

ENABLERS

THE ROLE OF ENABLING ENVIRONMENT IN SCALING UP CLIMATE FINANCE

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Sector/Thematic Analysis

CIF Program: CTF, SREP, and PPCR

TOPICS

- Technical Assistance
- Climate Finance
- Clean Technology
- Climate Resilience

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SUMMARY OF MAIN RECOMMENDATIONS

Maintain a broad “menu” of TA activities

Donors should remain flexible to support upstream enabling environment activities and also address market microstructure obstacles.

Take an integrated view when designing TA for market support

Deploy TA that concurrently addresses supply and demand constraints to kick-start sustainable green markets.

Use TA purposefully to drive partners to innovate and respond to evolving challenges

Use TA to drive innovation towards emerging issues or potentially underinvested areas development of global public goods, climate mainstreaming, and just transition.

Establish mechanisms to incentivize certain TA activities

Donors can leverage investment criteria, calls for proposals, or the establishment of other mechanisms to set “soft” funding allocations to key TA areas.

Given the relevance of financial institutions to enhance climate activities, align TA to existing global financial sector initiatives

The CIF should leverage its role and experience to play an active role in global initiatives supporting the alignment of financial institutions to climate priorities.

Leverage TA to enhance donors’ role in the green recovery agenda and more systematically measure its impact

TA can be the vehicle to mainstream the design and results measurements of economic cobenefits arising from climate projects.

EXECUTIVE SUMMARY

This report reviews and draw lessons from the role of enabling environment activities in scaling up climate finance based on experience from past clean energy and climate resilience-related technical assistance (TA) activities supported by the Climate Investment Funds (CIF). The review presented in this document looks back at TA, including policy development, capacity building, and transaction enabling activities, supported by CIF projects over the past decade. This includes TA activities financed by the CIF as well as those funded by other cofinanciers as part of CIF-supported projects. The review seeks to inform future CIF TA activities through the different CIF programs and through the dedicated CIF TA Facility (CIF-TAF), in addition to identifying lessons that can be used by other stakeholders engaged in climate TA activities. The CIF-TAF, established in 2019, supports the strengthening of the enabling environment for accelerating clean energy investments in CIF countries. In response to the COVID-19 pandemic, the CIF-TAF made green and resilient recovery an additional focus area to help countries build back better.

This review is guided by a review matrix based on the Organisation for Economic Co-operation and Development – Development Assistance Committee (OECD DAC) evaluation criteria and the dimensions of transformational change proposed by the CIF’s Transformational Change Leadership Partnership (TCLP). The OECD DAC criteria (relevance, coherence, effectiveness, efficiency, impact, and sustainability) is an established framework to assess the merits of an intervention. The TCLP adapted the OECD DAC criteria to converge on five dimensions of transformational change. The TCLP dimensions incorporate the concept of systemic change to the OECD DAC criteria. This review incorporates both frameworks, combining the concepts of relevance and coherence into a single criterion. In doing so, it incorporates concepts of transformational change for climate action into the analysis.

Findings

The CIF has supported a set of diverse and highly relevant TA activities necessary to address the most important barriers to scaling up climate finance. These activities can be divided according to their objectives into five categories:

- Establish the enabling environment conducive to facilitate climate investments through upstream activities such as *legal and regulatory framework development*.
- Facilitate the supply of finance by supporting financial intermediaries (FIs) *to develop their internal capacity* to assess green and resilient investments and adapt their business strategies and product offerings to target customers in this segment; and derisk and lower transaction costs for FIs to enter new green segments.
- Enable the supply of green and resilient technologies and services (including fostering the demand for finance) by *strengthening business models and technical capacity of enterprises and public entities* so they can provide competitive products and services and prepare viable projects that can receive financing and demand from end users.
- Foster the demand for green and resilient technologies and services through *advocacy and dissemination of the benefits* of such investments and facilitating the installation of new technologies, and reduction of costs involved in planning and executing investments in areas such as renewable energy (RE) and energy efficiency (EE) and enhance physical and economic resilience.
- Create *methodologies, analytical tools, and investments to measure green and resilient investments results, mainstream gender, and other environmental and social considerations and generate knowledge products* that facilitate replication and upscaling of green and resilient investments.

Notably, CIF TA support has been flexible and nimble to respond to evolving and emerging issues. This has included supporting government to adapt to evolving technical requirements, as was the case in India where TA supported foundational legal and regulatory frameworks required to catalyze rooftop solar PV

systems markets (Case study 3, India Grid Connected Solar PV Program). CIF TA has also supported emerging issues such as facilitating a just transition to renewables with particular attention to women's needs. For example, TA supported the use of gender-lens and community development approaches in the India Rajasthan Renewable Energy Transmission (Case study 1), including the establishment of women-led self-help groups for the population living around the solar park that constituted the main capital investment in the project.

The review identified four key findings on the role that TA has in facilitating the enabling environment for climate investments. These findings highlight the importance that relatively small financial investments in TA can have in facilitating transformational climate projects:

- *Focused and integrated interventions are key.* TA activities focused on a specific technology segment but covering all aspects, from upstream regulatory support to markets development, are particularly effective at accelerating results.
- *Mainstreaming for systemic change.* Mainstreaming climate considerations into national processes is critical to drive systemic change, and TA has been effective at supporting both countries and CIF implementing MDBs in this process.
- *Knowledge creation can have a transformational impact.* Knowledge creation as a global public good can be an efficient way to facilitate scaling up of investments, and additional TA support is needed.
- *Both stand-alone and bundled (with investments) TA is relevant.* To address regulatory gaps, private sector interventions may ultimately benefit more from the former and the public sector more from the latter.

Main recommendations

The following recommendations, drawn from the CIF experience, are applicable to governments, their development partners, and other organizations supporting the design and implementation of TA

activities seeking to provide an enhanced enabling environment for climate investments.

Maintain a broad “menu” of TA activities. Facilitating the development and functioning of green markets requires technical assistance interventions that support all market participants. This includes enabling activities that facilitate the operations of such markets and measure the impact of existing investments and facilitate future ones. This implies a need for flexibility not only to support upstream enabling environment activities but also to address market microstructure obstacles (i.e., support the matching of supply and demand) as well as the generation of global public goods.

Take an integrated view when designing TA for market support to increase the likelihood of success. This may include deploying TA that concurrently addresses supply and demand constraints. CIF projects have successfully kick-started sustainable markets for green goods and services by using TA to support, within a single project, FIs to supply credit, firms to supply goods and services, and end users to stimulate demand. In the context of projects involving climate finance, this increases the likelihood that FIs’ green financing activities will be sustainable as their finance supply will be met by demand from a broader range of borrowers.

Use TA purposefully to drive countries and their development partners to innovate in response to emerging climate priorities and address areas where there may have been under-investment. Based on the portfolio review and the evolving climate investments agenda—from the increased importance of measures to facilitate a “Just Transition” to the continued relevance of a green and resilient recovery from the COVID-19 crisis—consider establishing mechanisms to support types of TA activities where there has been underinvestment or where needs are expected to increase. These activities could include:

- *Global public goods.* Supporting the development of and dissemination of existing global public goods is a potentially underappreciated use of TA. Most global public goods in the CIF sample portfolio are generated as part of national projects and, therefore, there may be a limited incentive

for the funding recipient to use resources for such global activities when it may come at the expense of national activities. This may require addressing barriers to uptake on the recipient side—for example accessibility and technical capacity—as well as on the part of the entities providing TA, such as continued enhancement of their knowledge management activities.

- *Climate mainstreaming into planning processes.* Climate change mitigation and adaptation considerations are generally still not incorporated into broader public and private planning and execution processes. For example, Pilot Program for Climate Resilience (PPCR) TA projects in this area are supporting national public financial management offices and sector agencies to incorporate climate resilience as a key variable in their planning.
- *Innovation, particularly with respect to emerging “just transition” issues.* Consider fostering innovative climate interventions that could be kick-started through TA interventions. The definition of “innovation” could be very broad or focused on emerging topics such as addressing the needs of vulnerable communities to achieve a just transition; support for early-stage development of climate tech firms; or interventions leveraging the linkages between climate change investments, natural capital, and biodiversity.

Establish mechanisms to incentivize certain TA activities. Increasing the three types of TA activities mentioned in the previous paragraph can be achieved through a combination of mechanisms, including:

- Incorporate explicitly into investment criteria the requirement to consider how the proposed programs and investments contribute to the generation of global public goods, climate mainstreaming, institutional strengthening, and innovation.
- When applicable, utilize thematic calls for proposals to target the demand for TA to areas considered critical and adjust these calls on the basis of demand and evolving needs. The CIF-TAF’s inclusion of green and resilient recovery as a

key theme in a recent call for proposals is a good example of this approach.

- Explore establishing mechanisms that include a “soft allocation” made available to countries and their development partners, including MDBs, for TA-based innovative interventions. This is a variation on the “call for proposals” approach but uses a broad definition of innovation to foster creativity among the MDBs and their clients.
- In the case of global public goods, consider incorporating knowledge activities as an integral component of project design, implementation, and evaluation. This can be achieved, for example, by scaling up the practice of including, at the approval stage, project activities whose outputs are then incorporated into knowledge creation and dissemination work plans of the funding entity, as the CIF has been doing as part of its projects.

Given the relevance of FIs reorienting their business models towards green finance, align TA to existing initiatives in this area. Donors may consider playing a more active role in initiatives such as the central banks and supervisors’ Network for Greening the Financial System or the International Finance Corporation’s (IFC) Green Banking Academy. By

deploying TA for FIs through these mechanisms, effectiveness may be enhanced by developing a closer relationship with financial sector authorities.

Climate finance needs to be more relevant in the recovery and job creation agenda and TA (stand-alone or incorporated into projects) can be a key vehicle to achieve this. Continued support for climate investments must not rely only on future benefits (e.g., lowering of greenhouse gas emissions to stay within a 2°C world, or reducing future probability of food insecurity through climate-smart agriculture). Climate investments need to deliver faster results, particularly for local communities, and while this may be the case today, it is not systematically measured. TA can be used to develop metrics (monitoring structures/systems to help coordinate and course-correct in real time) and require projects to report on economic cobenefits, such as jobs and livelihoods created and protected, and impact on prices of food and household-level energy consumption. Activities such as those being supported by the CIF-TAF under the green and resilient recovery theme are a good example that could be further upscaled to address in a more holistic manner all the technical, environmental, and social challenges arising from climate change.



ACRONYMS

ADB	Asian Development Bank	M&E	Monitoring and Evaluation
AfDB	African Development Bank	MDB	Multilateral Development Bank
CfP	Call for Proposal	ODA	Official Development Assistance
CIF	Climate Investment Funds	OECD	Organisation for Economic Co-operation and Development
CIF-TAF	Climate Investment Funds Technical Assistance Facility	PFI	Participating Financial Institutions
CRG	Contingent Recovery Grant	PPCR	Pilot Program for Climate Resilience
CSP	Concentrated Solar Power	PV	Photovoltaic
CTF	Clean Technology Fund	RE	Renewable Energy
DAC	Development Assistance Committee	RESCO	Renewable Energy Service Company
DFI	Development Finance Institution	RREC	Rajasthan Renewable Energy Corporation
E&L	Evaluation and Learning	RRVPL	Rajasthan Vidyut Prasaran Nigam Limited
EBRD	European Bank for Reconstruction and Development	SCF	Strategic Climate Fund
EE	Energy Efficiency	SMEs	Scaling up Renewable Energy Program
ESCO	Energy Service Company	SREP	Scaling up Renewable Energy Program
FI	Financial Intermediary	SUPRABHA	Sustainable Partnership for Rooftop Solar Acceleration in Bharat
GEFF	Green Economy Financing Facility	TA	Technical Assistance
GRPv	Grid Connected Rooftop Solar Photovoltaic Program	TCLP	Transformational Change Learning Partnership
IDB	Inter-American Development Bank	ToC	Theory of Change
IFC	International Finance Corporation	WBG	World Bank Group
KIP	Knowledge and Innovation Program		

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1. RATIONALE AND CONTEXT

1.1. Objective, scope, and overall approach

The objective of this report is to explore and draw lessons from the role of enabling environment activities in scaling up climate finance based on experience from past clean energy and climate resilience-related TA activities supported by the CIF. The review presented in this document looks back at TA, including policy development, capacity building, and transaction enabling activities, supported by CIF projects over the past decade. This includes TA activities financed by the CIF as well as those funded by other cofinanciers as part of CIF-supported projects.¹

1.1.1. CIF: Brief summary

The CIF, one of the world’s largest multilateral funds, utilizes climate financing to help low- and middle-income countries accelerate low-carbon, climate-resilient development.

CIF supports an inclusive and just climate-smart future, focusing on diverse partnerships that derisk green markets and unlock additional investments and financing. To date, 14 contributor countries have pledged over US\$10 billion to CIF, which is expected to leverage an additional US\$62 billion in cofinancing in 72 recipient countries. Since its start, CIF has worked in the areas of clean technologies, energy access, climate resilience, and sustainable forests. And now, after identifying the next frontier of climate challenges, CIF is investing in five new areas: the transition from coal, climate-smart cities, nature-based solutions, industry decarbonization, and renewable energy integration. Recognizing the urgency of CIF’s mission and the strong demand from developing countries, the G7 confirmed its commitment to provide up to \$2 billion in additional resources for CIF in 2021.

CIF resources are deployed through a wide range of instruments and implemented by six partner MDBs acting as implementing partners: African Development Bank (AfDB); Asian Development Bank (ADB); European Bank for Reconstruction and Development (EBRD); Inter-American Development Bank Group (IDB); and World Bank Group, comprising the World Bank and the IFC.

For the purposes of this report’s analysis, the definition of TA encompasses a broad range of activities. In development and climate finance, there is no unique definition of TA, as will be discussed later in this chapter, and there is a broad range of activities that can be categorized as such. These include, but are not limited to, capacity building, project implementation support, preparation of technical studies, knowledge exchange, and creation and dissemination of knowledge products.

This review follows four steps to identify key lessons for future TA. The analysis considers:

1	Why is TA important for climate investments?	Brief literature review on the importance of TA activities to facilitate climate investments to identify key attributes of successful interventions.
2	What types of TA have been supported by the CIF?	Review a sample of the CIF portfolio to typify and establish a taxonomy of past CIF TA interventions.
3	Assess CIF TA against review matrix	Assess such TA interventions against a review matrix.
4	Identify key lessons and recommendations	Distill key lessons from the review and make key recommendations for future TA activities.

¹ In this document, the terms “climate,” “resilient,” “clean,” and “green” investment projects are used indistinctively, and they refer to activities that contribute to climate change mitigation and adaptation.

1.2. CIF-TAF for clean energy investment

In 2019, the CIF-TAF was established with seed funding from the government of Denmark to accelerate investments, build capacity of key stakeholders, and develop clean energy markets in client countries. The TAF was established to address barriers to the scaling up of markets for clean energy and mainstream climate considerations in the operations of the MDBs.² The CIF-TAF projects strengthen policy and regulatory frameworks, and support enabling environment activities as part of the CIF's broader efforts to expand clean energy, lower emissions, and support green recovery efforts. The CIF-TAF seeks to enable transactions through innovative business models, risk mitigation instruments, and standardized documents, among other intervention mechanisms.³

The relevance and importance of these objectives have been reinforced in the context of post-COVID-19 national recovery strategies underpinned by zero-emissions and climate-sensitive growth.

In response to the economic and social disruption caused by the pandemic, countries are seeking to implement sustainable and green stimulus measures to recover from the economic downturn that are also aligned with their climate change policies.⁴ This brings a unique opportunity to transform markets and public institutions to be more sustainable and resilient to climate change. The Global Commission on Adaptation found that investing US\$1.8 trillion in climate adaptation from 2020 to 2030 could bring US\$7.1 trillion in economic benefit.⁵ In this context, the CIF-TAF is well positioned to continue to address capacity constraints and derisk investments in ways that align with client countries' own development and recovery plans.

The allocation of CIF-TAF resources follows a unique approval process compared to that used in the rest of the CIF.

The CIF-TAF issues Call for Proposals (CfPs) soliciting submissions from partner MDBs. Following the release of a CfP, MDBs propose activities based on the themes and funding criteria specified in the CfP. A CIF-TAF Advisory Group, composed of representatives from donors, recipients, and MDBs, reviews the funding proposals, provides strategic guidance, and recommends decisions to the Trust Fund Committees, the CIF decision-making body, for final approval.

The two CfPs issued to date reflect responses to the evolving needs within the climate finance landscape.

The first CfP was launched in December 2019 with a specific focus on EE. It attracted more than six concept notes for a total funding request of US\$3 million. The Advisory Group approved five projects covering six countries totaling US\$2.5 million; the second CfP process led to a total of about US\$30 million in approved projects focused on two tracks:

- *Accelerating clean energy investments.* Activities under this track focused on renewable energy, including power generation, systems integration, and EE in buildings and industry. These included policy and regulatory support, institutional capacity building, and transaction support to mobilize private sector investment.⁶
- *Ensuring green and resilient recovery.* This second track integrated climate and sustainable development planning into the response to the COVID-19 crisis. Through non/prelending and policy/investment lending activities, CIF-TAF activities aim to assist beneficiary countries prioritize green and resilient elements in recovery planning and mobilize resources toward green recovery.

2 CIF (2018), [Proposal for Technical Assistance Facility for Clean Energy Investment Mobilization](#), CTF and SCF Trust Fund Committees document.

3 CIF (2020b), [CIF Technical Assistance Facility for Clean Energy Investment Implementation Report](#).

4 Vivid Economics and Finance for Biodiversity Initiative (2021), [Greenness of Stimulus Index](#).

5 United Nations (n.d.), [Financing Climate Action](#), accessed in May 2022.

6 CIF (2021), [Accelerating clean energy investments](#), accessed in June 2022.

1.3. TA in development finance

TA encompasses a broad range of activities that facilitate the deployment of development and climate finance resources. Along with capital investments, assistance in terms of regulatory support, capacity building programs, project planning, policy analysis, market development, legal assistance, and technology transfer and adaptation are crucial for countries and communities looking to undertake development activities. These activities, largely understood as TA, act as a stimulus for sectoral transformation through policy development, large-scale deployment of newer technologies, and development and expansion of markets.

While there is not a unique definition of TA, it generally focuses on capacity development at the national/systemic or project level. For example, the OECD defines TA as activities “(i) aimed at the transfer of technical and managerial skills or of technology for the purpose of building up general national capacity without reference to the implementation of any specific investment projects; and (ii) the provision of technical services required for the implementation of specific investment projects.”⁷ A report from the World Bank evaluation department has defined TA in even more general terms as “a key instrument for improving policies and project design, enhancing skills, and strengthening implementation capacity, and for institutional development in general.”⁸ An additional definition, from a World Bank research department report, has defined TA as the transfer or adaptation of ideas, knowledge, practices, technologies, or skills to foster economic development.⁹

The concept of capacity development has been around for more than five decades now. It has evolved over time, both in terms of functions and target group. From a historical perspective, the evolution of TA activities aimed at the public sector

can be linked to the evolution of capacity building in international development as having three stages¹⁰:

- In the 1970s, focus was on the capabilities of key individuals to fill gaps in specific roles, particularly in newly independent countries. Capacity building took the form of scholarships and training to transfer the same type of individual skills available in developed countries.
- In the 1980s, increased focus on the capabilities of organizations, which was generally understood to be ministries and other government line agencies. In this phase, capacity building activities supported organizational transformation activities encompassing all aspects from strategic realignment (e.g., changes in the mandates and structures of ministries) to operational details including job descriptions and performance measurement.
- In the 1990s, there was a paradigm shift as capacity building became focused on the institutional environment by providing sectorwide support that considered not only government line agencies but also broader matters such as increasing accountability to citizens and the relationship to parliaments and other political bodies.

