECAUSE OF A PPCR PROGRAM DESIGNED TO HELP MITIGATE AND CONTROL FLOOD AND DROUGHT DAMAGE. (CIF photo)

MOZAMBIQUE, Africa

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I. Background

The Climate Investment Funds (CIF) were established to scale up finance for climate change mitigation and resilience, filling urgent financing gaps and demonstrating the viability of emerging solutions. With more than US\$8 billion contributed since 2008, CIF supports transformational change toward low-carbon, climate-resilient development in the areas of mitigation, resilience, and forests through four programs: The Clean Technology Fund (CTF)¹, the Pilot Program for Climate Resilience (PPCR)², the Forest Investment Program (FIP)³, and the Scaling Up Renewable Energy in Low-Income Countries Program (SREP)⁴. These programs have supported 300 projects across 72 countries.

The Transformational Change Learning Partnership

CIF established the Transformational Change Learning Partnership (TCLP)⁵ in 2017 to facilitate a collaborative, evidence-based learning process on transformational change in the CIF context. The TCLP has three related components, all geared towards learning:

- 1 → An **Evaluation** of Transformational Change, undertaken by Itad;
- 2 → An **Evidence Synthesis** of Transformational Change, undertaken by the Overseas Development Institute; and
- 3 → A **facilitated learning** process with CIF stakeholders, supported by the Consensus Building Institute.

All TCLP components aim to understand CIF's role in contributing to transformational change by answering four questions on concepts, process and design, results, and learning.⁶

A first task was to identify a working definition of transformational change, building on previous work by CIF⁷ and others⁸. The TCLP defines transformational change in climate action as **strategic changes in targeted markets and other systems, with large-scale, sustainable impacts that shift and/or accelerate the trajectory toward low-carbon and climate-resilient development**. Four dimensions (relevance, systemic change, scale, and sustainability; see Exhibit 1) must be achieved to realize comprehensive transformation.

The Evaluation analyzed CIF's contribution to transformational change by testing hypotheses across case studies in 15 countries⁹, supplemented by information from other countries and sources, including interviews with over 250 individuals. The Evidence Synthesis focused on systematic collection and screening of secondary literature. The synthesis extracted evidence related to CIF's role in transformational change from over 85 sources. Although the two studies differed in methods and information sources, the findings are broadly aligned, and are therefore combined for this summary.

EXHIBIT 1 ↓

Four Dimensions of Transformational Change

RELEVANCE | The strategic focus of CIF investments—impacting low-carbon and climate-resilient development, with sustainable development co-benefits.

SYSTEMIC CHANGE | Fundamental shifts in system structures and functions.

SCALE | Contextually large-scale transformational processes and impacts.

SUSTAINABILITY | The robustness and resilience of changes.

Contextualizing the Findings

- **Program differences**—It is important to consider differences in CIF program funding levels, sectors, design, and implementation status when interpreting the findings. The CTF portfolio is the largest and most advanced, with 70% of projects approved between 2009 and 2015. The PPCR portfolio is maturing, with 60% of projects approved between 2013 and 2015, but is largely still at an early stage of implementation. Over half of SREP and FIP projects are only one to two years old, with some generating results but most still at the design or early implementation stages.
- **Limitations**—There are inherent limitations to analyses of complex systems change of this magnitude, including isolating CIF's influence, generalizing findings based on case studies, and potential bias stemming from a focus on more advanced programs. The evaluation team limited potential bias by gathering input from external experts; identifying positive, neutral, and negative dynamics; triangulating evidence; and caveating findings where appropriate. The Evidence Synthesis drew on publicly available literature¹⁰ on CIF's role related to transformational change. The available evidence is limited.
- **The world has changed since CIF's founding**—For instance, in 2008, low-carbon energy technology costs were high, penetration of these technologies in low- and middle-income countries was limited, and the enabling environment was not conducive to scaling. In the decade since, there have been large-scale investments in renewable energy technologies—notably wind and solar PV—with plummeting technology costs and increasing penetration in emerging markets.

The concept of transformational change has also evolved. The current TCLP concepts were retrospectively applied to work initiated ten years ago, when the four dimensions of transformational change were not identified. External factors also affect progress, including wider political, social, and environmental events, with investments occurring in complex and often uncontrollable contexts. Progress is often non-linear and unpredictable.

II. The Role of CIF's Design in Supporting Transformational Change

The Evaluation and Evidence Synthesis found that CIF's design is unique among climate funds, with programs designed to be strategically relevant to transformational change and design features that support the likelihood of transformational impact, including:

- A **country-led programmatic approach**¹¹, which sets the stage for multi-sectoral, context-specific transformation, supported by extensive stakeholder dialogue, engagement of influential champions, and alignment with national programs and ambitions on sustainable development.
- **Explicit consideration of transformational change at the design phase**, including identification of barriers (financial, institutional, policy, and knowledge and information related) that would need removal to achieve transformation.
- **Large investments utilizing a range of concessional financing tools**, including grants, loans, and other instruments. The scale, concessionality¹², and predictability of CIF resources has

helped engage MDBs, governments, and private-sector actors, mobilizing support from influential champions and influencing the type of projects CIF can support.