Different criteria have been used to classify TA activities. Consistent with the broad definition of the term, there are different criteria to establish TA typologies. Some of them are:

- Delivery mode. Embedding TA providers in government agencies to develop specific institutional capabilities and/or enhance processes; embedding TA providers within projects to provide technical skills to design and build infrastructure; providing sector policy advice in the context of MDB’s development policy loans; supporting and/or influencing the preparation of laws, regulations, and other institutional frameworks; and establishing twinning arrangements with other entities for knowledge transfer purposes.¹¹

7 OECD (n.db), [Glossary of Statistical Terms](#), accessed in May 2022.

8 World Bank Operations Evaluation Department (1996): *Lessons & Practices*. Number 7. Washington, DC.

9 World Bank (1997), [Applying Economic Analysis to Technical Assistance \(World Bank Policy Research Paper 1749\)](#).

10 Teskey, G. (n.d.), [Notes on capacity development—with a focus on fragile and conflict-affected states](#). World Bank, mimeo.

11 IBON International (2017), [The Reality of Aid 2016: Technical cooperation as an aid modality: Demand-led or donor-driven](#).

- Purpose. Policy, regulatory, and institutional reform; research and data collection; training; feasibility studies and project implementation support; environmental and social impact studies¹²; and provision of global public goods.¹³
- Bundled activity type. TA can be bundled with different types of development operations: Support the design and implementation of capital and other types of investments; support the design and implementation of reforms under policy-based lending; support programmatic approaches whereby specific TA activities are not identified ex-ante but funding is made available in support of long-term programmatic objectives.¹⁴

In the last two decades, TA targeting private sector development constraints has been deployed by MDBs and Development Finance Institutions (DFIs).¹⁵ These activities can be put into two broader categories:

- *Investment climate activities.* Supports the enabling environment for private sector activities and may include TA for legal and regulatory reforms design and implementation and the development of the legal, technical, and financial infrastructure conducive to private sector activities (e.g., credit registries). The direct recipient of this TA may be government entities and public/private partnerships.
- *Transaction advisory activities.* TA is provided to private sector entities (or public sector ones that play a direct role in enabling private transactions such as commercially oriented public banks) to enhance their strategies and business models, create products, and facilitate specific transactions.¹⁶

Global amounts allocated to TA are substantial. In 2020, US\$17 billion in disbursements for TA activities was made by the countries reporting to the OECD International Development Statistics database. This amount represents close to 10% of total Official Development Assistance (ODA) disbursements that year¹⁷ and probably underestimates its magnitude, as some of the TA bundled with capital investments and budget support operations are not reported separately. This relationship has remained approximately constant over the last three years for which complete data is available.

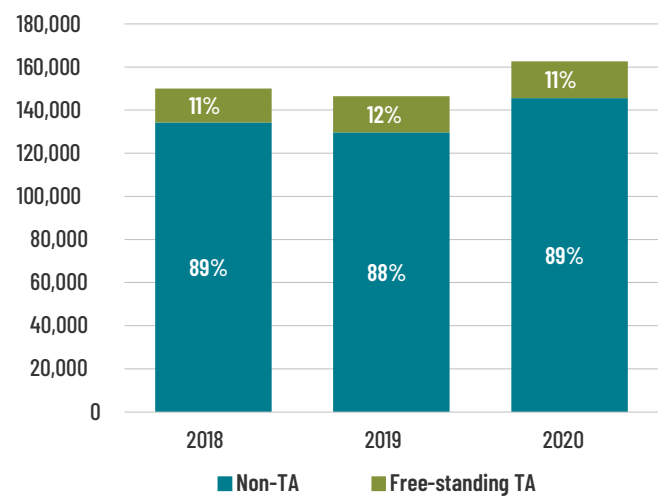


FIGURE 1. ODA net flows TA/Non-TA (US\$ million)

Source: KPMG analysis based on OECD statistics

12 Runde, Daniel et al. (2020), [The DFC: Delivering Technical Assistance in High-risk Contexts](#), Center for Strategic and International Studies.

13 Public goods are defined as “those that are available to all (‘nonexcludable’) and that can be enjoyed over and over again by anyone without diminishing the benefits they deliver to others (‘nonrival’).” They are global if they can be enjoyed by all citizens of the world. Chin (2021), [What are global public goods?](#), IMF.

14 Cox, Marcus and Gemma Norrington-Davies (2019), [Technical Assistance: New thinking on an old problem](#), Open Society Foundation. <https://agulhas.co.uk/app/uploads/2020/10/OSF-Landscaping-Study-on-TA-final-version-2.pdf>

15 The OECD defines DFIs as specialized development banks or subsidiaries set up to support private sector development in developing countries.

16 Farnand, Alexis (2019), [Technical Assistance for Investment](#), Government of the United Kingdom.

17 OECD (n.dc), [OECD International Development Statistics](#), accessed in June 2022.

While there are a limited number of evaluations of TA as a stand-alone instrument, some lessons have been identified to maximize its effectiveness and avoid pitfalls. There are relatively few analyses on the effectiveness of TA as most evaluations, particularly those commissioned by MDBs and bilateral development agencies, consider programs and interventions where TA is just one of the instruments being deployed and, in many cases, it is bundled with other types of investments. Furthermore, many evaluations are done shortly after project completion, when the impact of TA activities, particularly with respect to longer-term issues such as institutional reforms, may not have materialized yet.¹⁸ However, some important lessons have been identified:

- Long-term TA interventions are more effective in leading to transformational change and, consistent with this, shorter, “rapid response” TA is more effective when it is part of a broader program.^{19, 20}
- TA interventions must be adapted to the local context. While this may be an obvious observation after more than 75 years of international development history, it is tempting to use standardized TA programs and seek to replicate them without adapting them to local characteristics.²¹ Furthermore, TA, particularly when deployed to support legal and regulatory reforms, may fail if it is used as a technical solution to what is a political problem (i.e., hiring consultants to write a draft law will not advance reforms if the binding constraint lies in the political realm).²² Finally, implementing TA in the local language may also help ensure that stakeholders are fully engaged in the process.
- Maximize knowledge transfer and avoid “capacity substitution.”²³ Poorly designed and delivered

TA can lead to displacing local capabilities and generate overreliance on external expertise. Therefore, TA interventions should include a strong knowledge transfer component that can kick-start self-sustaining processes. This may be implemented through knowledge exchange programs among partners such as those managed by the CIF’s Transformational Change Learning Partnership.

- Link TA activities to realistic goals that are aligned to the technical and institutional capabilities of the recipient entity. Countries, and by extension institutions, may fall into a capability trap, in which “the implementation capability of the state is both severely limited and improving (if at all) only very slowly.”²⁴ Development partners have used TA to support countries in their attempt to escape this “trap.” However, there is a poor track record of success, and this is in part because unrealistic expectations and targets are set for the TA activities. Once those targets are not met, the overall change process that such TA was meant to support loses institutional support and countries may be left worse off.
- With respect to TA targeted at the private sector, bundling advisory services with long-term finance increases the likelihood of sustainability through the creation of new markets. This is particularly critical with respect to interventions involving private FIs receiving financing to kick-start lending to target activities (e.g., climate finance, small and medium enterprises). TA support can ensure that FIs make long-term changes to their business model and that their lending activity continues beyond the period when they receive external financing.²⁵

18 Tom Woodhatch, Alessandra Casazza, Brian Lucas, Frans Werter (2011), [Capacity Results. Case Stories on Capacity Development and Sustainable Results](#), LenCD.

19 Barr, Julian and Charlotte Vaillant (2008), [DFID Country Programme Evaluations: Synthesis of 2006/2007 Evaluations](#). ITAD.

20 Megersa, Kelbesa (2019), [The Effectiveness of Technical Assistance in Middle Income Countries](#). Institute of Development Studies.

21 OECD (2011), [Perspectives Note: The Enabling Environment for Capacity Development](#). OECD DAC.

22 Andrews, Matt and Lawrence Bategeka (2013) [Overcoming the limits of institutional reform in Uganda](#). Center for International Development at Harvard.

23 Tom Woodhatch, Alessandra Casazza, Brian Lucas, Frans Werter (2011), [Capacity Results. Case Stories on Capacity Development and Sustainable Results](#), LenCD.

24 Pritchett, et al. (2010), [Capability Traps? The Mechanisms of Persistent Implementation Failure](#).

25 KPMG (2021), [Mid-Term Review of Women’s Entrepreneur Finance Initiative](#).

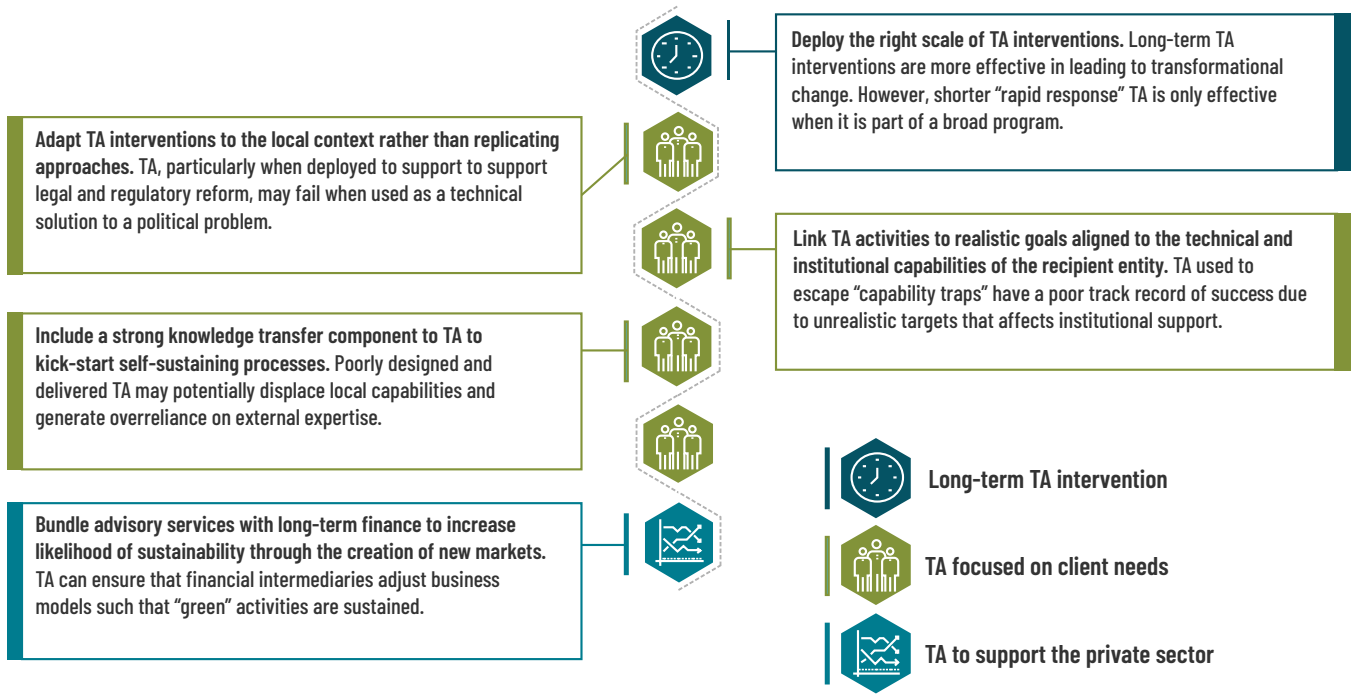


FIGURE 2. Literature review takeaways: lessons to maximize TA effectiveness



1.4. TA and climate finance

TA in climate is not structurally different from development finance, but it seeks to address needs inherent to delivering climate finance. A key obstacle is the enormous size of investment required, in the order of US\$ 1.6 trillion per year over the next decade²⁶ just for clean and resilient infrastructure. Facilitating the flow of public and private finance to meet this need is a critical area of TA focus. A study that reviewed 31 policy reports on the barriers associated with investment in renewable energy infrastructure, found that the short-term nature of investors, policy uncertainties, and the lack of appropriate scale in investment opportunities are the key barriers in the sector for the uptake of finance.²⁷ Therefore, TA can address these gaps by:

- Developing policies and legal and regulatory frameworks that align key sectors to the technical, financial, and regulatory needs to adopt new clean and resilient technologies
- Facilitating the crowding-in of longer-term investors through interventions such as the design of new financial instruments to derisk investments
- Preparing business plans, feasibility studies, and project proposals that can be used to attract investors to scale-up climate investments
- Addressing capacity constraints at the local and national level, including by upskilling staff, supporting planning and mainstreaming of climate considerations into operations, and implementing digital tools to increase efficiency and transparency.



26 Rozenburg J and Fay M (2019), [Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet](#). World Bank.

27 Hafner, Sarah et al. (2019), [A Scoping Review of Barriers to Investment in Climate Change Solutions](#), Sustainability, MDPI.

TA is being used to support climate finance through several levers. During the last decade, TA has been used to address a broad range of constraints to climate investments. These include:

- Facilitating the development of a legal and regulatory enabling environment that contributes to the design, financing, and implementation of climate projects. This has been critical to attract renewable energy producers and provided them with fair access to existing transmission and distribution networks.²⁸
- Reducing coordination and transaction costs through the generation and distribution of data, standard methodologies, and other global public goods. For example, the development of climate risk country profiles and climate risk actuarial methodologies has facilitated the creation of new insurance products to manage physical climate risks.^{29, 30}
- Facilitating project-level resource mobilization by supporting the preparation of technical and financial viability studies contributing to the process of attracting investors to new mitigation and resilience activities.³¹
- Subsidizing start-up costs and mitigating risks for innovative approaches whose technical or economic viability may not have been established yet and more generally contributing to test new business models. The design of risk-sharing and subsidy mechanisms for geothermal energy is a good example of this approach.³²
- Developing new financial products to crowd-in institutional investors into climate finance. The growing and increasingly mature green bonds market has benefitted from TA to support the structuring of these instruments as well as the development of the third-party verification companies that are critical to the integrity of this market.³³



28 World Economic Forum (2019), [From funding to financing: Transforming SDG finance for country success](#).

29 Hallmeyer K and Tonkonogy B (2018), [Designing Technical Assistance Activities for Adaptation and Resilience Companies](#). Climate Policy Initiative.

30 World Bank (n.d.), [Climate Risk Country Profiles](#), Climate Change Knowledge Portal (worldbank.org).

31 Murphy D and Parry J (2020), [Filling the Gap: A review of Multilateral Development Banks' efforts to scale up financing for climate adaptation](#).

32 Stadelmann, Martin and Angela Falconer (2015), [The Role of Technical Assistance in Mobilizing Climate Finance](#), Climate Policy Initiative.

33 Miller A and S Swann (2019), [Driving Finance Today for the Climate Resilient Society of Tomorrow](#). Global Commission on Adaptation.

2. METHODOLOGY

2.1. Overall approach

The CIF has been operational since 2008 and, through its Evaluation and Learning (E&L) Initiative, has established a track record of evaluations. However, there have not been any portfolio-wide learning reviews of its TA activities. This review, therefore, captures lessons from past and ongoing TA activities. Such activities include policy and regulatory enhancements, human and institutional capacity strengthening, and the development of innovative market instruments and business models.

This learning review is guided by a review matrix based on the OECD DAC criteria and the dimensions of transformational change proposed by the CIF’s TCLP. The OECD DAC criteria (relevance, coherence, effectiveness, efficiency, impact, and sustainability) are an established framework to assess the merits of an intervention.³⁴ The TCLP adapted the OECD DAC criteria to converge on “five dimensions of transformational change.”³⁵ The TCLP dimensions incorporate the concept of systemic change to the OECD DAC criteria. This review incorporates both frameworks, combining the concepts of relevance and coherence into a single criterion. In doing so, it incorporates concepts of transformational change for climate action into the analysis.

Scope. The review will focus on the following key areas in its review of previous CIF TA:

- **Context** of their origination and design, including key barriers and challenges they aimed to resolve at the design stage
- **Relevant stakeholders** and the consultation process
- **Lessons learned** from their implementation and, depending on the level of implementation reached, **initial achievements and impact.**

This review is based on a sample of projects covering three CIF programs. The CIF Administrative unit identified 50 projects with substantial TA components (project sample). These projects cover three programs: the CTF, the PPCR, and the SREP.³⁶ This sample, presented in Annex B, includes projects from all the MDBs implementing CIF activities.

:
 : **ABOUT THE CIF’S**
 : **TRANSFORMATIONAL CHANGE**
 : **LEARNING PARTNERSHIP**
 :
 : **The CIF’s E&L Initiative established the TCLP to**
 : **focus on collaborative learning on fundamental**
 : **changes in systems relevant to climate action**
 : **with large-scale positive impacts that shift and**
 : **accelerate the trajectory of progress toward**
 : **climate-neutral, inclusive, and sustainable**
 : **pathways.**

34 OECD (n.d.), [OECD DAC Evaluation Criteria](#), accessed in May 2022.
 35 CIF (2020c), [Five Dimensions of Transformational Change: Transformational Change Learning Partnership of the CIFs](#).
 36 Given their unique characteristics, Forest Investment Program activities were excluded from this review.

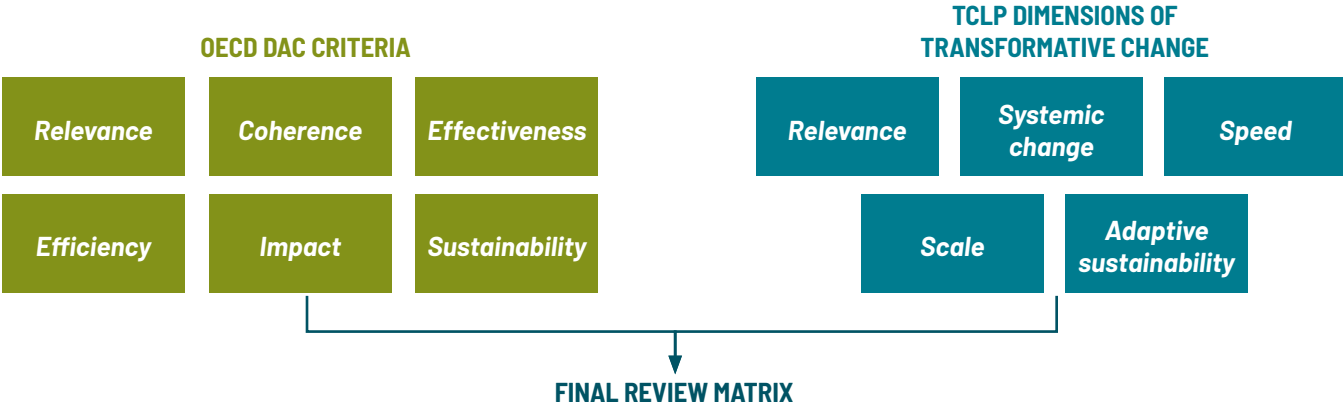
The analysis was based on the review of project documentation of the portfolio sample and interviews with key MDB staff. The documents included project preparation studies, submissions to the CIF and to the respective MDB boards during the approval stage, and supervision and project completion reports. This review did not incorporate field visits to validate findings.

impact, and sustainability) and it has been complemented using the CIF’s five dimensions of transformational change. Questions for the resultant five categories (Relevance and Coherence, Speed, Scale, Systemic Change, and Adaptive Sustainability) were built based on the experience of KPMG and lessons learned from best practices for program evaluations, questions specified in the terms of reference for the review, and KPMG’s understanding of CIF and its implementing MDBs. Preliminary findings from a review of the CIF portfolio and interviews with the CIF Administrative Unit during the inception phase also supported the formulation of the questions. The questions collectively illustrate strategic insights from previous or ongoing CIF projects.

2.2. Methodology description

2.2.1. Review matrix

The review matrix is based on the six categories of questions in the OECD DAC evaluation framework (relevance, coherence, effectiveness, efficiency, impact, and sustainability).