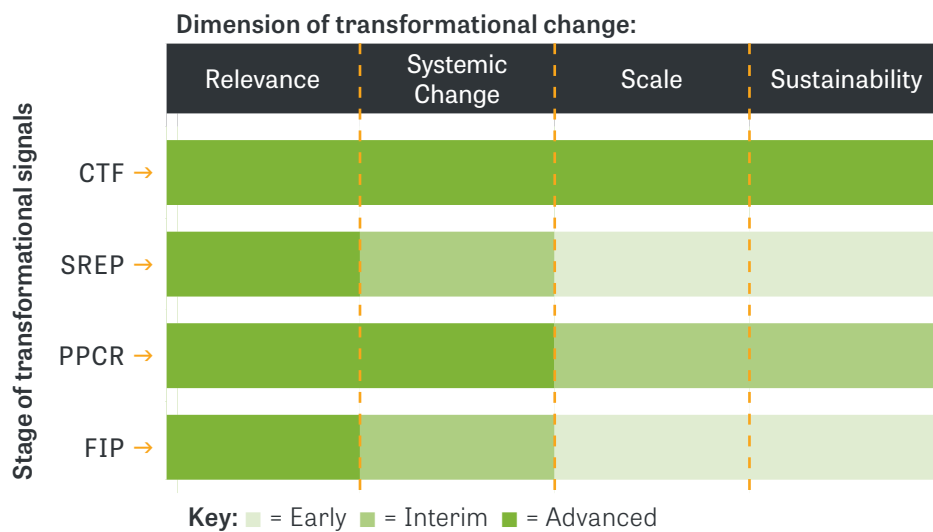
- **Delivery of financing through multiple coordinated MDBs**, working together to support national objectives in support of coherent investment packages.
- **Flexible and predictable funding**, making it possible to develop influential, often first-of-a-kind projects to address barriers and negotiate changing country and market conditions.

III. Overarching Findings on CIF's Contributions to Transformational Outcomes

There is evidence of transformation across CIF programs to greater and lesser extents depending on program and dimension. The evaluation classified this progress in terms of maturity in the signals of transformation (see Exhibit 2). Advanced signals indicate strong evidence of transformation, interim signals indicate transformation is underway, and early signals indicate pre-conditions are in place for future progress. The Evaluation and Evidence Synthesis both found that CIF's country programs are well designed and highly relevant to supporting transformation, reflecting a clear strength across CIF.

EXHIBIT 2 ↓

Signals of transformational change by dimension and program*



*This graphic reflects the balance of evidence collected through the evaluation across the countries covered. It is not an assessment of the overall portfolio.

At the program level, CTF has realized the most transformative results thus far. Operating in more-mature markets¹³, CTF programs commonly demonstrate advanced signals across all four dimensions, where low-carbon energy has shifted toward non-concessional, market-based approaches. The strong signals of scaling and sustainability reflect the development of private investment and developer markets.

The Strategic Climate Fund programs (PPCR, SREP, and FIP) have made interim or advanced progress on systemic change, reflecting changes in institutional structures and functions, even behavior change. For PPCR, fundamental shifts in stakeholder behaviors, knowledge, and capacity

demonstrate advanced systemic change.¹⁴ PPCR also commonly sees interim signals of scaling and sustainability, reflecting the mainstreaming of climate change into government structures, decision making, and budgeting, although there is variation in progress between countries, with the transition to sustainable models occurring at different speeds.

Differences in progress between programs hinge upon a range of factors, including implicit differences in sectors and program design, complexity, and level of resources available. Early and interim signals were more common in less-developed country contexts, where capacity and governance can represent constraints, and in more complex and contested thematic areas with strong socio-economic linkages (e.g., forests, community resilience, low-carbon transportation). It is generally also easier to measure advanced signals of change on technology deployment, investment, and finance (e.g., CTF), than through indicators of resilience or measures of systems change (e.g., policy, institutions, and knowledge).

Anchoring CIF programming in a narrative of wider co-benefits has helped support transformational change in local contexts. Such benefits include reducing poverty, a key driver for many low-income country governments—particularly concerning the community adaptation, forest livelihoods, and energy access agendas. They also include economic development and industrial green-growth strategies, including manufacturing, job creation, and greater productivity.

Some investments do not—at least yet—show signals of transformational change, particularly in the less mature FIP and SREP portfolios. This is in part because it generally takes four to seven years from project approval for transformation to emerge. Country-level barriers to transformation—such as institutional capacity constraints, subsidies for non-sustainable alternative agendas, political instability, and insufficient long-term financing—also inhibit progress.

In summary, over the ten years of its operations, CIF has made an important contribution to the trajectory of low-carbon, climate-resilient development in its target countries. This contribution at program level is set out in more detail below.

IV. CTF and Transformational Change

With programs in 15 middle-income countries and the MENA region¹⁵, CTF provides financing for the large-scale deployment of clean energy and other low-carbon technologies in emerging markets. CTF's overall transformation objective is to support the creation of, or transition to, low-carbon economies by demonstrating the viability of low-carbon technologies, and catalyzing replication and scale up of investments through private sector involvement.

The Evaluation and Evidence Synthesis found that **CTF has clearly contributed to transformational change, particularly in more advanced markets and countries where CTF investments have had at least a few years of implementation**, as a result of the following factors:

- **Timing:** CTF interventions have been strategically timed to accelerate, scale-up, and deepen transformational processes and outcomes.
- **Scale of financing, mainstreaming clean energy into national decision making:** The CTF design to invest large sums in a small number of clean energy technology projects enabled CTF to engage lead ministries responsible for strategic planning and financial management in partner countries. This helped bring climate finance into the mainstream of national economic and development decision-making in countries such as Mexico, Morocco, and Turkey.