REVIEW CRITERIA	RESEARCH QUESTIONS
Relevance and coherence	<ul style="list-style-type: none"> • What are the TA activities that are more directly linked to achieving the CIF programs objectives? • What TA activities and modalities (stand-alone or linked to investments) are more effective at addressing structural bottlenecks and generating global public goods?
Speed	<ul style="list-style-type: none"> • What TA interventions accelerate the delivery of climate results and/or generate results fast enough given existing initial conditions and complexity of undertaking? • When is TA effective and when does it deliver timely results?
Scale	<ul style="list-style-type: none"> • What TA activities led to climate investments being scaled up? • What are the characteristics of TA activities that crowded in private investment and generated follow-on projects?
Systemic change	<ul style="list-style-type: none"> • What are the preconditions required for TA activities to contribute to systemic change (i.e., fundamental shifts in system structures and functions)? What are the types of TA that can deliver systemic change? • What is the role of TA activities to link climate objectives to broader SDG goals?
Adaptive sustainability	<ul style="list-style-type: none"> • What TA activities have contributed to make CIF interventions more robust and adapt to evolving changes in the climate agenda (e.g., increased importance of just transition approaches)? • What TA activities have led to structural, long-term change? (Closely linked to systemic change)

2.2.2. Data collection and analysis

The data collection strategy is based on multiple sources to collect both a broad set of datapoints for quantitative analysis and qualitative data on key issues.

Data collection follows a logical escalating pattern, whereby we start with the large-scale broad data and focus in on issues as they arise from the preliminary analyses.

Portfolio data. The CIF team identified the 50 projects that constitute the portfolio sample. Selection was based on two criteria: data availability and projects in which CIF funding generally did not exceed US\$50 million (there were seven projects with CIF funding above US\$50 million).³⁷ The rationale for the latter criterion is that CIF-funded TA programming typically does not exceed this funding threshold. In identifying this sample, certain projects were excluded due to lack of readily available data or they were considered outliers because of their size. A portfolio dashboard was then developed based on publicly available project appraisal documents, project summaries, and other project level information.

Characterize TA activities. TA activities were categorized based on their intended objective guided by the questions, “*What is the TA seeking to achieve?*” and “*What is the obstacle that the TA is seeking to address?*” This resulted in five broad categories that describe the purpose of the TA in the sample portfolio. These five categories, further developed in the next chapter, are:

- *Upstream activity support* that seeks to create an enabling environment conducive to facilitate climate investments. This includes support to establish legal and regulatory frameworks conducive to climate investments.
- *Facilitate the supply of finance* by supporting FIs to develop their internal capacity to assess green investments and adapt their business strategies and product offerings to target customers in this segment; and derisking and lowering transaction costs for FIs to enter into new green segments.

- *Enable the supply of green technologies and services* (including fostering the demand for finance) through the provision of assistance to businesses and public entities to strengthen their business models and technical capacity to provide competitive products and services and prepare viable projects that can receive financing and demand from end users.
- *Foster the demand for green technologies and services* through advocacy and dissemination of the benefits of such investments and facilitating the installation of new technologies and reduction of costs involved in planning and executing investments in areas such as RE, EE, and enhanced physical and economic resilience.
- *Create methodologies, analytical tools, and investments* to measure green investment results, mainstream gender, and other environmental and social considerations and generate global public goods such as knowledge products and analytical tools that facilitate replication and upscaling of green investments.

Semistructured interviews. Semistructured key informant interviews were held with the CIF team, MDB focal points, task team leaders (TTLs), and selected implementation teams. These interviews, conducted concurrently with the portfolio analysis, complemented the data collected from other sources and deepened the review team’s understanding of key issues and topics surfaced using the other instruments. The team conducted a total of 11 semistructured interviews, including a total of about 40 people, with MDB focal points and project teams.³⁸ These stakeholders serve as the implementing partners’ day-to-day interlocutors with the CIF and their respective institutions. Interviews were guided by a set of questions derived from the review matrix.

37 See Annex B for list of these seven projects. These projects were included in the sample to better reflect the breadth of TA activities in the CIF projects.

38 Additional interviews will be carried out during the second half of August 2022 to obtain views from one additional MDB focal point as well as to gather additional information of some of the case studies reviewed.

Interview questions for project teams were further tailored based on publicly available information and sought to validate the ways in which TA was utilized as part of the project. Generally, discussions with project teams sought to confirm the team’s understanding of the project operation, project-specific challenges and the role of TA in addressing these, and the role of TA in mainstreaming cobenefits such as gender issues into the overall intervention.

Case studies. Six case studies were undertaken as part of the learning review. These representative cases highlight lessons learned in deploying the TA modalities highlighted earlier in the report (e.g., enabling environment: policy development, capacity building, and transaction enablers; and generation of global public goods). The following criteria were applied to case study selection:

- Project/Instrument balance to help ensure they are representative of the overall portfolio, including a combination of interventions addressing on the one hand clean energy and on the other climate resilience
- Balance between private and public sector projects
- Usefulness to the review by considering their relevance to the overall aim of identifying lessons learned that can be used to adjust or strengthen CIF-TAF strategy, programming, processes, and partnership approach; this may involve both considering the innovation/value addition of each specific case and its potential for replication
- Representativeness of TA modalities
- Regional, country income group, and contextual representation
- Data availability, including access to stakeholders such as MDB implementing partners, recipient country agencies, and private sector counterparts where applicable, to prepare case studies.

GUIDING QUESTIONS FOR SEMISTRUCTURED INTERVIEWS WITH MDB FOCAL POINTS

Why is TA, particularly when provided as part of grants, important to help your clients achieve their climate objectives?

What criteria are used to decide on the use of TA within a project and how much funding is needed to meet relevant objectives? What criteria are used to decide whether to apply for CIF funding to finance the TA?

What TA activities and modalities (stand-alone or linked to investments) are more effective at addressing structural bottlenecks and generate global public goods?

What TA interventions accelerate the delivery of climate results and/or generate results fast enough given existing initial conditions and complexity of undertaking?

What TA activities led to climate investments being scaled up?

In what ways does CIF TA drive climate cobenefits with other donor-funded projects and stakeholder engagement more generally?

What TA activities have led to structural, long-term change?



Based on these criteria, a high-level portfolio review, and consultation with the CIF and respective implementing partners, the review team developed deep-dive suggestions during the Inception phase. The long list was then discussed with the CIF team and prioritized into the following cases.

Case study data was collected using all instruments deployed for the broader portfolio analysis, and findings were compiled in Annex A. This included review matrix questions, desk review of publicly available project documents, and semistructured interviews with project teams. Project documentation was requested from implementing partner project teams to maximize the data analyzed as part of the review.

PROJECT	MDB	PROGRAM	RATIONALE
#1 India: Rajasthan Renewable Energy Transmission Investment Program	ADB	CTF	Role of TA in skill development, gender mainstreaming, and addressing technical barriers in implementation of nascent renewable energy technology
#2 Caucasus Green Economy Financing Facility (GEFF) – SREP Armenia Renewable Energy Grant Support	EBRD	SREP	Potential for TA to streamline and facilitate investment approval cycle and reporting, particularly for small and medium enterprises (SMEs)
#3 India Grid Connected Rooftop Solar Program	World Bank	CTF	Highlight ways to leverage TA in expanding the supply of financing to promote the adoption of critical technology; example of institutional change within government counterpart
#4 Middle-East and North Africa (MENA) Concentrated Solar Power (CSP)	World Bank	CTF	Importance of TA in supporting government’s strategic planning for the energy sector; potential for knowledge generation and transfer of know-how on a regional basis
#5 Climate Resilience Through Deep Tech Acceleration in the Caribbean Basin	IDB	PPCR	Development of support to precommercially viable private sector firms with innovative technologies
#6 Improved Decision-making for Climate-resilient Development in Asia and the Pacific	ADB	PPCR	Example of stand-alone TA supporting broader public sector capacity building efforts, namely in the public financial management and fiscal planning space



3. PORTFOLIO OVERVIEW

3.1. Portfolio overview

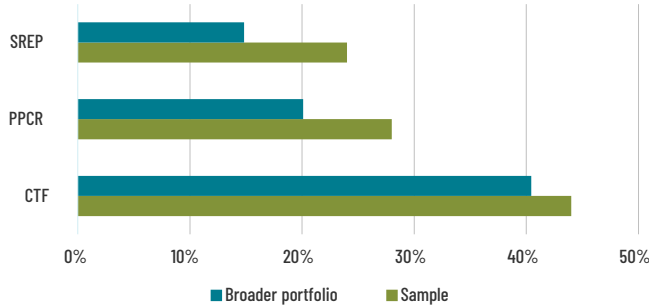


FIGURE 3. CIF portfolio vs. sample analyzed (projects approved)
 Source: CIF Annual Report 2022

This portfolio sample used in the review mirrors the characteristics of the overall CIF portfolio. CTF projects make up almost half of the 50-project sample, and the other half is divided approximately equally by PPCR (14) and SREP (12). This distribution approximately reflects the relative distribution among these three programs in the CIF portfolio (see chart).

The sample is also representative of the regional and development contexts in which CIF TA is deployed. The sample includes projects in a wide array of income groups, including low-income and lower-middle-income countries.

Public sector projects or programs make up 70% of the sample. Project data in the form of project appraisal documents and project and supervision reports were largely available online. Private sector projects were not as readily available, and information was solicited through interviews with MDB focal points.

3.1.1. Portfolio sample overview

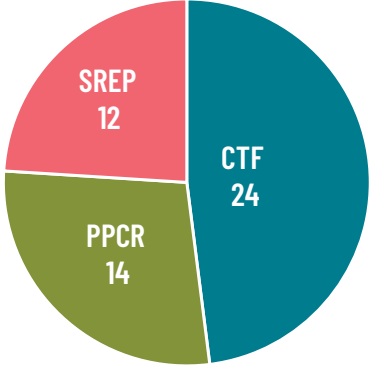


FIGURE 4. Program distribution (number of projects)

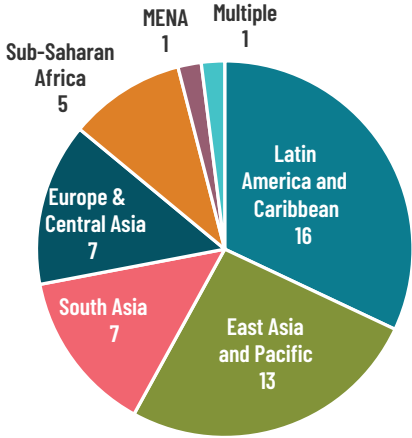


FIGURE 5. Geographic distribution (number of projects)

3.2. Typology of TA activities in the portfolio

The data for the portfolio sample was reviewed to characterize all the TA activities, irrespective of funding source in each project. This involved a detailed review of all the documentation available for each project to identify the TA components. Then, such components were reviewed as they were designed when each implementing MDB approved

them, followed by incorporating subsequent results presented in supervision or completion reports as well as in other documentation made available. This review encompassed all TA, regardless of its source of funding, as some of the projects included TA financing from the implementing MDB or from other development partners.

Five broad categories of TA and 11 types of activities were identified. With a view to establish a more detailed description of the portfolio and more easily answer the question, “*What TA activities are supported by the CIF?*,” TA activities in the portfolio were placed into 11 types within five broad categories of intended purpose of the interventions.

TABLE 1. Categories and types of TA in the portfolio

Category	ENABLING ENVIRONMENT/ UPSTREAM ACTIVITIES	SUPPLY – FINANCE	SUPPLY – TECHNOLOGY AND SERVICES	DEMAND – TECHNOLOGY AND SERVICES	RESULTS AND KNOWLEDGE
Type	<p>1. Legal framework</p> <ul style="list-style-type: none"> Legal, regulatory, and business environment reform <p>2. Institutional capacity and arrangements</p> <ul style="list-style-type: none"> Capacity building of national and subnational agencies to manage climate investment mechanisms (e.g., support through technical notes, policy recommendations, and drafting of SOPs/policies) Costs and risks mitigation of multicountry coordination by supporting regional bodies <p>3. Analysis and tools</p> <ul style="list-style-type: none"> Analysis and modelling of climate change adaptation options through climate-risk and long-term adaptation pathways studies <p>4. Pipeline/project preparation</p> <ul style="list-style-type: none"> Identification of potential projects, roadshows, dissemination among potential project sponsors and financiers 	<p>5. Support financial institutions’ internal strategy and capabilities</p> <ul style="list-style-type: none"> Development of green finance business models in FIs Design of innovative financial instruments and development of project pipelines Feasibility studies, market assessments to demonstrate commercial viability <p>6. Derisking/lowering transaction costs</p> <ul style="list-style-type: none"> Creation of risk-sharing facilities to promote EE/RE/CP investment Addressing nonfinancial barriers (e.g., contractual models) and perceived risks to investors 	<p>7. Business and technical support to firms and producers</p> <ul style="list-style-type: none"> Capacity building to firms seeking to develop green business lines and EE, including for firms at the early feasibility stage End-user support through the preparation of business plans, technical notes, methodologies, and human resources training to conduct green business activities and EE (e.g., energy audits) Technology platforms to facilitate the identification of green technologies <p>8. Implementation support to investment projects</p> <ul style="list-style-type: none"> Engineering studies, project management, safeguards compliance activities, and activities to support a just transition 	<p>9. End-user education and dissemination</p> <ul style="list-style-type: none"> Educate utilities, distribution companies, enterprises, and consumers to encourage uptake of RE/EE measures RE/EE diagnostic studies at end-user level to highlight potential savings if new technologies are implemented <p>10. End-user subsidies</p> <ul style="list-style-type: none"> Design of subsidy schemes to stimulate demand of new green technologies 	<p>11. Knowledge creation</p> <ul style="list-style-type: none"> Dissemination of business models and market information to inform productive uses of green technologies across sectors through workshops, thought leadership, and targeted campaigns Generation of guides on how to source, develop, present, and monitor bankable deals Establishment of risk and information monitoring system while building capacity at all levels of government Mainstream thematic considerations such as gender, climate responsiveness, and adaptive sustainability into project financing of MDBs

Enabling environment/upstream activities is the most common category supported. Most projects have activities that touch upon more than one of the five categories. The most common category focuses on the four types of activities under enabling environment/upstream activities. Almost 80% (39 of 50) of the projects reviewed included these types

of activities. This reflects alignment of the CIF TA activities with practitioner and academic literature, which points out the importance of TA to develop institutional capacity and, in the case of climate finance, establish a strong enabling environment that can crowd-in private and public sector financing into climate investments.

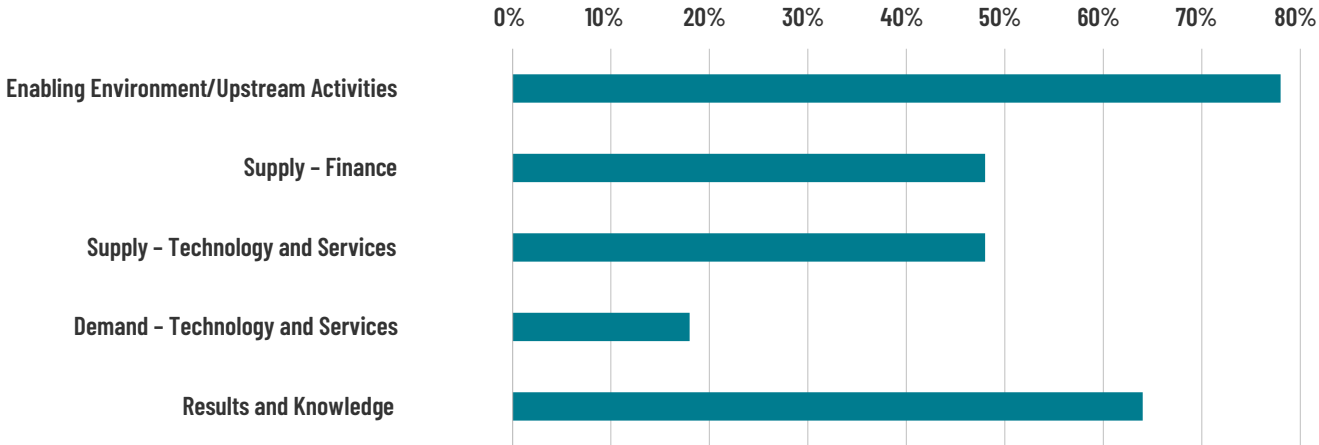


FIGURE 7. Categories of TA activities in the portfolio sample – Percentage of projects
 Source: KPMG analysis based on CIF and MDBs portfolio data
 Note that some projects had more than one category of TA activities and therefore data add up to more than 100%.



More than a quarter of the projects had support to institutional capacity and arrangements (activity 2) as the main objective of its TA activities. To obtain a clearer picture of the TA focus, the main activity type of each project was identified. This was done by reviewing the document and the results framework and assessing qualitatively the main purpose of the TA³⁹ as quantitative measures were not available in the documents reviewed, such as disaggregated financial allocations to each activity. More than

a quarter of the TA in the projects focused on supporting institutional capacity and arrangements, consistent with the importance of TA in supporting enabling environment activities. The importance of activities related to facilitating the supply of finance (categories 5 and 6 in the graph below) also reflects the important role that the CIF TA has played in seeking to kick-start financial markets in support of climate investments.

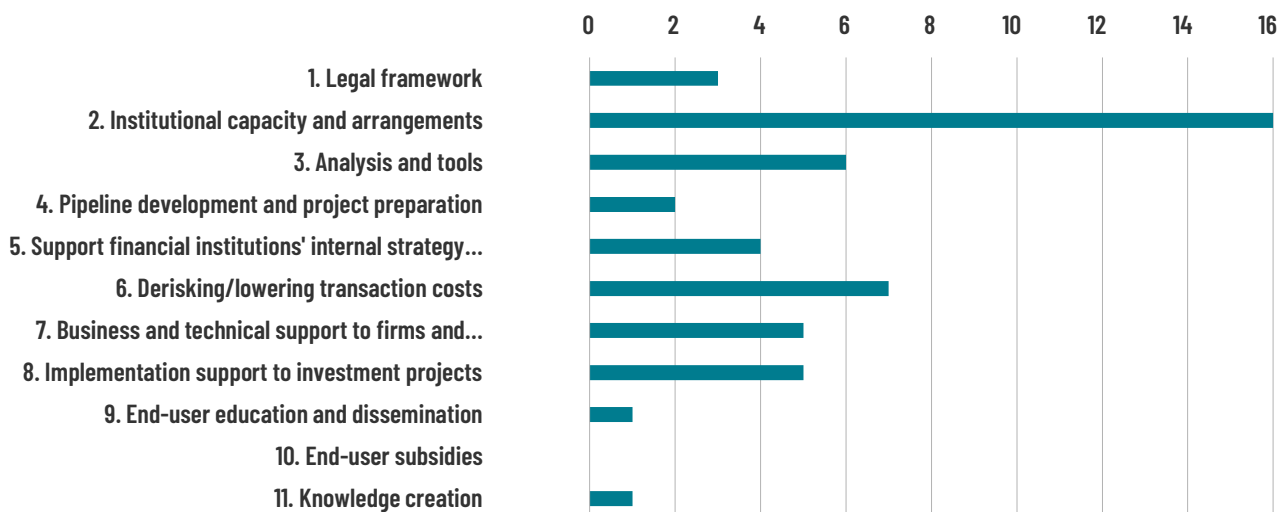


FIGURE 8. Main type of activity by project in the portfolio sample – Number of projects



39 The analysis focuses on the main purpose of the TA, which is not necessarily the objective of the project at large.

Most projects have multiple types of TA. For example, the six projects chosen for a deep dive in the case studies (Annex A) had up to six types of TA activities highlighting the broad range of impact that TA can have.