- **Promoting innovative and first-of-a-kind projects:** The momentum gained through the programmatic planning process, along with the certainty and flexibility of the large CTF resource envelope, has facilitated the design of innovative, often first-of-a-kind projects, such as in Kazakhstan for wind and solar PV, and Mexico and Turkey for energy efficiency (see Exhibits 3 and 4).
- **Changing risk perception and driving down costs:** The scale, flexibility, and concessionality of CTF finance have been key drivers in supporting transformation, changing risk perceptions among investors, and driving down costs.
- **Complementing and leveraging other donors:** CTF concessional finance has complemented and leveraged MDBs' and bilateral donors' technical assistance on policy, institutional, and regulatory work.
- **Continuation and growth following CIF:** Several clean energy markets, including solar PV in Thailand, wind energy in Mexico, and energy efficiency in Turkey, have continued to grow without public finance support following CTF investments, showing clear signs of sustainable growth.

CTF findings by dimension of transformational change

There are advanced signals across all four dimensions of transformational change.¹⁶ Challenges still remain in certain complex and contested areas, such as transport, and ongoing concessional support remains important for higher capital cost technologies (geothermal, concentrated solar power).

EXHIBIT 3 ↓

Examples of First-Mover Demonstration Projects Supported by CTF

Mexico	Chile	Morocco	South Africa	Turkey	Kazakhstan	Thailand
Two of nation's first large-scale wind projects (Eurus and La Ventosa projects)	First utility-scale geothermal power plant in South America (48 MW plant)	First utility-scale solar project in Morocco (500 MW Noor CSP complex)	First CSP projects in sub-Saharan Africa (Xina, KaXu, Khi Solar One projects)	First major energy efficiency programs targeting commercial and industrial equipment	First large-scale wind and solar projects in Kazakhstan (two 50 MW plants)	One of the first utility-scale wind projects in Thailand (7.5 MW Theppana plant)

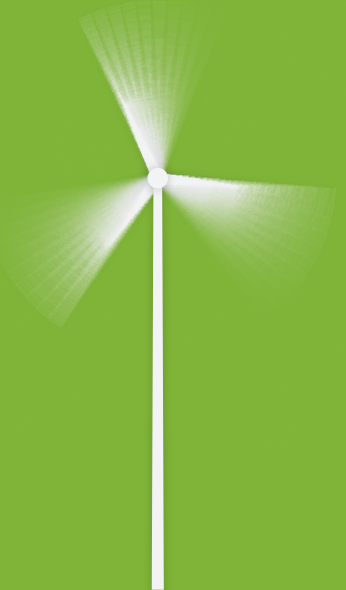
First major energy efficiency programs targeting lighting, appliances, and new homes

KAXU, S. AFRICA, ONE OF THE FIRST CONCENTRATED SOLAR POWER PROJECTS IN SUB-SAHARAN AFRICA [Source: CIF]



Transformation of the Mexico Wind Energy Sector

Following CTF support for two large private sector wind energy projects in 2009–10, widely regarded by Mexican officials and wind energy experts as “seminal projects in the development of the Mexican wind energy sector”, CTF provided US\$70.6 million through the Inter-American Development Bank in 2011 to further develop the wind sector. The investment helped establish a renewable energy financing facility in a Mexican national development bank to provide blended financing to scale investment in renewable energy. This in turn supported six wind energy projects in the 2012–16 period, helping to attract private investment, as new wind projects received around US\$11.8 billion from 2011 to 2017, of which 45% came from project developers and 23% from commercial banks, complementing MDB and CTF investments. Energy policy reforms have enabled further rapid scaling of wind energy projects, with about 4.3 GW of new wind capacity commissioned without concessional finance. (Source: BNEF (2018) and IFC (2014) in Evaluation)



RELEVANCE | CTF investments have been highly relevant to transformational change, both thematically in support of CTF's clean energy goals and in terms of their integration with national strategies and priorities. The selection of interventions has been timely and well targeted at those opportunities with the highest chance of transformational impact.

SYSTEMIC CHANGE | CTF programs have generated advanced signals of systemic change, with large investments changing behaviors and strong results from policy and institutional interventions. In the five countries analyzed in depth by the evaluation, CTF contributed to multiple first-mover and early-stage renewable energy and energy efficiency projects. These helped catalyze systemic changes, making it easier and more cost-effective for investors to pursue follow-on projects. Examples of systemic change signals include enhanced institutional capacity supporting renewable energy transitions (Morocco, Mexico); demonstration of technology and deployment model viability (Thailand, Mexico, South Africa); reduction in renewable energy-technology costs (Morocco, South Africa); and demonstration of large-scale renewable energy, influencing policy reform (Mexico).

SCALING | There are advanced signals of scaling across CTF-relevant markets, specifically increases in non-CIF investment, installed capacity, and engagement by financial intermediaries. In several countries, CTF investments have contributed to accelerating market take-off of technologies, including wind and solar PV energy. Scaling is faster in increasingly cost-competitive renewable technologies such as wind or solar PV, and slower in less cost-competitive technologies, such as geothermal in Indonesia and elsewhere. Examples of scaling signals include follow-on rounds of financing with expanded private sector interest (Morocco, Mexico); significant increases in installed capacity (Thailand, Mexico, Morocco)¹⁷; and rapid acceleration of market tipping points based on early wind and solar PV projects through competitive auctions (Chile, Mexico, South Africa).

SUSTAINABILITY | Signals of sustainability are advanced in all CTF markets analyzed in detail. CTF programs that demonstrated the viability of low-carbon technologies and deployment models served as the basis for further systemic change and scaling, under certain conditions. Examples of sustainability signals include shifts to non-concessional renewable energy finance (Thailand, Mexico) and the use of own corporate funds for scaling energy efficiency lending (Turkey).

V. SREP and Transformational Change

SREP supports more countries than CTF (21)¹⁸, focusing on lower-income countries. SREP is both much smaller than CTF and at an earlier stage of implementation. SREP aims to support transformational change by creating new economic opportunities, increasing renewable energy access and supply, and building policy and regulatory capacity.

The Evaluation and Evidence Synthesis found that SREP's **primary contribution to transformation is the delivery of demonstration/first-time projects, supported by the strengthening of the enabling environment (policies, institutions, and knowledge)**. SREP's investments are highly relevant to transformational change and lay a strong foundation for longer-term change. Realizing transformational results has been harder and slower than in CTF, due to relatively weak enabling environments, lack of technical capacity, and investment barriers, among other challenges.

Nonetheless, SREP has demonstrated several strengths that lay the foundation for future transformation. These include:

- **Stakeholder engagement and focus on climate change:** The process of developing SREP Investment Plans, through multi-stakeholder consultation, has facilitated governments to engage effectively with a wide range of stakeholders from the energy sector, as demonstrated in Kenya.
- **Strategic long-term plans and first-of-a-kind investments:** SREP has given countries the opportunity to adopt a systematic approach to energy development, considering the full range of renewable technologies appropriate for each context, often for the first time (see Exhibit 5).
- **Increasing energy access, with broader co-benefits:** SREP's support to micro- and mini-grids is expected to increase energy access significantly¹⁹ while bringing about broader socio-economic benefits, as documented in the Maldives and Rwanda.
- **Strengthening enabling environment:** SREP has helped strengthen the enabling environment for accelerated renewable energy deployment in low-income countries, as demonstrated in improvements for private sector participation in Honduras and the development of new advisory services in Tanzania.
- **Lowering risk:** SREP interventions have activated processes that lower renewable energy deployment risks for the government and the private sector, attracting developer and financier interest and follow-on investments. Country examples include Kenya, Ethiopia, and Nepal.

SREP findings by dimension of transformational change²⁰

SREP has strong relevance to transformational change. Results show interim signals around systemic change, and early results on scaling and sustainability. In general, realizing transformational change will take time and ongoing work to overcome barriers.

RELEVANCE | All four evaluation country program case studies demonstrated a high degree of relevance and alignment with national priorities. More broadly, the majority of SREP programs were well designed to address multiple barriers to transformation and advance the most likely transformational opportunities available at the time.

SYSTEMIC CHANGE | Interim signals of systemic change were identified. These arise primarily from country programs engaging on enabling environment barriers, such as policy frameworks,

Examples of First-Mover Demonstration Projects Supported by SREP

Armenia → *First large-scale solar PV plant in Armenia (55 MW Masrik plant)*

Kenya → *Some of the first large geothermal power plants in Kenya (Menengai field)*

Maldives → *First commercially-financed solar PV system (1.5 MW Hulhumalé project)*

Mali → *First utility-scale solar PV plant in West Africa (planned 33 MW Segou plant)*

SREP supported Kenya's newly created Geothermal Development Corporation (GDC) to de-risk the development of the Menengai Geothermal Field through a concessional loan of \$7.5 million and grant of \$17.5 million, channeled through the AfDB, with the AfDB providing a loan equivalent of \$120 million. There are three 35 MW plants under construction at Menengai, with scaling potential estimated at 7,000 MW. This model generated considerable interest from both investors and project developers and there are scaling signs as to its wider implementation. Countries in the region, such as Djibouti, have sought to develop their own version of the GDC model, whereas others have already developed it, such as Tanzania with the Tanzanian Geothermal Development Corporation. (Source: Micale et al. (2015) and van den Akker (2018) in Evidence Synthesis)



institutional capacity, knowledge, and behaviors—a reflection of the challenging and lower-capacity operating context in these countries. In some cases, SREP has been able to positively influence risk perceptions among investors.²¹

SCALING | There are early signals of scaling. In comparison to CTF, SREP investments are small; however, they may be large in relation to overall national energy demand. SREP is creating business models and demonstration projects that can serve as the basis for future scaling (e.g., mini-grid programs) and expanded private sector developer/partner interest (e.g., in Armenia and Nepal). As many SREP countries retain significant off-grid populations, the economics remain challenging and returns have not yet been sufficient to mobilize private capital at scale.

SUSTAINABILITY | Signals of sustainability in SREP are limited, reflecting the early stage of implementation, and the pilot nature of many of the projects. Overall, in SREP countries, challenges related to contexts, investment climate barriers, and ongoing constraints around affordability are likely to result in longer timeframes to achieve transformation.

VI. PPCR and Transformational Change

With programs in 28 developing countries and two regions²², PPCR aims to strengthen capacities and demonstrate ways to integrate climate risk and resilience into core development planning, hoping

also to leverage and scale-up climate-resilient investment. PPCR supports transformational change through a combination of resilience mainstreaming and investing in thematically linked projects.

The Evaluation and Evidence Synthesis found that **PPCR has played a major role in supporting national resilience planning and investment**. There are signals of transformational change across the four dimensions, with more advanced signals around relevance and systemic change, and interim signals around scaling and sustainability.