TABLE 2. Case studies: Range of TA types

TA TYPE	1 – INDIA: RAJASTHAN RENEWABLE ENERGY TRANSMISSION	2 – ARMENIA: GEFF RENEWABLE ENERGY GRANT SUPPORT	3 – INDIA GRID CONNECTED SOLAR PV PROGRAM	4 – MENA CONCENTRATED SOLAR POWER	5 – IMPROVED DECISION-MAKING FOR CLIMATE RESILIENT DEVELOPMENT IN ASIA AND THE PACIFIC	6 – ECOMICRO 2.0 CLIMATE RESILIENCE THROUGH DEEP TECH ACCELERATION IN THE CARIBBEAN BASIN
1. Legal framework			●	●		
2. Institutional capacity and arrangements	●		●	●	●	
3. Analysis and tools				●	●	
4. Pipeline development and project preparation				●		
5. Support financial institutions' internal strategy and capabilities			●			
6. Derisking/lowering transaction costs			●			●
7. Business and technical support to firms and producers		●	●			
8. Implementation support to investment projects	●		●			
9. End-user education and dissemination		●	●			
10. End-user subsidies		●				
11. Knowledge creation				●	●	

3.2.1. Enabling environment/upstream support

This is the most common category of TA supported by the CIF, and it has played a particularly important role in creating the legal and regulatory environment to facilitate the adoption of new clean sources of energy. In the context of climate change adaptation, support in this area contributes to mainstream resilience considerations in national and private sector strategic planning. In the portfolio sample, close to 80% of projects included activities in this category activities and about 50% of projects' TA had this as the main type of TA activity.

TABLE 3. Legal framework

KEY EXAMPLES	
Project	Key focus
CTF: IFC Kazakhstan Energy Infrastructure Program	Improve the regulatory enabling environment for RE, particularly the technical work to implement a feed-in tariff regulation
CTF: World Bank/IDB Chile TA for Sustainable Geothermal Development	Legal and regulatory reform related to the geothermal sector, in particular the preparation of a new geothermal concession draft law

CTF and SREP TA have supported line ministries and regulators in adapting legal and regulatory frameworks to facilitate investments in clean energy generation. In most cases, changes to the legal and regulatory framework are aimed at leveling the playing field to ensure that RE is not at a disadvantage financially with respect to other sources of energy by, for example, facilitating feed-in tariffs that can contribute to the financial closing of RE investments.

TABLE 4. Institutional capacity and arrangements

KEY EXAMPLES	
Project	Key focus
CTF: MENA CSP TA Program	Promote the deployment of CSP technologies by expanding the market and supporting the creation of ecosystems that attract investors in related services and products
SREP: Pacific Renewable Energy Investment Facility Kiribati: South Tarawa Renewable Energy Project	Support required due diligence, project preparation, and procurement support, as well as policy recommendations for energy sector projects

Institutional capacity and arrangements comprise the largest group (41%) of enabling environment and upstream support activities. This type of TA cuts across CTF, SREP, and PPCR programs, supporting a wide range of beneficiaries, including line ministries, businesses, and local FIs. As such, institutional capacity and arrangements activities support a range of objectives related to the expansion of new markets for renewable technology, accelerating investment in adaptation and mitigation by public and private sector stakeholders, and strengthening institutional capacity to facilitate scale-up of technologies and encourage mainstreaming of resilience into broader development planning.

TABLE 5. Analysis and tools

KEY EXAMPLES	
Project	Key focus
PPCR: Strengthening Risk Information for Disaster Resilience in Bhutan	Build on Bhutan's policy framework for integrating climate and disaster risk management in development activities by establishing institutional mechanisms and agency coordination and systemic data management
PPCR: Supporting the Design of Long-term Adaptation Pathways in the Face of Climate Risks in Peru and Colombia	Improve decision-making processes in the two countries by modelling climate adaptation options given current and future climate risks

CTF and PPCR TA have also supported the development of analytical studies and tools that help assess climate risks in priority sectors; inform adaptation options tailored to local needs and considerations; and foster systemic approaches to data collection, sharing, and use. This type of TA also supports the design and implementation of monitoring and evaluation systems for programs, technical simulations of EE, and other project management support. Tools generated under this type of TA contribute to two main purposes: (i) provide a public good to public and private entities as is the case with the provision of data that estimates the probability and impact of climate-related disasters to assess and manage climate and disaster risks and design insurance products and (ii) incorporate climate risks into national economic and sectoral development planning.

TABLE 6. Pipeline development and project preparation

KEY EXAMPLES	
Project	Key focus
PPCR: Knowledge and Support TA for the Private Sector Business Development for Climate-resilient Agribusiness Projects in Asia and the Pacific	Conduct a market gap assessment to prioritize investment in small and emerging market companies in the Pacific, South/Southeast, and Central Asia
SREP: Mini Hydropower Plants and Related Distribution Networks Development Project	Support the feasibility study for an electrification project covering 60 rural localities

PPCR and SREP TA have enabled the development of a pipeline of climate resilient projects, including those with cobenefits such as gender additionality. This includes support across several stages of the investment cycle, such as feasibility studies, preparation of funding applications, market analysis and screening of investment opportunities, and project structuring. Support is also provided in activities such as roadshows and dissemination of investment opportunities among potential project sponsors and financiers.

3.2.2. Supply – Finance

Triggering the development of sustainable financial markets for green investments depends not only on providing long-term liquidity that matches the risk characteristics of such investments, but also on the capacity of FIs to reorient their business models towards new green activities. This includes redesigning their credit underwriting processes to assess and price financial risks arising from green investments and designing products that meet the needs of their clientele engaged in that type of investments. Nearly half of portfolio activities analyzed included some component of this type, indicating that supporting the development of climate-oriented financial markets is a significant focus of the CIF.

TABLE 7. Support financial institutions’ internal strategy and capabilities

KEY EXAMPLES	
Project	Key focus
CTF: Colombia Sustainable Energy Finance Program	Support the establishment of a risk-sharing facility among Colombian FIs to promote EE, clean production, and RE investment by end users, particularly SMEs
CTF: Turkish Sustainable Energy Financing Facility	Provide commercial banks in Turkey with on-lending to private sector borrowers for EE and small-scale RE investments

CTF and PPCR TA have supported FIs in the development of internal strategies and capabilities. In most cases, this includes enhancing FIs’ ability to monitor portfolio and loan performance, product development, and management training on transaction structuring and energy service companies’ (ESCOs) lending practices. Overall, these TA activities enable FIs to better understand the market potential of EE and RE projects and carry out effective risk assessments in key sectors, ultimately encouraging private sector and household uptake of green product offerings. This can be particularly important for EE, where the estimates of savings resultant from investments need to be incorporated into the analysis

carried out by the FIs to assess their loans. As some of the EE technologies are relatively new, TA is critical in disseminating their characteristics and financial implications to the overall energy costs of a potential FI borrower.

TABLE 8. Derisking/Lowering transaction costs

KEY EXAMPLES	
Project	Key focus
PPCR: Structuring and Launching the Caribbean Water Utilities Insurance Company	Support product development and distribution, ultimately mobilizing investment in the insurance company that will provide affordable natural disaster insurance with sufficient claims capacity
CTF: Turkey Geothermal Development Project	Establish risk-sharing mechanism to foster investments in the geothermal sector

TA activities in this area have sought to reduce perceived investor risk in clean technology projects and climate resilience financing schemes through contingent recovery grants for geothermal and other capital-intensive projects; design of risk-sharing mechanisms; and risk management product development, distribution, and implementation. For example, TA has been used to design the technical parameters of contingent grant facilities used to support geothermal exploration and to train the government specialists in charge of managing these facilities. This category also includes grants provided to early-stage green firms as these funds are used to reduce risks and attract other investors.

3.2.3. Supply – Technology and services

Transitioning to a green economy requires assisting existing companies to reorient their product offerings towards new clean and resilient goods and services (for example, converting industrial heating and cooling companies into ESCOs focused on the delivery of EE services) or supporting new green firms during their early-stage operations when they need to establish their business models and develop the capacity to prepare investment plans to attract financing. In the portfolio sample, about 50% of projects included activities in this category and 20% of projects’ TA had this as the main type of TA activity.

TABLE 9. Business and technical support to firms and producers

KEY EXAMPLES	
Project	Key focus
SREP: Caucasus GEFF – SREP Armenia – Renewable Energy Grant Support	Provide finance, technical advice, and incentives to help SMEs become more competitive by investing in high-performance technologies and EE practices
SREP: Business models for private sector-led mini-grid energy access project	Increase generation capacity of renewable energy mini-grids in South Asia

CTF, PPCR, and SREP TA have included business and technical support to firms and producers. These generally include technical support to promote climate resilient production and livelihoods, assistance to ESCOs to participate in on-lending schemes, development of tailored financial products, resilient supply chains, and relevant market studies to gauge the feasibility of select products. In Bangladesh, for example, CIF TA enhanced climate change risk management capacity of private sector stakeholders (including farmers) by developing an early warning system based on weather and crop-related information.

TABLE 10. Implementation support to investment projects

KEY EXAMPLES	
Project	Key focus
SREP: Bangladesh Scaling-up Renewable Energy Project	Support the establishment of a renewable energy financing facility and mobilize resources to support a pipeline of renewable energy projects
CTF: Chile CTF-IDB CSP Project	Enable the construction of the first solar CSP power plant by supporting financial sustainability and scaling up through facilitating learning in the market

These TA activities support the construction of large-scale energy projects, often the first of its kind in the local market. The TA component of these projects supports a wide range of activities, including program management, financial and commercial viability studies, and monitoring and evaluation.

TA has also supported the implementation of social, gender, and environmental activities. These are described in some of the project documents as contributing to address the safeguards requirements that implementing entities need to meet as a requirement to receive CIF and MDB funding. However, these activities—for example, micro-enterprise development and skills training for women affected by the construction of solar parks (Annex A, Case study 3)—can be put into the broader context of supporting a Just Transition to a clean and resilient economy.

3.2.4. Demand – Technology and services

Strengthening the enabling environment and the supply of finance and services may not be sufficient to develop green markets: demand may also need direct technical support. For example, consumers and their energy utilities companies may need TA to be able to take advantage of net metering regulation that could increase the supply of renewable energy. Also, businesses and households may not have a clear perception and the technical know-how to assess the

payback period for EE investments. In the portfolio sample, nearly 20% of projects included activities in this category.

TABLE 11. End-user subsidies, education, and dissemination

KEY EXAMPLES	
Project	Key focus
CTF: Support to FIRA for the Implementation of an EE Financing Strategy for the Food Processing Industry	Address informational and technical barriers that prevent supply of and demand for financing in energy efficiency investment projects

CTF TA has supported end-user education of the value of EE investment projects through the provision of technical and coordination support to intermediaries, training of relevant stakeholders such as SMEs, energy service and equipment providers, and FIs, among others. For example, in Mexico, CIF funds helped pilot financial incentives for firms in the food processing industry seeking financing for their energy investments and TA to assess the potential financial benefit from such investments as a way to reduce the payback period and trigger demand. Such support helped demonstrate the economic viability of EE across sectors by lowering perceived risk by local FIs and target firms. Other examples include training firms to undertake technical feasibility studies and evaluate options for efficiency improvement, energy audit capacity building, and standardization of products and services.

3.2.5. Results and knowledge

TABLE 12. Knowledge creation

KEY EXAMPLES	
Project	Key focus
CTF: Knowledge Management Grant – Impact Assessment Study of CTF-financed clean energy projects in Turkey	Analyze the impact of CTF funding provided to energy projects in Turkey, particularly effectiveness in leveraging private sector capital and introducing new, renewable energy technologies to the market

This category of TA includes activities linked to specific projects, such as support to the development of monitoring and evaluation (M&E) frameworks and mainstreaming thematic considerations such as gender, climate responsiveness, and adaptive sustainability into MDB project financing. Additionally, this area includes knowledge transfer and activities tied to the generation of global knowledge as well as awareness raising, and dissemination of information and lessons through conferences and workshops.

These activities can be ultimately linked to the creation of global (or regional) public goods such as M&E approaches and the integration of gender, social, and other environmental cobenefits into climate projects that can inform new initiatives in other countries. In the portfolio sample, 64% of projects included activities in this category.

3.3. TA theory of change

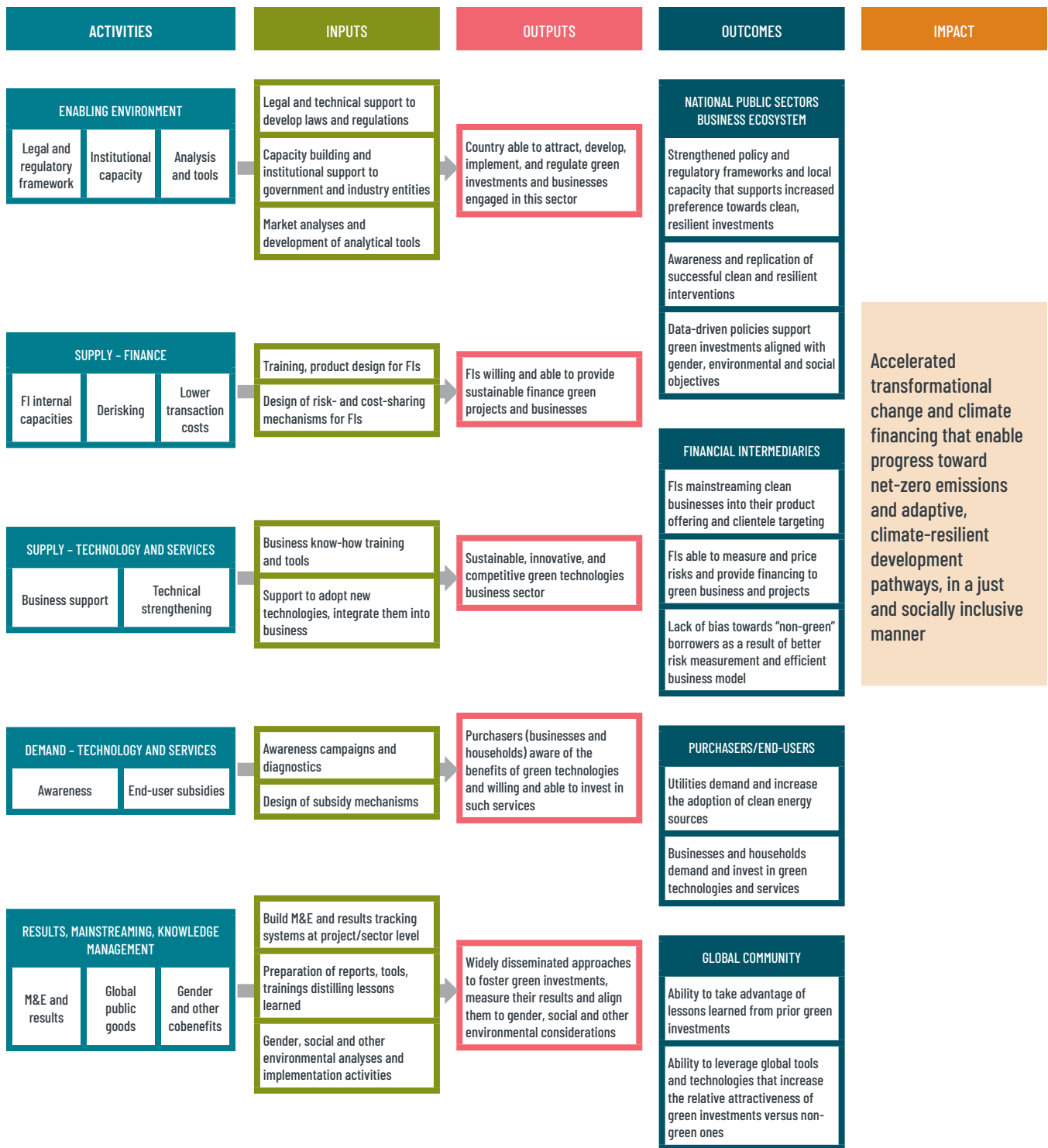
The Theory of Change (ToC) for the CIF was adapted, based on the portfolio sample review, to create a ToC that focuses on TA activities. The CIF has developed a program-wide ToC.⁴⁰ However, to sharpen the focus on TA activities, a de facto ToC was developed focused on TA taking as a starting point the five types of activities identified in the portfolio sample. This ToC serves as an additional tool to guide the findings presented in the next chapter. Further, it establishes the following pathways from activities to impact:

- TA activities are focused on establishing a strong enabling environment and facilitating the development and functioning of markets for green technologies and services, measuring results and distilling lessons, and creating other global public goods from such engagements.
- These activities are carried out by funding a broad range of inputs, including capacity building to public and private institutions, information dissemination and awareness campaigns, design of financial instruments and analytical tools, and preparation of technical reports.

- As a result of these inputs, an enabling environment conducive to green investments is established; a sustainable and competitive market supplying green technologies and services and with access to financing is put in place; and national and global stakeholders have access to results measurements, techniques, and methodologies to scale-up such technologies and services.
- Such outputs lead to a public and private sector whose policies and strategies are oriented towards green technologies and services, strong and resilient demand and supply for such services, and a global community with the ability to design and implement green projects and business models.
- As a result of these transformations, TA ultimately leads to impacts aligned with those sought by the CIF: accelerated transformational change towards net-zero emissions and inclusive, climate-resilient development pathways.



40 Romboli, Sandra and Neha Sharma (2022), [MEL Policy and Guidance](#), CIF.



Note: “Green” refers to technologies and services that lead to reduced green house gases and/or increase resilience to climate change.

FIGURE 9. CIF TA Activities: Theory of Change

4. REVIEW FINDINGS

4.1. Relevance and coherence

What are the TA activities that are more directly linked to achieving the CIF programs' objectives?

What TA activities and modalities (stand-alone or linked to investments) are more effective at addressing structural bottlenecks and generating global public goods?

KEY FINDINGS

The CIF supports the full spectrum of TA activities—upstream activities, supply and demand facilitation, and results knowledge management—necessary to address barriers to climate finance.

Addressing regulatory gaps, kick-starting self-sustaining markets, and supporting a “just transition” are increasingly relevant and effective measures.

Both stand-alone and bundled (with investments) TA is relevant; when it comes to TA to address regulatory gaps, private sector interventions may ultimately benefit more from the former and the public sector from the latter.

The CIF TA activities are seeking to address the right obstacles that need to be overcome to deliver the impact the CIF seek. The fundamental question regarding the *relevance* of TA support is whether such TAs generate the impact the CIF seeks to achieve with its investments. The types of TA activities supported by the CIF projects and the linkages between their expected outputs and the impacts that the CIF seeks to achieve, as shown in the ToC presented in the previous chapter, shows that the CIF has supported the right type of activities. The diversity of such activities reflects the varied types of constraints that hinder climate investments. In many cases, multiple types of TA need to be deployed in a single project. For example, upstream support to create a strong legal and regulatory framework to attract investments in clean energy is necessary but not sufficient. Efficiency

can be gained when integrated interventions are done in the context of a single project as it is the case with the India Grid Connected Rooftop Solar Photovoltaic (PV) Program, which supported developing the upstream enabling environment as well as market participants (FIs, energy generation and distribution companies) to create a strong solar energy ecosystem (see Case study 3).

MOST RELEVANT TA ACTIVITIES

Address evolving regulatory gaps

Kick-start markets through combined supply and demand interventions

Support “just transition” activities

However, three types of TA activities are particularly relevant and effective. As a result of the review of the projects documentation, engagement with the MDB focal points, and the deep dives in the six case studies, three types of TA emerged as particularly effective at addressing obstacles critical to achieve the CIF's objectives: support to governments to address regulatory gaps; design and execution of measures to kick-start markets for green goods and services; and activities complementary to capital investments to ensure all stakeholders, particularly vulnerable communities, benefit from the CIF's interventions.

Regulatory gaps evolve as technologies and climate objectives evolve and the CIF TA has been responsive to those changes. For instance, some of the earlier TA interventions focused on supporting regulatory agencies to develop the framework required to trigger rooftop solar PV systems markets, one of the earlier relatively less capital-intensive sources of RE. The CIF provided TA matching the mechanism chosen by each country. For example, India promoted the development of Renewable Energy Service Companies (RESOCs) and the CIF supported their regulatory framework and the national and state level (Case

study 3, India Grid Connected Solar PV Program). Other countries, focused on regulation to decrease the emissions from existing utilities by adoption regulatory requirements on substation automation and electronic metering (Vietnam, Distribution Efficiency Project). As technology evolves, the TA more recently has moved to address policy gaps related to other RE initiatives such as hybrid technologies involving batteries (India, Innovation in Solar Power and Hybrid Technologies) or to address policy gaps with respect to other types of climate objectives such reducing emissions through increased EE (Mexico, Ecocasa Program).