PPCR has supported transformational change through a number of features and accomplishments:

- **Program designs that address each country's unique barriers:** PPCR Strategic Programs for Climate Resilience (SPCRs) establish a common, multi-sectoral vision for climate resilience aligned with national development priorities. SPCR address multiple barriers to advance systemic change, spur scalability, and increase the likelihood of sustainability.
- **Building country ownership and focus on climate resilience:** The programmatic approach has changed how countries such as Cambodia and Tajikistan approach climate resilience, providing the first opportunities to adopt a multi-sectoral approach and advancing the enabling environment for climate-resilient investments. Establishing a strategic focal unit in an influential position within the government to champion PPCR coordination and cooperation, as in Bangladesh and Zambia, has been instrumental in country ownership, institutional processes, and strengthened policies.
- **Strong incentives for climate resilience mainstreaming:** PPCR has created strong incentives for national stakeholder engagement through the programmatic approach and by integrating technical assistance with large-scale investments. This has facilitated buy-in from a range of sector ministries. CIF investments have provided practical learning opportunities to inform more effective planning, programming, and policymaking; in some cases, these linkages could be strengthened.
- **Increased awareness and understanding:** New planning frameworks, developed as a result of SPCR preparation or embedded in PPCR investments, have increased awareness and understanding of vulnerability to climate change, as evidenced across the evaluation case studies (see endnote 16).
- **Strengthened national adaptation strategies:** Strategic timing of technical assistance to strengthen knowledge systems on climate resilience has supported the development of national adaptation strategies. There are documented examples in Tajikistan, Bangladesh, and Nepal.
- **Attracting private and public finance:** The SPCR process often facilitated co-finance from MDBs, donors, and private investors in several countries (Bangladesh, Bolivia, Mozambique, Tajikistan, Zambia, Jamaica and other Caribbean countries). Sub-national engagement at the district level has helped to further scale investments in Nepal, Niger, and Tajikistan.
- **Increased capacity to understand and track resilience:** CIF reporting on PPCR results has supported systemic change by providing governments with M&E tools to measure climate resilience progress, which has been mainstreamed into national systems, as in Nepal and Zambia.

PPCR findings by Dimension of Transformational Change²³

RELEVANCE | PPCR investments are generally well designed, aligned with national change processes, and based on nationally-led stakeholder engagement, making them relevant to transformational change.

SYSTEMIC CHANGE | Signals of systemic change reflect mainstreaming, capacity building, and changed mindsets by demonstrating the feasibility of resilience approaches. Examples include improved mainstreaming of climate considerations into development planning (Niger, Mozambique, Zambia) and increased government ownership and direction over institutional climate change structures (Zambia, see Exhibit 6); wider availability of improved climate and weather data for planning (Jamaica, Nepal, Niger); and increased awareness of climate change through improved university and secondary curricula (Nepal).

SCALING | There are interim signals of scaling for public and private sector interventions, particularly in follow-on programs where governments or international financial institutions have expanded PPCR programs or replicated them (e.g., Nepal, Tajikistan). PPCR's financial and supply chain intermediation with private sector companies has also mobilized lending and advisory services (Jamaica, Mozambique, Nepal, and Tajikistan).

SUSTAINABILITY | In most countries evaluated there are signs that transformational change can be sustainable, as shown by government commitment to follow-on programming (Nepal, Niger),

EXHIBIT 6 ↓

Mainstreaming Resilience in Zambia

In Zambia, PPCR has helped to mainstream climate resilience. Through support for the development of the Sixth National Development Plan (2011–15), climate change adaptation and mitigation, and disaster risk management principles, were mainstreamed into priority programs in crops, livestock, fisheries, natural resources, transport, energy, information and communications technology, housing, water supply and sanitation, mining, tourism, local government and decentralization. Government ministries were subsequently required to allocate staff and budgetary resources to climate resilience programs, which carried forward to the Seventh National Development Plan (2016–2020). This, in turn, further mainstreamed climate change across all relevant sectors, strategies, and districts. All provincial and district development plans are now required to mainstream climate change to reduce risks, requiring both an overarching strategy and detailed programs and projects. The National Policy on Climate Change (2016) is a step in that direction, and climate finance for adaptation is increasing. (Source: Evaluation interviews)

increased willingness to commit national budgetary resources (Zambia), and new approaches to funding resilience (Jamaica). Notably, in Tajikistan, private sector lenders are lending from their own resources.

VII. FIP and Transformational Change

With support to 14 countries²⁴, FIP recognized that a focus on carbon was not in itself sufficient to drive transformational change. It has sought to support transformation through coordinated multi-level efforts, including strengthening policy, social, and governance frameworks; using concessional finance to create economic and financial incentives; and changing mindsets among key constituencies.

FIP's design and investment planning process are highly relevant to transformational change.

There is evidence of interim systemic change, signaled by government policy reforms and commitments to forest protection. Despite successful demonstration of new business models, alignment around a positive vision, and increased government commitment in several FIP countries, sustainability has yet to materialize due to entrenched incentives and interests counter to FIP's goals, and the long timelines needed to secure positive change.

Nonetheless, FIP has demonstrated several strengths that could support and increase opportunities for transformational change:

- **Focus on drivers of deforestation:** The preparation of Investment Plans has enabled FIP countries to identify major drivers of deforestation and shape investment outcomes toward them, focusing on cross-sectoral linkages in forest-related sectors (see Exhibit 7).
- **Driving action at scale through a systems approach:** Adopting a national systems approach—with the context, drivers, and barriers to forest conservation identified in the FIP



FIP INTERVENTIONS IN BURKINA FASO INCLUDE INCREASING THE SUPPLY OF WOOD FROM FORESTS UNDER SUSTAINABLE MANAGEMENT. [Source: CIF]

FIP Brazil Investment Plan

The FIP Brazil Investment Plan (IP) was strategically focused on making agriculture and ranching practices more sustainable. The National Plan on Climate Change states Brazil's goal is to achieve a 40% reduction in deforestation in the Cerrado biome by 2020. However, a rapid increase in Brazilian soybean and cattle production and its expansion into the Cerrado act as drivers of economic growth that hinder effective climate change actions. The Investment Plan chose to invest in the Cerrado biome, operating at a geographic scale larger than the landscape or ecosystem level, and supporting national efforts to formulate policies that can be applied at this scale, thereby increasing the potential for generating transformational impact. (Source: Little (2018) in Evidence Synthesis)

Investment Plans—has been key to securing action at scale, as documented in Brazil and Burkina Faso.

- **Shifting market perceptions:** FIP capacity building activities, alongside the deployment of financial instruments, has helped to shift market perceptions by showcasing the synergies between the agriculture and forest sectors (e.g., in Mexico and Brazil) and addressing financial barriers, leading to a transformation in opportunities for rural enterprises in Mexico.
- **New partnerships and cross-sectoral cooperation:** New partnerships have improved forest and agricultural management practices. Institutional cooperation has helped find cross-sectoral solutions and promote ownership and economic gains at the local level, as demonstrated in Ghana and Mexico.
- **Empowering Indigenous Peoples and Local Communities:** FIP's Dedicated Grant Mechanism (DGM) for Indigenous Peoples and Local Communities (IPLCs) is empowering IPLCs in fourteen countries, including Brazil, Burkina Faso, Democratic Republic of Congo, Indonesia, Mexico, Mozambique, and Peru to develop and implement their own actions to reduce deforestation and forest degradation and promote natural resource management.
- **Increased government commitment:** The likelihood of sustainability of FIP investments has been strengthened by governments committing budgetary resources, introducing new fiscal measures, and/or making legislative change, to continue developing FIP initiatives deemed to be successful. Documented examples of such action come from Mexico, Brazil, Lao PDR, and Burkina Faso.

FIP findings by dimension of transformational change²⁵

RELEVANCE | The FIP design is highly relevant to transformation, employing integrated solutions to address a broad range of barriers and creating a platform for future transformational change.

SYSTEMIC CHANGE | FIP's approach of aligning incentives and creating common understanding has helped lay the foundations for systemic change. Nevertheless, disbursement remains at an early stage in many country programs, and systemic changes are not yet advanced. Examples of early and interim signals include forest policy reforms, new financing approaches, and cross-institutional collaboration (Mexico, Lao PDR, Brazil, Burkina Faso); integration of forestry into broader climate policy (Mozambique); and increased capacity of local communities and Indigenous Peoples to engage on forestry reform (DGM).

SCALING | Limited evidence was found of scaling, although the FIP approach of demonstrating new incentive models could form the basis for further replication. The continuing absence of large-scale financing and prevailing perverse economic incentives are major constraints. Early signals include successful pilots to increase areas under sustainable forest management and early replication of financing models by intermediaries at a small scale (Mexico).

SUSTAINABILITY | FIP has demonstrated the potential viability of new business models and aligning stakeholders around a common vision. However, entrenched interests and long timelines make it difficult to determine to what extent and which of the change models are likely to be most successful long term. Early signals include increased government commitment to governance and enforcement systems (Mozambique) and successful piloting of commercial forest financing models (Ghana, Mexico).

VIII. Other Findings

Private Sector

CIF has made substantial inroads with private sector actors in several contexts, helping to address investment risks across a wide range of scales, associated with micro, small, and medium enterprises to large corporations.²⁶ Many examples come from CTF, but there is evidence in SCF programs as well.

In Chile, Mexico, and Thailand, the **de-risking of early solar PV and wind energy projects** by CTF was vital in driving down investment risk perceptions, which lowered costs and attracted commercial investors. In South Africa, CTF investments in renewable energy coincided with the early stages of the country's new competitive bidding process, **facilitating some of the first private sector developments** of concentrated solar power, solar PV, and wind energy projects. The private sector is also the **largest source of co-financing** for CTF projects.²⁷

In certain technology areas, such as concentrated solar power, **CTF programs have supported improved technology scaling and cost reduction at a national and sometimes global scale.** For example, following on the success of CTF-supported projects, ACWA Power in Morocco was contracted to provide 700 MW of CSP in Dubai at a significantly lower cost of US\$0.073/kWh—reflecting the improved economies of scale and learning gained from its experience in Morocco. The Dubai plant has set a global benchmark for concentrated solar power costs.

For SCF programs, microfinance and risk sharing mechanisms in PCCR countries such as Jamaica, Nepal, and Tajikistan has helped transfer risks away from companies, increasing private sector engagement; however, a number of markets were not sufficiently mature for the continuation of IFC investments (e.g., Niger, Zambia). In Armenia (SREP), legal risk mitigation approaches, such as power purchase agreements, guarantees, and licenses were used to reduce perceived risks; and higher payment certainty has resulted in lower risk premiums.

All four programs have effectively used an intermediated approach—working through national financial institutions and partners—to deliver change for actions that fall below the typical value threshold for individual MDB investments.²⁸ The use of financial (and supply-chain) intermediation has influenced changes in attitude and behavior; e.g., CTF energy efficiency projects in Mexico and Turkey are using several financial instruments to leverage new flows of private investment. In Mexico FIP, FINDECA has achieved 100 percent repayment rates on loans, significantly improving perceptions around the viability of providing credit to community forest enterprises. PCCR's

intermediation with private companies has also mobilized lending and advisory services (e.g., Jamaica, Mozambique, Nepal, and Tajikistan).