TA that combines support to the supply and demand of finance and of goods and services has been particularly effective at achieving sustainable results. SREP support to the Armenia RE Grant Support program and the CTF's to the Colombia Sustainable Energy Finance Program and Mexico's EE Financing Strategy for the Food Processing Industry show the benefits of combining TA activities that support:

- FIs to reorient their business models, thus increasing the chance of sustainable interventions that also include long-term financing. By supporting structural changes to FIs' business models, product offerings, and strategies to reach target clients, TA can create financial markets for climate investments in a potentially more sustainable manner than when these markets are fostered just through the availability of credit lines. As multiple evaluations of credit lines⁴¹ have shown, deeper structural changes among FIs can in the long term be a more effective mechanism to trigger new models of financing. TA provided to the State Bank of India as part of the India Grid Connected Solar PV Program enabled lowered perceived risk of investing in a then-nascent solar PV market (Case study 3).
- Suppliers of green goods and services to develop new business models. The CIF has been

particularly involved in supporting smaller firms to become ESCOs and provide other EE services.

- End user of green goods and services to stimulate demand. This may be done through the design of subsidy schemes, the dissemination of the benefits of the investment (particularly effective with respect to EE), or by reducing transaction costs (for example, by identifying a "menu" of appropriate technologies and service providers and making this information freely available).

Just Transition⁴² and social and economic cobenefits from climate interventions are critical to attaining the CIF's objectives and TA has been critical to support this.

TA activities address gender issues and other environmental and social cobenefits in climate investments. With respect to gender, government agencies, FIs, and private sector project sponsors generally do not have the technical capacity to apply a gender lens in climate projects or strengthen the economic and social components of their investments beyond what is necessary to meet the safeguards requirements of MDBs and national regulations. The India Rajasthan RE Transmission (Case study 1) is an example where TA supported a gender-lens approach to the project that supported community development activities, including the establishment of women-led self-help groups, for the population living around the solar park that constituted the main capital investment in the project. With respect to other economic cobenefits, TA can support activities that link climate objectives to job creation and green recovery considerations. The use of TA to stimulate both the supply and demand of green goods and services—by supporting the technical capabilities of business and increasing awareness among consumers, for example—can generate important economic development cobenefits. For example, the work to foster the capabilities of the ESCOs in Colombia to deliver EE projects can be put into the broader context of job creation and increased economic activity that a broader transition to a greener economy would have (CTF, Colombia Sustainable Energy Finance Program).

41 World Bank Independent Evaluation Group (2006), [Review of Credit Lines](#).

42 Just Transition is defined by the International Labor Organization as "greening the economy in a way that is as fair and inclusive as possible to everyone concerned." This involves ensuring not only that workers who may be displaced by newer greener industries find alternative livelihoods, but also that all stakeholders benefit from green investments.

With respect to the second line of inquiry on relevance and coherence, there is a role both for stand-alone and for TA bundled for investments; public and private projects may have different needs in this area, particularly for enabling environment activities. One third (17 out of 50) of the projects in the sample were TA-only projects; the rest of the TA was delivered as a component of larger investment projects. A review of the documents available as part of the preparation of some of the projects, interviews with the MDB focal points, and experience of KPMG with other assessments of TA in international development point out two key issues:

- Particularly for *public sector*-oriented projects, it is important to ensure there is political momentum for implementation. Political considerations in most countries give priority to investment projects and, therefore, stand-alone TA activities may not get the necessary implementation political commitment. Therefore, TA *bundled* with public sector investments may lead to faster, more effective results.
- On the other hand, MDBs implementing *private sector* projects highlighted the relatively long time lag between raising funds to support TA activities and following up with private sector projects. This is because identifying private sector investment opportunities ex-ante (to bundle with TA), particularly for upstream enabling environment activities, may be difficult as investors may need to see first the outcome of the TA activities before committing to investments. Therefore, *stand-alone* TA focused on enabling environment activities may be particularly important for private sector development.

4.2. Speed

What TA interventions accelerate the delivery of climate results and/or generate results fast enough given existing initial conditions and complexity of undertaking?

When is TA effective and when does it deliver timely results?

• KEY FINDINGS

• **TA activities focused on a specific technology segment but covering all aspects from upstream regulatory support to markets development, seem to be particularly effective at accelerating results.**

• **Upstream-enabling environment TA activities in the public sector are more effective at delivering timely results when bundled with investments.**

• **Enabling environment activities linked to specific technologies and markets may be more effective at delivering results than those with a more general objective.**

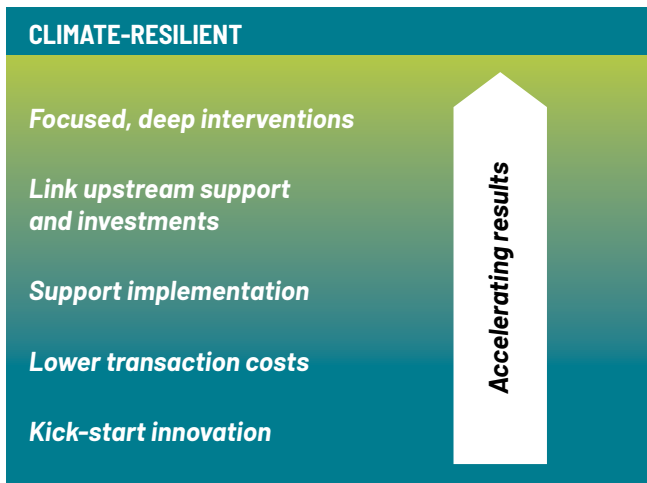
• **TA for implementation support is critical, particularly for government agencies in the early stages of entering the RE space.**

• **Reducing transactions costs and technical uncertainties may be particularly effective to accelerate the uptake new clean technologies.**

• **More recently, the CIF has started to support firms at their early stage of development through grants and TA, another approach to accelerate impact.**

• **The focus on speed should not come at the expense of other types of interventions whose results may take longer to materialize.**

• **Several MDBs highlighted the effectiveness of the CIF when compared to other sources of climate finance.**



Focus and depth: TA activities focused on a specific technology segment but covering all aspects from upstream regulatory support to markets development seem to be particularly effective at accelerating results. TA activities that cover all three aspects of markets development—supply of finance and supply and demand for technologies and services—and that were focused on a particular technology (Nepal, Business Models for Private Sector-led Mini Grid Energy Access) or sector of the economy (Mexico, EE Financing Strategy for the Food Processing Industry) have the potential to provide particularly fast results. By concentrating strong support on a very specific market sector, TA can crowd-in financing and know-how and support simultaneously all stakeholders to accelerate results.

Upstream-enabling environment TA activities in the public sector are more effective at delivering timely results when bundled with investments. Maintaining the momentum of legal, regulatory, and other enabling environment actions generally requires concurrent investments in “hard” infrastructure or other types of works, goods, and services. For example, stand-alone TA in areas such as the development of the regulatory framework for mini-grids or net-metering may stall if stakeholders do not see in the horizon actual investments in these areas. The CIF support to the development of grid-connected solar PV (Case study 3) is a good example of this approach. In contrast, the support to Colombia to develop geothermal energy (Investment Grant for the Financing and Risk Transfer Program for Geothermal Power), including activities to update the required

regulation to enable the development of such investments, through a stand-alone TA has generated limited results.

Enabling environment activities linked to specific technologies and markets may be more effective at delivering timely results than those with a more general objective. The more upstream a TA activity is, the higher the risk that its impact may not be identified or that the momentum of stakeholders’ commitment may be lost if the actual investments and structural changes appear to be quite distant. Therefore, these risks can be mitigated by focusing enabling environment TA activities in well-defined areas. This can be done by focusing on specific technologies, such as the regional Concentrated Solar Program in the Middle East and North Africa (see Case study 4), or economic subsectors such as supporting the development of the energy-efficient housing sector in Mexico.

TA for project implementation support is critical, particularly for government agencies in the early stages of entering the RE space with MDB assistance. This support is particularly important in areas such as procurement of new technologies, environmental and social safeguards design and implementation, and compliance with loan covenants. For example, CIF TA was instrumental in supporting a state government, a relatively new entrant to the RE field, in implementing a major solar energy generation and distribution project (Case study 1).

Reducing transactions costs and technical uncertainties may be particularly effective to accelerate the uptake new clean technologies. Another area of intervention that can be deployed and generates results relatively quickly is activities geared at reducing transaction costs for market participants. This includes the development of tools and catalogues to preidentify clean technologies available for financing as has been done in Armenia (Case study 2) or facilitating the aggregation of multiple borrowers into single cooperative-based funding vehicles to facilitate the financing of climate-resilient agriculture (Bangladesh, Promoting Climate Resilient Agriculture).

More recently, the CIF has started to support firms at their early stage of development through grants and TA, another approach to accelerate impact. Support to Climate Tech start-ups is a promising approach to accelerate the delivery of new green technologies such as those supported by the IDB-Lab's EcoMicro 2.0 project in the Caribbean (Case study 6). While it is still too early to assess results, support to start-ups is a promising mechanism to speed up results.

The focus on speed should not come at the expense of other types of interventions whose results may take longer to materialize. The right set of expectations should be set for certain TA activities whose impacts may take longer to materialize or where attribution to TA support may be more difficult to justify. This may be the case due to the time lag between enabling environment activities and actual investments, particularly from the private sector, that would take advantage from strengthened legal or regulatory frameworks established thanks to TA support. In the case of TA that generates global public goods, it can facilitate replication of successful projects, but the direct linkage of such replication to prior TA activities may be difficult to establish.

Finally, with respect to speed, several MDBs highlighted the effectiveness of the CIF when compared to other sources of climate finance. Taking a broader view of timeliness in achievement of results requires also considering the internal approval processes within the CIF. Multiple MDB focal teams emphasized that the alignment of the CIF processes with those of the MDBs, including the documentation required for approval as well as the methodologies used to assess climate impact, create a fast and streamlined process that makes it easy to achieve timely results, particularly when compared to other climate finance funds.

4.3. Scale

What TA activities led to climate investments being scaled up?

What are the characteristics of TA activities that crowded in private investment and generated follow-on projects?

KEY FINDINGS

- Four types of TA interventions set the stage for climate investment being scaled up: support to FIs to trigger self-sustaining financial markets, design of risk-sharing mechanisms and other financial instruments, sector feasibility studies and potential pipeline definition, and sector commercial ecosystem development.
- In principle, knowledge creation and dissemination as a global public good should also be effective at leveraging additional resources, but their impact is harder to measure and there are relatively few projects in the sample that focus on this area.

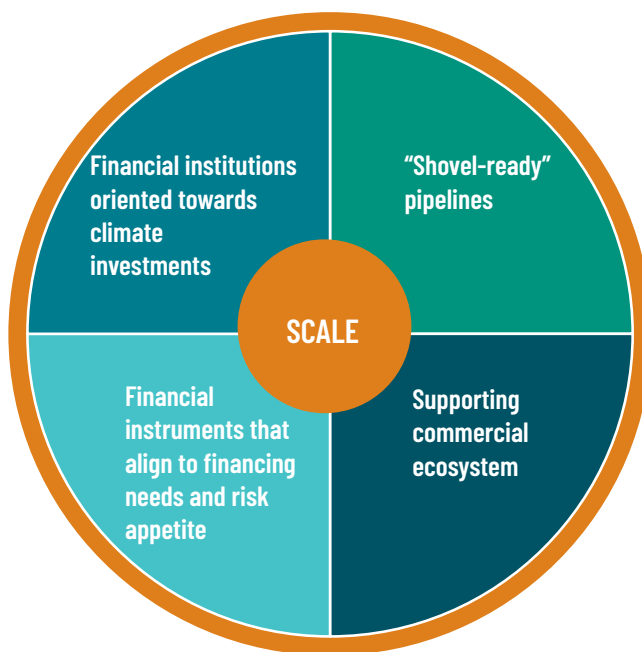


FIGURE 6. Scaling up investments

In the portfolio sample, four types of TA interventions set the stage for climate investment being scaled up. In this case, the analysis is based on the potential that TA activities had to leverage additional resources directly and indirectly:⁴³

- Support to FIs to trigger self-sustaining financial markets. As discussed before, TA that supports FIs' business models to focus on green financing has the potential for major leveraging whereby relatively small amounts of funding to develop new business strategies, products, and processes can lead to substantial investments based on funding provided by the FI out of its own resources or through funding from MDBs and other financing entities that use that FI to deploy funding (Turkey, Commercializing Sustainable Energy Finance Program).
- Design of risk-sharing mechanisms and other financial instruments. An additional mechanism to support FIs is to design and bring together stakeholders in support of risk-sharing mechanisms. Multiple CIF interventions in support of geothermal energy, a RE source with high-risk characteristics, have used TA to design risk-sharing mechanisms as well as technical studies that could then be leveraged by FIs and project sponsors (Turkey Geothermal Development Project). Similarly, the feasibility analysis and design of new instruments such as resilience bonds could trigger substantial additional funding (Building Climate Resilience in Latin America and Caribbean through Financial Instruments).
- Sector feasibility studies and potential pipeline definition. Establishing pipelines of projects that are ready to receive investment and start being developed ("shovel-ready") and that are based on feasibility studies for the new technologies on which they are based can facilitate the scaling up and mobilization of investment resources. For example, CIF TA has been used effectively in the early stages of testing the viability in a country of a new technology (geothermal), business model (Nepal Business models for private sector-led mini-

grid energy access project), or potential demand for new services (Mexico Ecocasa Program).

- Sector commercial ecosystem development. TA can also support creating awareness of a new technology, stimulate demand, and provide capacity building to technology suppliers to meet the specific needs of the market. For example, in Lesotho (RE and Energy Access Project), TA has provided technical capacity to all sector stakeholders—including training of independent verifiatory agents, M&E staff, establishment of a certification program for companies, and consumer education through gender experts. These types of approaches, consistent with the theme of integrated interventions, have the highest potential to trigger self-sustaining markets that lead to scaled-up investments.

Maximum impact in scaling up and crowding private sector has been observed in projects that combine most of the four types of interventions presented above.

The India Grid Connected Solar PV program is a good example of this approach. By December 2020, after four years of implementation, it had catalyzed US\$3.5 billion of investment, leveraging \$625 million of resources from the World Bank and the CTF, as it had been instrumental in kick-starting the solar rooftop market in India (Case study 3).

In principle, global public goods should also be effective at leveraging additional resources, but their impact is harder to measure and there are relatively few projects in the portfolio that focus on this area, which suggest there has been underinvestment in this type of activities.

For example, the CIF has played an important role in supporting two relatively early-stage technologies, geothermal and CSP (Turkey Geothermal Development Project; Chile, CSP Project). The lessons learned and disseminated from the CIF investments, some of which have been generated using TA resources, should in principle have contributed to investments in other countries. However, attribution of such impact is difficult and would require a more systematic tracking of global investments in these technologies and assessing for each project to what degree some of the lessons

43 The definition of leverage is aligned with Principle 2 in the [OECD DAC Blended Finance Principles](#) (2018) and the [DFI Working Group on Blended Concessional Finance for Private Sector Projects](#) (2019).

learned from the CIF interventions have been applied. Only one of the projects in the portfolio sample is solely dedicated to knowledge generation (Turkey Impact Assessment Study of CTF-financed clean energy projects in Turkey).

4.4. Systemic change

What are the preconditions required for TA activities to contribute to systemic change (i.e., fundamental shifts in system structures and functions)? What are the types of TA that can deliver systemic change?

What is the role of TA activities to link climate objectives to broader SDG goals?

KEY FINDINGS

Strong government buy-in is a critical precondition for TA to support systemic change.

Upstream-enabling environment TA is necessary but not sufficient to elicit systemic change.

The experience in climate change mitigation shows the systemic importance of incorporating local needs to technologies and business practices from the developed world.

Mainstreaming climate considerations into national processes is critical to drive systemic change and the CIF TA is moving towards providing this kind of support and assisting MDBs to bring their expertise in other areas to the climate space.

Strong government buy-in is a critical precondition for TA to support systemic change. TA that led to systemic changes took place in the context of strong policy and political commitment by governments that integrated the objectives of the CIF climate investments into the overall strategic policies of the government. For example, a key component of the success of the Rajasthan RE Transmission project (Case study 1) is that it took place in the context of a strong political commitment from the state government as well as continued engagement and

coordination with national agencies. Similarly, some of the larger CIF TA engagements that are successfully developing new RE sources, such as the CSP in Chile, and geothermal in Turkey have taken place in the context of major national political strategies (for example, in Turkey, the National RE Action Plan established an explicit target of developing 1,000MW of geothermal energy, which served as a key driver of the CIF project).

Upstream-enabling environment TA is necessary but not sufficient to elicit systemic change.

In the case of clean technologies, the private sector expects to have a well-functioning regulatory framework in place. Consistent with the approach taken by the CIF, this does not only mean laws and regulations aligned with international standards but also regulatory agencies with strong capabilities to be able to engage the industry as problems arise or new technological changes are deployed. Therefore, transformational change requires strong human capital at the national level—legal, regulatory, and technical—not just good laws and regulations. Capacity building, though it may appear less important than, for example, updating energy regulations to allow for net metering at the household level, is critical to develop the ability to respond to a dynamic environment such as technological advances in renewable energy.⁴⁴ However, to ensure support for this type of upstream TA, it is important to manage expectations from all stakeholders: this type of support is generally just the first step in attracting investments, particularly from the private sector.

The experience in climate change mitigation shows the systemic importance of incorporating local needs to technologies and business practices from the developed world.

Most RE technologies being deployed in developing countries have reached an important level of maturity in developed countries. Therefore, the challenge is not to develop new technologies but to adapt them to local needs. As the focal point of one of the MDBs supporting private sector programs stated, “TA is critical to making sure that the type of business private sector has done in places like Sweden can be brought into developing

⁴⁴ This is consistent with Insight 2 (“Transformational change entails evolving the focus and targets in tandem with the change in the contexts”) in [Transformational Change Concepts](#), CIF, 2021.

countries.” The TA deployed through projects that are part of the CIF Dedicated Private Sector Program, a special funding window that supports several of the project in the portfolio sample analyzed, focus on facilitating that type of business sector involvement.

Mainstreaming climate considerations into national processes is critical to drive systemic change and the CIF TA is moving towards providing this kind of support and assisting MDBs to bring their expertise in other areas to the climate space.

Some of the stakeholders interviewed feel that many of the barriers to bring clean energy to developing countries are reasonably well understood even if they may not have been overcome. Unlike clean energy, the broader challenges posed by climate change adaptation remain less understood and, therefore, TA in this area will be increasingly important. Two types of interventions, initiated mostly during the last two years, are being implemented in the sample portfolio to mainstream resilience into national strategic and organizational arrangements:

- Integrating climate resilience risks into macro-fiscal and public financial management processes (Regional, Improved Decision-making for Climate-resilient Development in Asia and the Pacific) and into overall national development planning processes (PPCR, ADB Cambodia: Mainstreaming Climate Resilience into Development Planning). A major systemic change can be achieved in national policies by embedding climate considerations as a pillar of national strategic and fiscal planning. At the MDB level, these activities are also contributing to reorient their efforts and technical work in areas such as macro-economics and public financial management towards climate change issues.
- Enhancing coordination among national agencies (Regional, Pacific Resilience Program) as well as with development partners (PPCR, ADB Tajikistan Building Capacity for Climate Resilience). The cross-cutting nature of resilience implies coordination challenges that need to be addressed for proper design and implementation of projects.



4.5. Adaptive sustainability

What TA activities have contributed to make CIF interventions more robust and adapt to evolving changes in the climate agenda (e.g., increased importance of just transition approaches)?

What TA activities have led to structural, long-term change? (Closely linked to systemic change)

KEY FINDINGS

- **CIF TA is being used to scan challenges “just beyond the horizon” and initiate the process of responding to them, assisting both recipients and implementing MDBs in this process.**
- **CIF is using TA, including through the CIF-TAF, to tackle emerging broader equity concerns arising from the transition to a green economy and the need to accelerate a green recovery after COVID-19.**
- **Current experiences can be upscaled to further advance support to a Just Transition, one of the most critical new issues in climate investments.**

While it is still too early to assess its impact, TA is being used to scan challenges “just beyond the horizon” and initiate the process of responding to them, assisting both recipients and implementing MDBs in this process. Unlike infrastructure investments that require longer-term planning and contracting and, therefore, cannot be reoriented quickly, climate TA can be more easily adapted to respond to emerging issues. Such flexibility applies both directly to the TA activities being supported (e.g., change diagnostic studies to include new issues) as well as to the investment activities whose design and execution may need to be adjusted with TA support. For example, the ADB is supporting a regional TA to integrate climate-smart planning into fiscal planning so that countries are equipped to tackle climate-related risks in public financial management (see Case study 5: Improved Decision-making for Climate-resilient Development in Asia and the Pacific). As mentioned above, this CIF support is also enabling the implementing MDB to link its teams and expertise in nonclimate topics (e.g., public financial management) to climate resilience challenges.

Broader equity concerns arising from the transition to a green economy and the need to accelerate a green recovery after COVID-19 have brought to the fore new issues in climate finance that the CIF, including through the CIF-TAF, is tackling. Such emerging and critical policy areas require adapting climate finance interventions. The CIF has rolled out new programs in response to these challenges, as has been the case with the Accelerating Coal Transition Investment Program, which addresses not only technical challenges but also the social needs of communities affected by this transition. Highlighting the role of TA in this area, the CIF-TAF second call for proposals targeted activities to support a green and resilient recovery from COVID-19 as one of its themes. The role of TA in this process should continue to be increased and a good starting point would be upscaling some of the activities that have been already deployed in previous CIF projects. These include:

- Job training activities for new technologies that could be reoriented as retraining for workers in industries where employment may shrink because of the transition. The CIF has already supported successful training for both RE (Armenia RE Grant Support) and EE (Mexico FIRA EE Financing Strategy for the Food Processing Industry). The India Grid Connected Solar PV Program (Case study 3) is the closest CIF TA intervention where retraining took place for entities that would become RESCOs and used to provide a broader range of energy services.
- Design of subsidy mechanisms targeting the poor to address energy price shocks that could arise during the transition.
- Analysis of the jobs and economic growth impact of different green technologies to incorporate this as a criterion for policy selection. The previously mentioned work to integrate climate resilience risks into macro-fiscal and public financial management processes includes this type of analysis, though it is still in early stages of implementation.

TA can contribute to measure potential negative impacts and ensure green investments are contributing to a Just Transition. The transition towards cleaner sources of energy can lead to losses of employment in industries that may become obsolete or lead to higher energy prices, at least during a transition period. In both cases, the poor will be disproportionately affected. Achieving a Just Transition requires “maximizing the social and economic opportunities of climate action, while minimizing and carefully managing any challenges.”⁴⁵ TA activities that could achieve this include:

- Support upstream national strategic planning activities to include transition risks and mitigation costs as part of developing plans, technology selection criteria, and social and human capital programs.
- Carry out market analyses to identify alternative economic activities for regions and sectors of the economy to be adversely affected by the pandemic.
- Incorporate social indicators linked to the transition process to climate change national monitoring systems.

Governments are responding to the COVID-19 crisis through green recovery measures aiming to achieve triple gains on the climate, poverty, and inequality challenges. Governments around the world are designing and implementing economic recovery measures to address the impact of the pandemic. At the same time, they see the potential to use these policy measures not only to restart growth but also to reorient and enhance such growth path towards a green future making gains to address poverty, reduce inequalities, and accelerate the decarbonization of their economies and increase their resilience to climate change impacts.

TA can be used to incorporate green recovery measures into climate projects by supporting the design and implementation of incentives. This can be done, for example, through a fiscal mechanism or through regulatory requirements and measures to strengthen the enabling environment that can facilitate green activities. Some of these measures reduce the absolute costs of green investments while others effectively decrease the relative costs of green versus nongreen investments (e.g., using TA to design a carbon tax mechanism). In the following example, TA could support the design of the fiscal mechanisms as well as the planning and execution of regulatory and enabling environment measures:

- Fiscal: Financial-based incentives can take many forms, but the main types are tax based, through instruments such as carbon taxes, tax rebates, and research and development tax incentives; grants/subsidies through direct transfers of funding or in-kind contributions such as the provision of TA; and concessional loans and risk sharing through lending programs, seed capital, and guarantees such as first-loss layers in investment funds or through markets development by mechanisms such as issuance programs and funding initial transaction costs to trigger the use of innovative instruments such as green and other labeled bonds.
- Regulatory and enabling environment measures: incentives can be provided through regulations that mandate or facilitate better practices conducive to green investments or support an adequate enabling environment. This type of measures includes government-issued regulation, such as prudential requirements for financial institutions requiring the explicit recognition of climate risks, as well as mandatory and voluntary initiatives arising from the private sector, trade associations, or joint public private initiatives, as is the case with stock exchanges’ environmental, social, and governance disclosure requirements.

45 International Labor Organisation (n.d), [Frequently Asked Questions on just transition](#).

5. RECOMMENDATIONS

The following recommendations, drawn from the CIF experience, are applicable to governments, their development partners, and other organizations supporting the design and implementation of TA activities seeking to provide an enhanced enabling environment for climate investments.

5.1. What to support

Maintain a broad “menu” of TA activities.

Facilitating the development and functioning of green markets requires interventions supporting all market participants as well as enabling activities that facilitate the operations of such markets and knowledge generation that contribute to measure the impact of existing investments and facilitate future ones. This implies having flexibility to not only support upstream-enabling environment activities but also addressing market microstructure obstacles (i.e., support the matching of supply and demand). On the supply side, this may include development of green finance business models in FIs, design of innovative financial instruments to develop project pipelines, and lowering transaction costs through risk-sharing facilities. On the demand side, TA has a role to play in building capacity of firms seeking to develop green business lines, and support to technology platforms that facilitate identification and uptake of green technologies.

Use TA purposefully to drive innovation and help countries, the private sector, and development partners push the frontier on emerging climate priorities and address areas where there may have been underinvestment. Based on the portfolio review and the evolving climate investments agenda—from the increased importance of measures to facilitate a just transition to the continued relevance of a green and resilient recovery from the COVID-19 crisis—consider establishing mechanisms to support types of TA activities where there has been underinvestment or where needs are expected to increase.

These activities could include:

- *Global public goods.* Supporting the development and dissemination of global public goods is a potentially underappreciated use of TA. Most global public goods in the CIF sample portfolio are generated as part of national projects and therefore there may be a limited incentive for the funding recipient to use resources for such global activities when it may come at the expense of national activities. This may require addressing barriers to uptake on the recipient side—for example, accessibility and technical capacity—as well as on the part of the entities providing TA such as continued enhancement of their knowledge management activities.
- *Climate mainstreaming into planning processes.* Climate change mitigation and adaptation considerations are generally still not incorporated into broader public and private planning and execution processes. For example, recently approved PPCR TA projects in this area support national public financial management offices to incorporate climate resilience as a key variable in their planning. These interventions have the potential to achieve strong impact with relatively limited TA resources and generate long-term systemic change. Similarly, for the private sector, mainstreaming may help uncover investment opportunities with double dividends (commercial and social) and enable better management of climate-related risks.
- *Innovation, particularly with respect to emerging “Just Transition” issues.* Consider fostering innovative climate interventions that could be kick-started through TA interventions. The definition of “innovation” could be very broad or could be focused on key emerging topics such as activities linked to addressing the needs of vulnerable communities to achieve a just transition, support to early-stage development of climate tech firms, or interventions leveraging the linkages between climate change investments and natural capital and biodiversity.

Establish mechanisms to incentivize certain TA activities. Increasing the three types of TA activities mentioned in the previous paragraph can be achieved through a combination of mechanisms, including:

- Incorporate explicitly into investment criteria the requirement to consider how the proposed programs and investments contribute to the generation of global public goods, climate mainstreaming, institutional strengthening, and innovation.
- When applicable, utilize thematic CfPs to target the demand for TA to areas considered critical and adjust on the basis of demand and evolving needs. The CIF-TAF's inclusion of green and resilient recovery as a key theme in a recent CfP is a good example of this approach.
- Explore the possibility of establishing a “soft allocation” made available to countries and their development partners (e.g., MDBs, bilateral agencies) for TA-based innovative interventions. This is a variation on the “call for proposals” approach but uses a broad definition of innovation to foster creativity among project developers.
- In the case of global public goods, consider incorporating knowledge activities as an integral component of project design, implementation, and evaluation. This can be achieved, for example, by scaling up the practice of including at the approval stage, project activities whose outputs are then incorporated into knowledge creation and dissemination work plans of the funding entity, as the CIF has been doing as part of its projects.

5.2. Linkages to other global initiatives

TA can be critical to support emerging global issues where countries and the private sector may not be ready yet to make major investments. In this context, TA can facilitate bringing into the national and private sector agenda issues that have not been fully developed yet or for which additional preparatory activities are needed. Consider piloting some initiatives to explore potential demand from recipients in areas such as:

- Addressing the linkages between climate change investments and natural capital and biodiversity. TA can support feasibility studies and the development of nationally adapted methodologies to incorporate natural capital and biodiversity concepts into the planning process for climate investments. This may include valuing biodiversity benefits of climate projects to fully capture their return of investment.
- Supporting developing countries' FIs to align their operations to the Paris Agreement. This process is not linked to specific financing programs, as it is the case with the TA to FIs in the CIF portfolio, but to the transformation of their core business strategies and practices. Such transformation is focused on three areas: do no harm (e.g., reduce or eliminate investments in greenhouse-gas-emitting activities), support Paris-consistent climate cobenefits (e.g., contribute to decarbonize countries' economies), and foster transformative outcomes (e.g., facilitate and reduce the cost of adaptation to climate change).⁴⁶

Given the relevance of FIs reorienting their business models towards green finance, ensure alignment of TA to existing initiatives in this area. Climate-oriented TA activities may consider playing a more active role in initiatives such as the central banks and supervisors' Network for Greening the Financial System or the IFC's Green Banking Academy. By deploying TA activities for FIs in alignment with the objectives of these initiative, their effectiveness may

⁴⁶ Clark et al. (2019), [Implementing Alignment with the Paris Agreement: Recommendations for the Members of the International Development Finance Club](#).

be enhanced by developing a closer relationship between agencies supporting climate investments and financial authorities.

5.3. Programming priorities

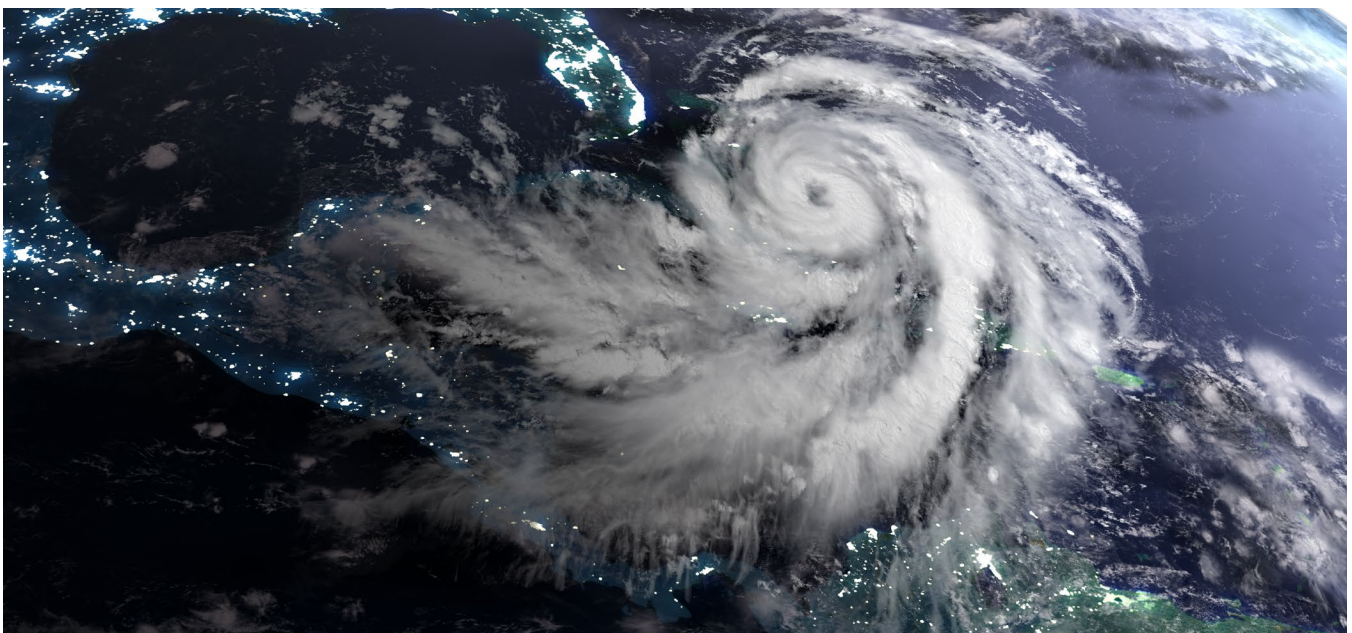
Take an integrated view when designing TA for markets support. Consider deploying TA that concurrently addresses supply and demand obstacles to increase the likelihood of success. CIF projects have successfully kick-started sustainable markets for green goods and services by using TA to support, within a single project, FIs to supply credit, firms to supply goods and services, and end users to stimulate demand. In the context of projects involving climate finance, it increases the likelihood that FIs' green financing activities will be sustainable as their finance supply will be met by demand from a broader range of borrowers.

Design enabling environment and other upstream activities with differentiated results expectations according to local circumstances. Momentum in support of legal and regulatory reforms may be lost if the outputs of such TA activities, such as new legal frameworks, are not met by actual impacts generated by projects delivered with support from such reforms. However, particularly for private sector investments, there may be a substantial lag between reforms and

actual on-the-ground activities. Therefore, these expectations need to be set accordingly during the TA consultations and design phase.

When possible, target TA programs to specific technologies and market segments. Within a project or initiative, focus TA resources to support a specific technology (e.g., microgrids, resilient construction) in a well-defined segment (e.g., the food industry, the housing construction sector). While recognizing the need for flexibility, focused efforts are more likely to deliver transformative results within a reasonable timeline.

Climate finance needs to be more relevant in the recovery and job creation agenda and TA (stand-alone or incorporated into projects) can be the initial vehicle to achieve this and measure its impact. Continued support for climate investments must not rely only on future benefits (e.g., lowering of greenhouse gas emissions to stay within a 2°C world or reduce future probability of food insecurity through climate smart agriculture). Climate investments need to deliver faster results and may be already doing it, but it is not systematically measured. TA can be used to develop metrics and require projects to report on issues such as jobs created and protected, and impact on prices of household-level energy consumption and commodities.



ANNEXES | BIBLIOGRAPHY

Annex A: Case studies

**Annex B: Projects analyzed –
Portfolio sample**



ANNEX A: CASE STUDIES

Case study 1 – India: Rajasthan RE Transmission

PROGRAM	CTF
IMPLEMENTING PARTNER	ADB
PROJECT AMOUNT	US\$800 million
CIF TA AMOUNT	US\$2 million
BENEFICIARIES	State Government of Rajasthan (GoR), including Rajasthan Renewable Energy Corporation (RREC); Rajasthan Raya Vidyut Prasaran Nigam Limited (RRVPNL)

Project summary

The Rajasthan RE Transmission Investment Program was approved in 2013 to increase RE generation and reduce transmission costs in the solar-energy-rich Indian state of Rajasthan. The US\$500 million multitranches financing facility supported the GoR's plans to generate 8,000 MW of solar and wind generation capacity by 2018 (from 1,767 MW and 45 MW, respectively) by financing the development of a transmission network that can support the evacuation of new energy capacity.⁴⁷ In this context, the project financed the physical construction of



⁴⁷ Rajasthan Renewable Energy Transmission Investment Program (Facility Concept), ADB (2013).

transmission lines and supported institutional capacity building of the Rajasthan's state transmission licensee and state nodal agency responsible for renewable energy, the RRVPNL and RREC, respectively.

A US\$2 million TA grant was allocated to support critical “nonphysical” aspects, including infrastructure master planning, community development initiatives in surrounding areas near the park, institutional capacity development of the RRVPNL and RREC, and the commissioning of relevant technical studies.⁴⁸

Community development aspects of the TA included skill training, employment generation, and engaging the local population in income generation activities that are not land intensive and provide access to better health and educational services.

A review by the ADB's Independent Evaluation Group⁴⁹ concluded that the project successfully achieved targets. Network transmission capacity was expanded up to 3,700 MW in line with expected outputs. Institutional capacity for the management of renewable energy parks and transmission system was also enhanced in the form of studies on renewable energy integration, technical appraisal of the Bhadla solar park—which was selected as a site to host concentrated solar thermal projects—and execution of other community-related trainings.

Rationale

The project highlights the role of TA in facilitating meeting social safeguards, particularly alignment with gender considerations and other elements linked to a just transition. TA activities heavily featured the mainstreaming of community and gender development components to mitigate social and environmental risks.

Role of TA

The TA component of the project supported the achievement of technical outputs as well as “softer” community development initiatives in areas around the Bhadla solar park. TA was

primarily used to develop the institutional capacity of executing agencies RRVPNL and RREC. This included commissioning studies to support the GoR's preestablished RE integration roadmap, the provision of enterprise resource planning tools, and operational activities such as asset accounting. TA contributed to improved load management, RE integration, and preparation of the roadmap for smart grids. Similarly, a public-private partnership in the early development phase of solar park and transmission infrastructure reduced significant project-level risks to private investments in renewable generation assets. Engagement with the local government and nodal agencies, along with the state and national government facilitated project implementation by increasing buy-in by all stakeholders. The project remained well aligned with the governments' and GoR energy sector objectives and with ADB's country and sector strategies in India.⁵⁰

TA also supported community development and livelihood activities in Rajasthan that facilitated the holistic development of the local communities and vulnerable groups in the state. In Rajasthan,

TA extended support for infrastructure planning for the Bhadla solar park and community development initiatives in the surrounding areas. This included community development policy and action plans as templates for new projects; micro-enterprise development and skills training for women in animal husbandry, embroidery work, and handicrafts; skills development through bookkeeping, accounting, finance management, and negotiations training; provisions for supply of drinking water and solar home lighting system for the community; and health camps for the local community targeting vulnerable groups such as women and girls.

48 [Rajasthan Renewable Energy Transmission Investment Program \(Facility Concept\)](#), ADB (2013).

49 [India: Rajasthan Renewable Energy Transmission Investment Program \(Tranche 1\)](#), ADB (2022).

50 [Fact sheet: Rajasthan Renewable Energy Transmission Investment Program](#), ADB (2018).

Integrating gender-sensitive approaches into the TA enhanced broader development impacts on livelihoods and community development. TA activities enabled capacity building, including community development, an action plan for renewable energy parks, and skill training interventions for both men and women; helped in establishing women-led self-help groups; and piloted community models for renewable energy-based water supply.⁵¹ The project has also created a positive impact in communities that directly or indirectly affect the project development⁵² through micro-enterprise development and skill training for women (handicraft, animal husbandry, etc.); skill development largely among men through accounting, finance management, and negotiation training; and provision for providing supply for drinking water, health camps, and solar home lighting for the community. Gender mainstreaming approaches were incorporated into the project's overall monitoring and evaluation framework through performance indicators and targets for gender equality and women empowerment.