Gender

CIF has improved its mainstreaming of gender considerations and is advancing women's voices, skills, and livelihoods in ways that are starting to bring about systemic change.

CIF has moved toward gender-equal participation in, and benefits from, CIF interventions. The strongest results are in Strategic Climate Fund programs. CIF investment plans and projects (e.g., in Cambodia, Lao PDR, and Nepal) increasingly include in-depth gender analysis, women-specific activities, and sex-disaggregated monitoring and reporting. There are interim signals of systemic change regarding gender-responsive design and institutional changes, as well as market-related outcomes, which might lead to scaling.



TWO RECIPIENTS OF PPCR FUNDED CLIMADAPT, A CLIMATE RESILIENCE FINANCING FACILITY, IN TAJIKISTAN [Source: EBRD]

The importance of gender equality to transformational change has been recognized and incorporated into CTF planning frameworks, contributing to some changing country practices, for example, in Vietnam.

Although there is potential for transformative gender impacts in the short to medium term, there is less evidence on how gender-responsive programming has enhanced broader and more advanced transformational change results. However, CIF partners are starting to design more gender-responsive interventions.

CIF's Influence on MDBs

Through the timing, scale, concessionality, predictability, and flexibility of its funding, CIF has supported the scaling up and mainstreaming of climate finance initiatives within its partner MDBs in a variety of ways, amplifying CIF's transformational impact. This includes:

- **Helping to increase MDB climate finance**, which rose by more than 50% from 2011 to 2017. In 2017, CIF's six partner MDBs committed about US\$27 billion in climate finance, or about 25% of total MDB operations from their own accounts.
- **Building awareness and testing new concepts**, demonstrating that climate change could be a viable part of MDBs' core business. CIF enabled MDBs to pursue riskier projects and deploy resources sooner.
- **Supporting the development of new MDB products**, such as blended finance structures, and identifying lessons on what works, which were later replicated and mainstreamed within MDBs.
- **Creating a collaborative platform** for MDBs to work and learn together at the global level, with some spill-over effects on other joint initiatives, such as climate finance tracking.

Transformational Change Processes and Timelines

Transformational change occurs when a range of context-specific factors align and can vary significantly by program, theme, or market. As such, it can appear chaotic and unpredictable, particularly when comparing interventions or timescales. Incremental change from individual projects can also cumulatively make future transformational tipping points more likely. Realistic expectations should therefore be applied regarding both the timescales for transformation and the role that specific interventions can play, especially in more complex areas or contexts.

IX. Recommendations to CIF and other Climate Finance Stakeholders

The Evaluation and Evidence Synthesis offer recommendations in the spirit of learning from experience and strengthening the transformational potential of climate finance, which are summarized below.²⁹

- 1 → **Build on CIF's strengths and insights gained from experience.** Continue to capitalize on CIF's comparative strengths, including working through a few MDBs in targeted countries, using concessional resources to catalyze higher levels of investment and large-scale impact.
- 2 → **Develop tools to support transformative programming design,** such as guidelines, frameworks, and country-level theories of change.
- 3 → **Approach transformation from a portfolio perspective,** supporting investments that address more complex barriers and require longer-term support, thereby maximizing the benefits from flexible, concessional finance to support priority challenging and emerging areas.
- 4 → **Support the role of national champions in program design and delivery** by further prioritizing engagement with influential stakeholders who can facilitate course correction where barriers emerge.
- 5 → **Maximize incentives for national stakeholders to engage** in transformation by pairing investment funds with technical assistance—allowing barriers to be addressed.
- 6 → **Continue to promote and expand the use of private sector approaches,** through market development and financial intermediation—especially in resilience and forestry, where these approaches are more emergent.
- 7 → **Strengthen the inclusion of gender-responsive actions** by continuing to promote gender-responsive programming and fully resourcing and implementing the CIF Gender Policy.
- 8 → **Build global 'supply side' expertise in selected technology or thematic areas** with a view to addressing issues common to a range of countries.
- 9 → **Enhance the benefits of the programmatic approach throughout implementation** across all programs, including coordinated multi-stakeholder consultation, increased focus on flexibility, shortening planning and approval periods to maintain relevance, and differentiating between country contexts.
- 10 → **Reflect transformation better in research, measurement, reporting, and learning** by investing in learning activities that address knowledge gaps and embed 'learning partners' to play a targeted role. Further refine transformational change concepts, focusing on sustainability and the trade-offs between rapid change versus investing with a longer-term view.