An established renewable energy strategy and roadmap in Rajasthan prior to the project contributed to rapid project start-up and achievement of results. ADB had a track record of projects with the government of India for identifying the feasible location for the deployment of renewable energy in India, and the state of Rajasthan was identified as an ideal location for solar owing to its ideal conditions of highest solar radiation, wind potential, and vast tract of barren land in the country. By the end of 2011, the state of Rajasthan and RRVPL installed the RE capacity of wind generation and solar generation of 1,767 MW and 45 MW⁵³ each, all of which was transmitted through the existing transmission grid. This lay a foundation for Rajasthan RE Transmission Investment Program in the country as well.

Initial investment push coupled with TA can play a crucial role in the development of institutional capacity. The capacity building elements of the program helped make the case for investment and vice versa, accelerating development of renewable energy sources through adequate transmission capacity. There is also an expected outcome in the form of cleaner electricity mix⁵⁴ and more efficient and effective generation and transmission system in Rajasthan.

Assessment against review matrix

RELEVANCE AND COHERENCE	Unique combination of technical support in terms of institution capacity building of the executing agencies, as well as contributing to development of local communities and vulnerable communities in the state.
SPEED	Rapid results by focusing on a state with ideal conditions (highest solar radiation, and vast tract of barren land) and a fairly well-developed enabling environment for solar uptake.
SCALE	RE production continues to increase and we can hypothesize that the initial investment coupled with TA, which facilitated institutional capacity building, was critical in this process.
SYSTEMIC CHANGE	Strong linkages of TA to other social-related SDGs, including gender empowerment and livelihoods.
ADAPTIVE SUSTAINABILITY	Contributing to address social issues around solar investments, and underappreciated issues such as development impacts of the project on communities and livelihood, critical to facilitate future investments.

51 Ibid.

52 Ibid.

53 Ibid.

54 Ibid.

Takeaways

- Mainstreaming gender and community development aspects to capital-intensive renewable energy projects adds value to the design and target results. TA facilitated in providing skill training for both male and females, healthcare facilities, and clean water and electricity supply, and contributed immensely to address underappreciated social issues around solar investments.
- Capacity building and monitoring of performance for project executing agencies are areas where TA deployment can lead to dividends in project development outcomes. This includes assistance to government counterparts and operators that are receiving support from MDBs for the first time, particularly in critical areas such as procurement, safeguards, and compliance with loan covenants.



Case study 2 – Caucasus Green Economy Financing Facility (GEFF) – Armenia Renewable Energy Grant Support

PROGRAM	SREP
IMPLEMENTING PARTNER	EBRD
PROJECT AMOUNT	US\$37 million
CIF TA AMOUNT	US\$5.25 million
BENEFICIARIES	Private sector; households

Project summary

The EBRD-managed Green GEFF⁵⁵ provides financing and technical support to firms and households to encourage uptake of green technologies in 32 countries of operation. Through the GEFF, EBRD on-lends to participating financial institutions (PFIs) that then finance residential and commercial subborrowers, often applying a gender-

responsive lens. This approach promotes women and men’s equal access to green finance. The GEFFs facilitate investments in RE, EE, and climate resilience projects. Additionally, with support from the Green Climate Fund and Austrian Federal Ministry of Finance, the Facility provides TA to both PFIs and subborrowers for project assessment, capacity building and training, awareness raising, and gender-mainstreaming activities.

In Armenia, the GEFF partners with local PFIs⁵⁶ to provide financing of up to US\$300,000 for clearly defined projects that utilize “preapproved” standard equipment and materials that do not require further technical assessment, and up to US\$1 million for large-scale EE and RE projects that require technical assessment.⁵⁷ Preapproved technologies are made available through the Green Technology Selector (GTS),⁵⁸ accelerating the adoption of RE at the firm and household level. Subborrowers that are interested in financing GEFF standard technologies available on GTS, such as commercial rooftop or building integrated PV power generation, and solar thermal installations, can apply without any further technical approval.



55 [GEFF – Welcome to the Green Economy Financing Facility \(ebrdgeff.com\)](https://ebrdgeff.com).

56 These include Ameriabank, ACBA Leasing, Inecobank, and ArmSiwss Bank.

57 GEFF Armenia (2022), [Financing partners – GEFF in Armenia](#).

58 GEFF Armenia (2022), [Green Technology Selector](#).

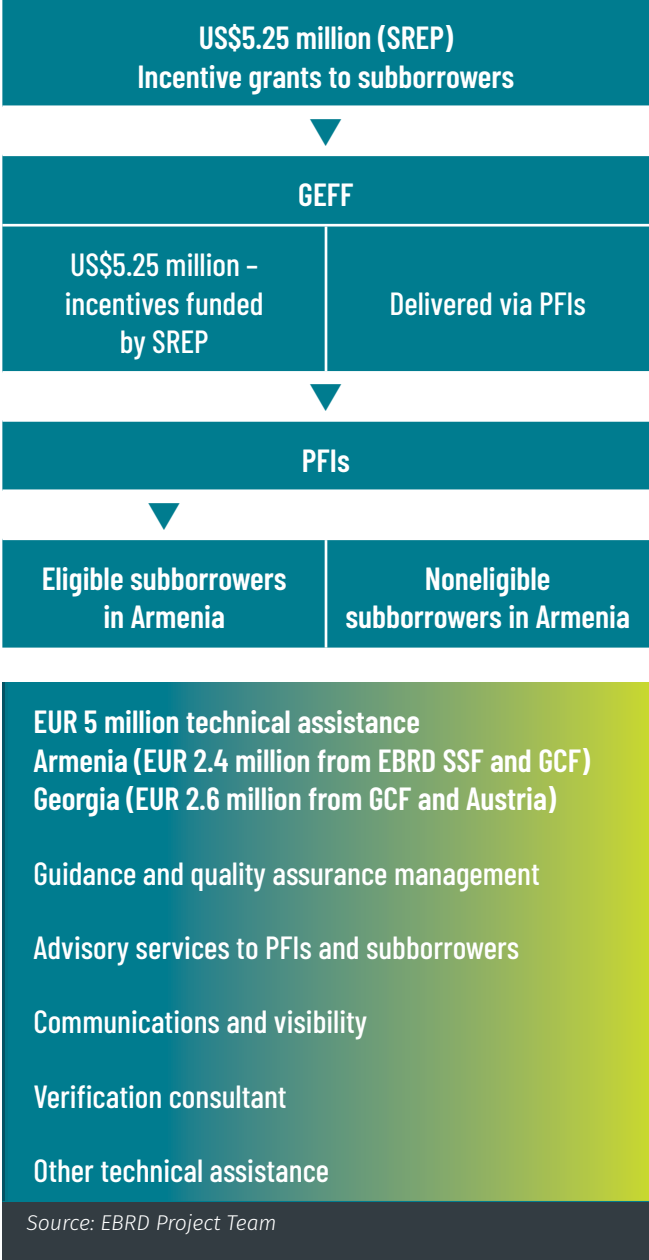
Additionally, subborrowers seeking financing for green investments not available under the “preapproved” approach may be eligible for free technical advice from the GEF Armenia team. This support is meant to ensure that proposals are technically eligible by helping assess compliance with GEF criteria, aligning equipment and processes with business needs, identifying additional green investment opportunities, providing financial analysis of technology options, and post implementation reporting.

Rationale

GEFF Armenia demonstrates effective use of TA in multiple areas. TA provides advisory support to PFIs on quality assurance and management issues, technical guidance to PFIs and subborrowers, and marketing and communications support to increase awareness of potential benefits, also aiming to increase women entrepreneurs’ access to finance. The project also highlights the potential for pipeline development and the ability to scale climate finance in transition countries when TA is jointly deployed with incentive grants.

Role of TA

Upstream TA to PFIs deployed jointly with incentive grants and advisory services to subborrowers helped facilitate sustainable energy financing. PFIs disburse SREP-funded incentive grants of up to 20% of the project upon successful completion and verification of small-scale RE projects, lowering the cost of financing, and facilitating investment in target green technologies.⁵⁹ The initial tranche of CIF funds has been fully committed and EBRD investments in second tranche are 90% disbursed. Simultaneously, TA was also used to build the capacity of PFIs to provide financing in the nascent green technology market. This includes training on technical and technology issues to support with credit analysis and product development, initiating vendor cooperation opportunities, internal and external marketing and communication support, and project assessment and reporting.



TA interventions that support the design of digital tools and platforms can potentially accelerate the achievement of climate results, particularly when these lower transaction costs and expand access to finance. In Armenia, dedicated TA established the Green Technology Selector and created a basic point of entry for borrowers, streamlining the investment approval process and accelerating the delivery of

59 Grant support, GEF Armenia. [Grant support – GEF in Armenia \(ebrdgeff.com\)](http://ebrdgeff.com).

climate results. TA supported the technical design of the Selector so that preapproved technologies saw uptake by end users: the GEFf consulted private sector users in the market to gauge the relevance of the GEFf's priority technologies. In addition, through TA, the GEFf engaged consultants to design a customizable back-end that can easily accommodate evolving needs in the market.

Furthermore, TA supported the design of a website that made funding eligibility criteria transparent and publicized advisory opportunities for firms and end-users. Through PFIs, financing was made available to private companies, vendors, and green technology manufacturers interested in investing in eligible technologies. Technical assessments are available to subborrowers that can benefit from more complex solutions. In these cases, TA is used to engage a consultancy to provide free technical support services. Case studies published on the GEFf website⁶⁰ also highlighted commercial benefits such as cost savings through reduced energy, water, and resource consumption; greater productivity due to reliable equipment; and improvements in product quality leading to enhanced company brand and overall profitability. These benefits are demonstrated across sectors—namely agriculture, beverages, and textiles in the case of Armenia.

There is an important role for TA in building a pipeline of investible projects in target countries. The local GEFf project team provided end-to-end business development support to PFIs new to the RE market. The project team reviewed PFI portfolios to identify investment opportunities among existing and new clients and proposed green economy projects to PFIs for their consideration. Once agreed, GEFf assisted PFIs in their outreach to promote small-scale RE among identified clients.

Ongoing policy dialog with relevant authorities in Armenia uncovered regulatory barriers that prevented the systematic uptake of green technologies. Although this was financed outside of the TA, it was critical to tailoring solutions aligned to the local market. For example, a regulatory review identified bottlenecks in net metering rules, quality

assurance, and land allocation issues that were addressed through policy dialogue with electricity networks regulators.

TA funds supported a gender baseline assessment (GBA) that assessed the extent to which PFIs' marketing strategies cater to women-owned SMEs. The report's findings—e.g., higher awareness among women on the negative impacts of climate change on their business, lack of collateral among women that impedes access to financing—informed the GEFf's engagement with PFIs. As a result, an opportunity to train managers and executives of PFIs on gender-sensitive approaches was established. Through the GEFf, EBRD also engaged in knowledge dissemination through public events that highlight the distinct impact of climate change on women-owned businesses and the need to tailor green financing to address women-specific barriers. The findings of the gender baseline assessment have informed country-specific knowledge products accessible via the established website.



60 [GEFF – Welcome to the Green Economy Financing Facility \(ebrdgeff.com\)](https://www.ebrdgeff.com/).

Assessment against review matrix

RELEVANCE AND COHERENCE	Credit lines as well as advisory services provided by EBRD helped the participating local financial institutions and clients in enhancing their market practices. This also helped the GEFs to demonstrate the benefits of green economy investments and show how green projects are turned into sound investments.
SPEED	Fast track route of funding. Through an innovative framework for grants programs, the borrowers received an investment incentive amount upon successful completion and verification of small-scale renewable energy projects. This helped in lowering the cost of financing and facilitating investment in target green technologies.
SCALE	TA deployed along with incentive grants helped to accelerate the uptake of renewable energy by private companies, vendors, manufacturers of green technology, as well as end users at the household level.
SYSTEMIC CHANGE	GEFF expertise and financial assistance not only helped in accelerating the uptake of renewable energy but also has proved to be a cornerstone project that has paved the way for inflow of investments in other green projects in Armenia as well.
ADAPTIVE SUSTAINABILITY	Through advisory support and technical guidance, TA deployed under the program has been very effective in addressing the barriers associated with the expansion of green technology market, thereby lowering cost of financing, facilitating investment in target technologies, and eventually accelerating climate results. TA supported major stakeholders and helped in streamlining the process of adoption of green technologies by them. TA funds also supported a gender baseline assessment that highlighted the need for tailored green financing to address women-specific barriers; this was a critical step in creating an enabling environment for future investments.

Takeaways

- Capacity building of PFIs can enhance the effectiveness of incentive grants and other schemes that encourage industry and residential investment in green technology. While incentive grants lower the cost of financing and encourage uptake of key technologies, targeted TA to FIs contribute to a sustainable financing ecosystem.
- There is an important role for TA in cultivating a robust pipeline, particularly by leveraging PFI portfolio and deploying complementary capacity building to help PFIs go to market.
- TA can facilitate demand for green technologies by building capacity among private sector, vendor, and manufacturer end users. TA is used to support qualifying SMEs and other firms applying for financing in the form of business plan preparation and developing of technical capabilities.
- Green investments designed in a gender-responsive manner can help address persistent gender gaps, enhance access to financial and productive assets and, overall, improve women's economic opportunities. Projects that recognize the distinct needs among men and women contribute to broader climate objectives. Gender mainstreaming efforts enhanced the inclusiveness of finance provided for the adoption of green climate technologies.



Case study 3 – India Grid Connected Solar PV Program

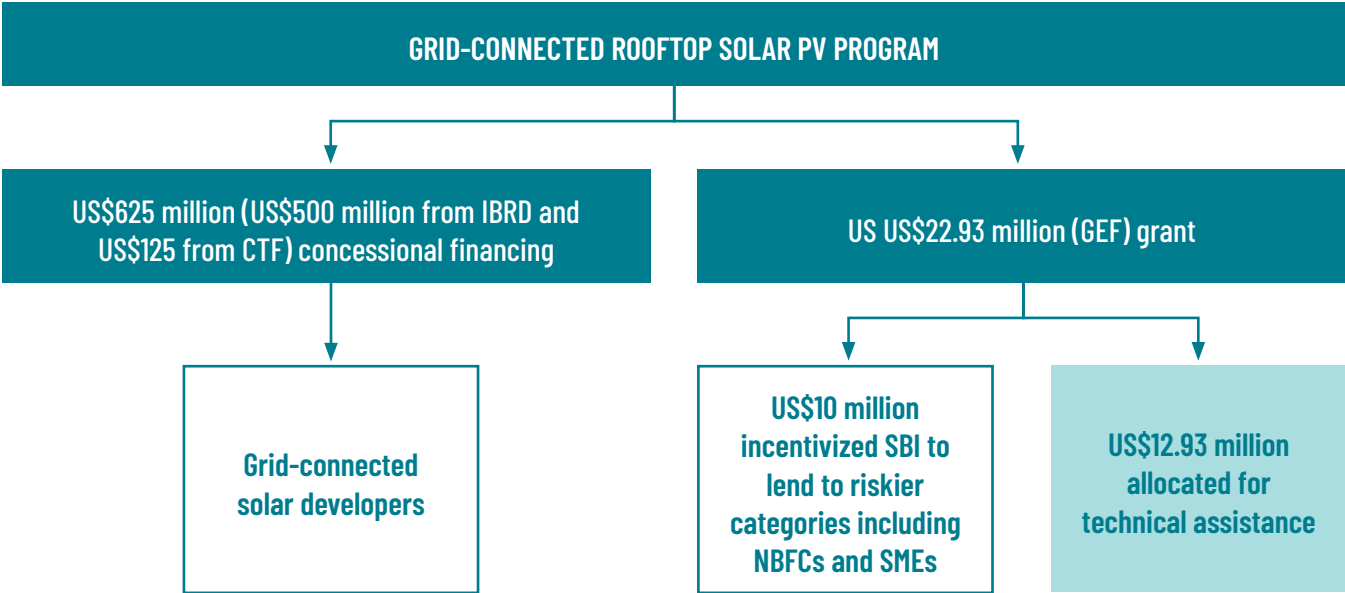
PROGRAM	CTF
IMPLEMENTING PARTNER	World Bank
PROJECT AMOUNT	US\$915 million
CIF TA AMOUNT	US\$5 million
BENEFICIARIES	Commercial and Industrial sector

Project summary

The World Bank, the Clean Technology Fund (CTF), and the Global Environment Facility (GEF) in partnership with India’s Ministry of New and Renewable Energy (MNRE) launched a large debt financing program in 2016. The program provided US\$625 million⁶¹ to the State Bank of India (SBI), to support India’s Rooftop Solar PV ambition to finance Grid Connected Solar

PV Program (GRP) projects and enhance the capacity of various stakeholders involved in GRPV implementation.⁶²

This program included a US\$12.93 million TA component entitled Sustainable Partnership for Rooftop Solar Acceleration in Bharat (SUPRABHA). The component offers capacity building support to 17 Partner States allocated by MNRE⁶³ to accelerate the uptake of grid-connected rooftop solar PV by creating an enabling environment for increasing the inflow of finance into the sector. To achieve this goal, the program focused on six areas, including strengthening the policy and regulatory landscape around grid-connected solar PV in India, capacity building of key institutions, knowledge exchange programs, media and outreach activities, process streamlining, and demand aggregation. The TA was executed by a Project Management Consultant engaged by SBI and supervised by the MNRE-led Steering Committee.



61 The funds were provided under the Program for Results lending instrument, which links disbursements to achieving agreed results.
 62 World Bank (2016), [Restructuring Paper on a Proposed Program Restructuring of Grid-Connected Rooftop Solar Program](#).
 63 These states include Assam, Haryana, Andhra Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Bihar, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh, Rajasthan, Chandigarh and Delhi.

Rationale

Key barriers to climate change investments identified during project preparation include the short-term view of investors, policy uncertainty, and the lack of appropriate scale in investment opportunities. These barriers persist in part due to the relatively immature policy environment governing the clean energy sector. The TA provided under SUPRABHA has been effective in addressing these barriers as well as in facilitating investment and institutionalizing policies that support renewable energy investment, particularly, grid-connected rooftop solar PV in all partner states in India. In 2016, the rooftop solar was at a nascent stage (500 MW capacity). This program was the first risk-taker in India that aimed at mobilizing the finance and increasing the installed capacity of rooftop solar in the country. It has since then substantially reduced the cost of debt and unlocked private capital for critical technology. Since its inception, the market has grown at a 64% compound annual growth rate.⁶⁴ It has been a flagship program for the World Bank whose performance has consistently been rated as highly satisfactory.

The case study provides an example of the potential for TA to drive institutional change among government counterparts (e.g., the establishment of a GRPV department within SBI). Learnings would be useful in paving pathways for similar other projects in the RE space in CIF target countries.

Role of TA

TA interventions were critical in fast-tracking the uptake of new technologies in the private and public sector in India. The GRPV program was implemented across 17 states allocated by the MNRE. TA interventions as part of the program have helped aggregate demand in 4,429 sites across 11 states. Moreover, up-front TA to discoms, state nodal agencies, state power departments, and state electricity regulatory commissions helped streamline applications for grid connection, implement net-metering/gross-metering policies, and trained rooftop PV certification agents to ensure proper installation. The total demand aggregated was 382 MW,⁶⁵ driven by the commercial and industrial sectors. TA activities also helped in achieving the program objectives by



64 [Restructuring Paper on a Proposed Program Restructuring of Grid-Connected Rooftop Solar Program – World Bank Document.](#)

65 [SUPRABHA, Future of Electric Mobility.](#)

supporting states in tendering 170 MW of solar rooftop capacity in the residential sector while aggregating a demand of 350 MW in institutional sectors. This was done through identifying investment opportunities, raising awareness, and aggregating demand.