Endnotes

1. CTF was established in 2008 to provide scaled-up financing to contribute to the demonstration, deployment, and transfer of low-carbon technologies with a significant potential for long-term greenhouse gas emission savings.
2. PPCR was established in 2008 to support developing countries and regions in building their resilience to the impacts of climate change.
3. FIP was established in 2008 to provide scaled-up financing to help countries address the drivers of deforestation and forest degradation.
4. SREP was launched in 2010 to demonstrate the economic, social and environmental viability of low-carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through the use of renewable energy.
5. The TCLP is part of the CIF's [Evaluation & Learning Initiative](#).
6. TCLP Questions: (1) [Definitions](#): how is transformational change conceptualized in the international field of climate finance? (2) [Process and design](#): to what extent and how does CIF's approach to planning, designing, and implementing its investments work to advance transformational change? (3) [Results](#): to what extent, how, and under what conditions are CIF-supported investments and activities contributing to transformational change? (4) [Learning](#): how can CIF and others increase their contributions to transformational change?
7. See [Climate Investment Funds: Accomplishments, Transformational Impact, and Additionality in the Climate Finance Architecture](#). CIF 2015
8. See work by the [World Bank Group's Independent Evaluation Group](#), and the [Global Environment Facility's Independent Evaluation Office](#).
9. The evaluation findings focus on CTF programs in Chile, Mexico, Morocco, Thailand, and Turkey; SREP programs in Armenia, Honduras, Kenya, and Nepal; PPCR programs in Jamaica, Mozambique, Nepal, Niger, Tajikistan, and Zambia; and FIP programs in Burkina Faso, Mexico, and Mozambique.
10. The Evidence Synthesis drew from publicly available literature published in English. It did not incorporate internal MDB project documents, which was outside of the scope. These documents generally do not examine systems-level transformational change as understood by the TCLP.
11. See also, [Evaluation of the CIF Programmatic Approach](#), ICF 2018.
12. Concessional financing is financing using terms (interest rates, loan periods, etc.) substantially more generous than market terms.
13. Such as Mexico, Turkey, Thailand, and Morocco.
14. E.g., Jamaica, Mozambique, Niger, Tajikistan, and Zambia.
15. CTF started out with 12 country investment plans and a regional program. During 10 years of operation, programming grew to cover 15 country investment plans and one regional program in Chile, Colombia, Egypt, India, Indonesia, Kazakhstan, Middle East and North Africa (MENA), Mexico, Morocco, Nigeria, Philippines, South Africa, Thailand, Turkey, Ukraine, and Vietnam.
16. Based primarily on evaluation CTF case studies on Chile, Mexico, Morocco, Thailand, and Turkey, supplemented by information from the Evidence Synthesis.
17. CTF has contributed to more than 7 GW of new installed renewable energy capacity across CTF countries (CIF 2018), including more than 221 MW in Thailand, 1,123 MW in Mexico, and 2,270 MW (by 2020) in Morocco (BNEF 2018).
18. The initial six SREP countries were Ethiopia, Honduras, Kenya, Maldives, Mali, and Nepal. In 2012, six new pilots (seven countries) were added: Armenia, Liberia, Mongolia, Pacific region (Solomon Islands and Vanuatu), Tanzania, and Yemen. In 2014, the SREP Sub-Committee agreed to select another 14 countries: Bangladesh, Benin, Cambodia, Ghana, Haiti, Kiribati, Lesotho, Madagascar, Malawi, Nicaragua, Rwanda, Sierra Leone, Uganda, and Zambia. To date, of these 27 countries, 21 (those in italics) have approved Investment Plans.
19. More broadly, SREP is expected to improve energy access for more than 5.7 million people.' (SREP Results Framework 2018). However, there are only limited results in terms of actual improved access to date.
20. Based primarily on evaluation case studies on SREP programs in Armenia, Honduras, Kenya, and Nepal, supplemented by information from the Evidence Synthesis.
21. For example, Armenia (solar PV), Ethiopia (lighting, geothermal), and Kenya (geothermal).
22. Starting in 2009, 18 countries and two regional programs for the Pacific and Caribbean joined PPCR and have both Strategic Programs for Climate Resilience (SPCRs) and corresponding investment resources. These initial 18 countries in the general order their SPCR were approved are Bangladesh, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Zambia, Grenada, St. Lucia, St. Vincent and the Grenadines, Samoa, Bolivia, Yemen, Jamaica, Caribbean Region, Pacific Region, Tonga, Dominica, Haiti, and Papua New Guinea. An additional 10 countries added in 2017 have SPCR but no funding commitment for projects. These ten countries are Bhutan, Ethiopia, The Gambia, Honduras, Kyrgyz Republic, Madagascar, Malawi, The Philippines, Rwanda, and Uganda.
23. Based primarily on evaluation case studies on PPCR programs in Jamaica, Mozambique, Nepal, Niger, Tajikistan, and Zambia, supplemented with information from the Evidence Synthesis.
24. FIP started out working in eight countries: Brazil, Burkina Faso, Democratic Republic of Congo, Ghana, Indonesia, Lao People's Democratic Republic, Mexico, and Peru. In 2015 FIP added six new countries (Congo Republic, Côte d'Ivoire, Ecuador, Guatemala, Mozambique, and Nepal). Nine additional countries have approved Investment Plans with no funding envelope (Bangladesh, Cambodia, Cameroon, Guyana, Honduras, Rwanda, Tunisia, Uganda, and Zambia), therefore these are not included in the set of 14 countries that receive FIP funding for projects.
25. Based primarily on evaluation case studies on FIP programs in Burkina Faso, Mexico, and Mozambique, supplemented with information from the Evidence Synthesis.
26. Risks include lack of certainty about contractual payments and revenues to power providers, predictability of regulatory and permitting processes, and technology performance in new contexts, among others.
27. The private sector leverage factor is reported by CIF as 1:3.3, followed by MDBs (1:2.6) and bilateral/other sources (1:2.2). Source: CTF Semi-Annual Operational Report, January 2019.
28. Intermediated approaches engage smaller-scale markets where transaction costs would otherwise be too high.
29. Please refer to the separate Evaluation and Evidence Synthesis reports for a complete description of each study's recommendations.



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