TA has a crucial role to play in improving the economic feasibility of a new technology and hence contributes to creating an enabling environment, particularly as part of a broader blended finance approach. For this program, US\$10 million incentivized SBI to lend to riskier categories, such as nonbanking financial institutions (NBFCs) and MSMEs. For example, MSMEs were given loans through first loss mechanisms. SUPRABHA also engaged a consulting firm to conduct a study on understanding the key barriers associated with solar uptake in MSMEs and development of mitigating financial framework. TA activities helped identify MSMEs as key stakeholders to speed up solar PV uptake. Additionally, several capacity building programs indirectly helped the RESCOs to tap the market opportunities and are expected to bring down the cost of financing by 11%–12%.⁶⁶

Regulatory and policy support facilitated through TA promoted the uptake of technologies that are relatively newer to the market. These include the Model Rooftop Solar Regulation 2019 (National), RESCO Build-Operate-Transfer Model Petition (Chandigarh), Rooftop Solar Policy (Meghalaya), Rooftop Solar Policy (Sikkim), and Vendor Empanelment Sikkim.⁶⁷ The TA program helped provide the required policy push, which in turn contributed to creating an enabling environment that encouraged uptake of rooftop solar technologies.

Moreover, capacity building and training of stakeholders contributed to the overall objectives of the project. TA was provided to manage the capacity-building program and to improve the business environment for solar rooftop investment. The program has trained about 2,300 stakeholders, including 100 master trainers, 500 SBI officials, 2,500 DISCOM officials, 500 entrepreneurs, and 100 other

bank officials.⁶⁸ Additionally, TA supported distribution utilities in creating unified web portals for digitalizing the solar rooftop application process in states. This wide-scale support further developed an enabling environment that catalyzed demand for rooftop solar.

TA deployed as part of the program helped disseminate consumer information on rooftop solar, reinforcing economic feasibility and potential for large-scale deployment. As part of the project, a national-level campaign was designed to help state agencies raise consumer awareness of the benefits and process of installing a GRPV system. Along with this, TA funds helped revamp the MNRE website; supported national and state level advertisements, state media and outreach plans, national branding and communication strategy, and PR outreach for states; and stakeholder ecosystem survey reports have been launched. Additionally, several informational films to create awareness among the consumers were also launched.⁶⁹ This communications push boosted the consumer understanding of the then-nascent technology.

Identification of and aggregation of demand is a crucial step towards the adoption of any new technology. In the GRPV TA program, online data rooms were created to reduce the cost for developers by bringing roofs to tender. The data room created 4,429 sites, and the demand was a major push towards the attainment of the objectives of the program.

Initial thrust stemming from TA funds and activities can have impactful results on drawing investments and commercial financing towards projects with several financial barriers. There are major barriers in the adoption of GRPV among consumers. In India, the support from TA helped in reducing the cost of debt from double digits to a single digit for GRPV. Before the launch of the program, there was commercial financing of only 500 MW of solar rooftops over five years. By September 2021, the program had already achieved direct commercial financing of 606 MW of GRPV capacity while supporting the installation of 5,574 MW.

66 SUPRABHA, [MSME Barrier identification and financing report](#).

67 SUPRABHA, [Future of Electric Mobility](#).

68 Ibid.

69 Ibid.

An updated net metering energy policy and regulation are an important prerequisite to expanding uptake of rooftop solar in India.

One of the flagship interventions of this program was to update the model net-metering regulations for the Forum of Regulators. In addition, several states were supported in updating their policies and regulations related to the solar rooftop to update the model regulation for metering and accounting.

Assessment against review matrix

RELEVANCE AND COHERENCE	Highly relevant and effective. Fully end-to-end approach to trigger a new market by combining TA to improve the business environment for rooftop solar and providing financing. The TA supported both the lender triggering the development of the financial market (supply of finance) and the regulators. TA also facilitated demand through dissemination to potential consumers.
SPEED	The rate of growth of the GRPV was positively affected by the second year of the program. Synergies with technological advances (leading to lower costs) and increased financing provided by the project led to rapid deployment and results.
SCALE	The training of bankers facilitated the leveraging of an additional US\$3.5 billion in investments.
SYSTEMIC CHANGE	The program has been able to address the prevailing issue of high initial investment and availability of fewer subsidies to the borrowers. This has helped to reduce the cost of debt and achieve direct commercial financing of 606.48 MW while supporting the installation of 5,574 MW.
ADAPTIVE SUSTAINABILITY	The program incentivized SBI to lend to riskier categories, including nonbanking financial institutes as well as SMEs and identified them as major stakeholders in solar PV, which contributed to addressing the market barriers. TA activities under the program such as development of mitigating financial framework and capacity building programs helped to tap market opportunities and reduced cost of financing by 11%-12%.

Takeaways

- TA can play a crucial role in mainstreaming and streamlining the process of uptake of new technologies as well as be successful in attracting commercial financing, especially in a nascent market.
- TA can address the key barriers related to investments and policy uncertainty in the renewable energy sector.
- TA has been effective in starting a regulatory reform, creating an enabling environment for investments through market expansion and capacity building programs, and establishing a policy framework to address underlying issues with the implementation of the program.



Case study 4 – Middle East and North Africa Middle East and North Africa Concentrated Solar Power (CSP)

PROGRAM	CTF
IMPLEMENTING PARTNER	World Bank
PROJECT AMOUNT	US\$10 million
CIF TA AMOUNT	US\$9.5 million
BENEFICIARIES	Government (Algeria, Egypt, Jordan, Morocco, and Tunisia)

Project summary

The MENA region has significant potential for the use of solar energy to increase the share of renewable energy in their overall energy mix, meet participating countries’ national clean energy goals, and increase the availability of clean and affordable energy. However, like any other new technology, there are certain barriers associated with bringing CSP⁷⁰ technology into the markets of these countries.

In 2016, the World Bank with support from the CTF launched a Knowledge and Innovation Program (KIP) to lay the foundation for the investment project in the MENA region. The MENA CSP TA program supports large-scale deployment of CSP technology by enhancing the developmental and economic impacts through increased local manufacturing and service provision, and informed policies and programs in participating countries (Algeria, Egypt, Jordan, Libya, Morocco, and Tunisia). The program aims to facilitate technology and know-how transfer, strengthen capacities, and address market barriers by providing comprehensive support organized in four pillars. The support includes just-in-time assistance, seed funding, platforms for industry cooperation and knowledge exchange, training and education courses, and expertise for expanding CSP and fostering an enabling framework. The development objective of the TA program is to promote the deployment of concentrated solar technologies in participating MENA countries. It will focus on high-value impacts on the region’s economies by seeking to expand the CSP market, improve the regulatory and policy frameworks, support the creation of ecosystems that will attract investors in related services and products/ equipment, and strengthen capacities in participating countries.



70 Concentrated solar power systems generate solar power by using mirrors or lenses to concentrate a large area of sunlight onto a receiver. Electricity is generated when the concentrated light is converted to heat (solar thermal energy), which drives a heat engine (usually a steam turbine, thus the requirement for water) connected to an electrical power generator.

Rationale

The MENA region has one of the highest solar energy potentials in the world given its high direct normal solar radiation. Solar energy could meet both local electricity needs and provide additional external revenues due to its export potential. However, realizing the region's CSP potential has faced challenges. They include the high up-front investment costs for CSP, the unmet energy needs of the participating countries that have at times focused efforts on other less-clean-but-faster-to-develop sources of energy such as natural gas; uncertainty with respect to commitment from European partners to purchase produced power; the lack of readiness of the transmission infrastructure; and limited supply of clean water required for CSP technologies.

The program seeks to help participating countries in laying the groundwork to realize the true potential of CSP, by conducting assessments and market research; facilitating several interactions between governments, technology, and know-how transfer; and providing selected CSP industry segments with assistance in upgrading production processes and platforms for business cooperation. The program will also contribute to expanding the CSP market by exploring the potential for small-scale concentrated solar applications, addressing market barriers, and facilitating experience exchange between country agencies leading CSP development. The program complements the MENA CSP Investment Plan, which was endorsed in 2009 by the Trust Fund Committee of the Clean Technology Fund to support the development of 1 GW of CSP generation capacity and associated transmission infrastructure in five MENA countries: Algeria, Egypt, Jordan, Morocco, and Tunisia.⁷¹

The project provides insights on the role of TA in large-scale implementation of a nascent technology like CSP, especially in addressing challenges associated with it. The learnings from the case underpin the development challenges for undertaking regional projects and highlight major areas of work and the type of TA most effective in addressing those challenges. This provides groundwork for similar regional projects by CIF.

Role of TA

Knowledge generated through TA facilitated interventions helps in identification of potential of new technologies and associated expansion opportunities. For the CSP project in the MENA region, TA provided through the KIP helped member countries in identification and evaluation of the project specifics, including through an expansion plan; the feasibility and readiness for the adoption of technologies; optimal capacities; technical, contractual, and financial characteristics; and other legal, economic, and socio-economic aspects of the project. It also helped to identify the timing, sizing, location, grid integration, and procurement and financing strategy for it. For example, the KIP conducted a prospective analysis in Jordan in two phases to estimate the potential of CSP and other renewable technologies in Jordan's electricity mix by 2035, and to define the technical, economic, and financial viability of a CSP plant. The main outcome of the program thus far has been to increase CSP and thermal storage in utility planning process. There has been longstanding advisory support to utility companies to increase model capabilities, which has supported increasing the renewable energy capacity.

Several socio-economic, financial, and technical assessments conducted through TA activities have immense potential to contribute towards market expansion of a certain technology. For instance, to facilitate the expansion of CSP capacity in Morocco, the KIP supported analytic work concerning participation of Morocco in EU auctions for renewable electricity. This activity analyzed the value of electricity market integration between the signatories of the Sustainable Energy Trade Initiative (Morocco, Portugal, Spain, France, and Germany), identified obstacles and preconditions to free flows of electricity when economically justified, and defined an implementation plan for greater market integration between the participating countries.

TA provided through the KIPs help in enabling discussions between participating governments and contribute to highlighting the opportunity and challenged associated with projects.⁷² In the

⁷¹ [MENA CSP TA Proposal, CTF.](#)

⁷² [MENA CSP KIP, World Bank \(2020\).](#)

MENA CSP project, the KIP has successfully assisted the government by highlighting the value of CSP in providing to energy systems, including progress towards achieving domestic renewable energy targets, reduced expenditures and reliance on imported fuels, and cost-effective storage and grid flexibility services that enable integration of greater amounts of inexpensive generation from variable renewable sources.

TA has a crucial role to play in creating awareness among key stakeholders for the adoption of a new technology. The TA has helped in increasing the awareness about technical knowledge within the relevant ministries of the participating countries as well as different divisions of the utility responsible for planning/operations/investment. The aim of this TA was to provide decision makers with important technical inputs critical to a complex political process. This was done by organizing workshops by inviting as many players as possible in the sector, including stakeholders from ministries and utilities. Roundtable meetings with country delegations were convened to facilitate sharing of country experiences.

In-depth TA helps in identification of competitiveness of a technology in industry-sectors and ensures on-time delivery of the project. Just-in-time assistance under the technical component of the projects assists the potential CSP industry segments by providing consultation through a roster of international experts that will help in mapping the CSP component manufacturers, assess the feasibility to upgrade production processes, and develop upgrade plans. For example, in Tunisia, in-depth TA was also conducted for the potential for concentrating solar heat to contribute to competitiveness of the industrial sector. Through on-site interventions, a report was produced comprising an analysis of possible technical configurations and integration points, economic and financial assessment, and sensitivity analyses, while recommendations to

support the development of CSP projects in Tunisia were delivered.

Beneficiary countries, keen to enhance energy security, redirect oil and gas resources for value-added industrial use, and reap economic cobenefits including from increased revenues from renewable energy penetration, demonstrated substantial political willingness, and facilitated an enabling environment for GRPV. In this context, an initial push from TA activities along with the contributions from MDBs assisted in lowering the cost of the overall project. TA contributed to the creation of an enabling environment for crowding both private and public investments for CSP projects in the MENA region. This in turn has helped accelerate the inflow of finance for the development of new projects, as well as in addressing barriers to the adoption of CSP. For example, in Morocco, AfDB has mobilized US\$285 million to help finance the initial development phases of the NOOR Midelt solar projects.⁷³ This pushed Morocco to second globally and first in Africa and the MENA region⁷⁴ in the 2019 Climate Change Performance Index. Similarly, electricity generated by NOOR I cost US\$ 0.245 per kilowatt-hour (kWh), and US\$ 0.18/kWh—if concessional financing is factored. That has dropped to US\$ 0.19/kWh for NOOR II and to US\$ 0.175/kWh for Redstone.⁷⁵ The low-cost debt is already driving down the cost of CSP in Morocco by 25% for Noor I and an additional 10% for Noor II and III (achieved in 2015), thus reducing the government subsidy required to bridge the affordability gap for CSP.⁷⁶

The ripple effect of TA is seen in bringing development and creating job opportunities in the communities. During construction of NOOR I in Morocco, 250 permanent jobs and 2,400 temporary jobs were created, and 850 new jobs are expected to be generated from the construction of Noor II and III.⁷⁷

TA-facilitated development of projects has had great effect on the development of local community. The effect on the local economy that the NOOR project has provided is an incentive for higher value-added

73 [Morocco's NOOR Solar Projects Support Africa's Energy Transition, moroccoworldnews.com.](https://moroccoworldnews.com/morocco-noor-solar-projects-support-africa-energy-transition/)

74 [Morocco's NOOR Solar Projects Support Africa's Energy Transition, moroccoworldnews.com.](https://moroccoworldnews.com/morocco-noor-solar-projects-support-africa-energy-transition/)

75 [Investment in Concentrated Solar Power, World Bank \(2016\).](#)

76 [Background Brief on Morocco's CSP Plant Noor-Ouarzazate, CIF \(2016\).](#)

77 [Snapshot of Ouarzazate solar complex, AfDB \(2016\).](#)

manufacturing for the supply of parts. The NOOR I project sourced 30% of its components locally. The goal for NOOR II is to raise that figure to 35%.⁷⁸

TA can also be instrumental in realizing the technical goals of the project. For instance, in Morocco, the NOOR project has helped in avoidance of 675,000 tons of CO₂e greenhouse gas emissions per year and has provided new or improved electricity service to 1 million people as of March 2021.⁷⁹

Strong and foreseeable market for technology is a prerequisite for better generating impactful results of TA on the systemic change. With the delays in implementing the CTF investment plan and lack of time-bound pipelines to achieve CSP capacities in targeted countries, the CSP market remains limited. This is a major hurdle in initiating a systemic change. Therefore, it is imperative to estimate the readiness of the technology in the participating countries and set time-bound targets to achieve the goal of the program.

Assessment against review matrix

RELEVANCE AND COHERENCE	Highly relevant example for market creation. The project focused on tackling soft issues at the regional level, which led to concrete project development. Additionally, analytical work including socio-economic, financial, and technical assessments facilitated by the TA under KIP helped the member countries in evaluation of readiness and estimating the feasibility associated with large-scale deployment of CSP.
SPEED	Use of just-in-time assistance by roster of international consultants for several areas of need (business model and tender development, mapping of CSP component manufacturers and service providers, assessment of production capabilities).
SCALE	Program included a grant program to surface proposals on licensing, quality standards certification, R&D of pilots between industry and academia, joint venture proposals, and other start-up proposals. AfDB implemented financial support schemes and streamlining of regulatory and policy framework.

SYSTEMIC CHANGE

Initial push from TA activities (roundtable meetings between several ministries, analytical work) coupled with support from MDBs, assisted in reducing government subsidy, hence contributing to bridging the affordability gap for CSP in the region.

ADAPTIVE SUSTAINABILITY

Multiple touchpoints across government agencies (energy, finance, research, education, planning, utilities) in several countries and coordination with private sector (facility owners, business associations, universities, engineering firms, local financiers, and funds) suggests close collaboration and ability to adapt.

Takeaways

- A TA program can help in facilitating the uptake of new technologies through knowledge sharing and capacity building efforts.
- TA conducted on a regional basis can help in increasing coordination among countries and produce a knowledge exchange on various topics.
- TA can be effective in creating market expansion opportunities through market assessment, technology transfer, and regulatory support.



78 [Investment in Concentrated Solar Power, World Bank \(2016\).](#)

79 [Noor Solar Power Project, World Bank.](#)

Case study 5 – Improved Decision-making for Climate-resilient Development in Asia and the Pacific

PROGRAM	PPCR (Strategic Climate Fund [SCF])
IMPLEMENTING PARTNER	ADB
PROJECT AMOUNT	US\$2.15 million
CIF TA AMOUNT	US\$2.15 million
BENEFICIARIES	Government

Project summary

Improved Decision-making for Climate-resilient Development in Asia and the Pacific is a knowledge and support TA program that aims to support the three selected developing member countries—Armenia, Indonesia, and Mongolia—to strengthen their countries’ systems for climate risk informed fiscal decision-making, and knowledge on climate risk-informed decision-making, by taking into consideration developmental interests of the countries and government priorities. The project started implementation in 2020 and is expected to

reach its goals by 2023. With the total estimated cost of US\$2.15 million to be financed by the Strategic Climate Fund and administered by ADB, the TA is expected to enable participating countries to tackle climate-related risks, tap the opportunities presented by it, and create climate-resilient fiscal policies. The TA is aligned with the national priorities of developing member countries with respect to climate change adaptation, which is reflected in their National Adaptation Plans/Nationally Determined Contributions and with ADB’s countries partnership strategies⁸⁰.

Rationale

The changing course of climate poses severe risks to the three participating countries under the program especially because their economies are highly dependent on climate-sensitive sectors such as agriculture, fisheries, and tourism. Therefore, it is critical to identify the specific climate-related risks and opportunities that exist in these sectors and incorporate climate-resilient development pathways to address risks, explore opportunities, and maximize benefits. However, these economies lack the necessary vision and guidance for the identification and prioritization of policies and investments to achieve these goals.



80 [Improved Decision-Making for Climate-Resilient Development in Asia and the Pacific, ADB \(2020\).](#)

It is thus crucial to aid these countries to integrate climate resilience considerations in fiscal decision-making processes to inform the appropriate level of spending on climate adaptation actions and determine potential sources of revenue (such as through environmental taxes) to finance climate adaptation measures. This regional TA project supports governments to assess and manage climate fiscal risks. It will enable decision-makers to (a) understand climate impacts on fiscal sustainability; (b) allocate and layer fiscal risk; and (c) improve fiscal capacity to finance investment in a climate-constrained world. The TA will also support adaptation investment planning in priority sectors.⁸¹

This stand-alone TA attempts to shift the entry point for climate adaptation from a project level to upstream fiscal and sector planning. This is expected to help in the identification of wider processes that can help influence the future pipeline of investments in climate adaptation. Further, by promoting a whole-of-society approach toward resilience, the TA aims to systematically engage the private sector in climate adaptation-related investments, which is critical in recognizing the scale of finance needed for climate adaptation. Additionally, the project also incorporates gender analysis into the overall climate-resilience pathway and attempts to integrate COVID-19 recovery packages with climate resilient development. As countries design their recovery packages, it will be important to understand the implication of these measures on climate resilient development, identify trade-offs, and promote green and resilient recovery measures which could be replicated in other countries.

Role of TA

TA is supporting the generation of technical evidence, training, and institutional strengthening to build climate-sensitive national fiscal planning processes. The TA program has three key sets of deliverables:

- Analytical evidence generation. Preparation of country climate fiscal reports providing an assessment and guidance on climate fiscal risk assessment and management and financial resource optimization. This is complemented by the preparation of adaptation investment reports for key sectors and a technical document summarizing global best practice on climate responsive fiscal planning.
- Training, learning, and dissemination. Development of training modules, codesigned with participating countries, on climate responsive fiscal planning and regional dialogues.
- Institutional Strengthening. In addition to the two sets of activities described before, which will strengthen institutional knowledge on climate responsive fiscal planning, among key government institutions, the TA will also support interagency coordination meetings in the participating countries to strengthen knowledge and networks between agencies responsible for financing investment in climate adaptation. Participants in this process include ministries of finance, line ministries (such as agriculture and water), central bank, national development agencies, climate-related ministry, and other relevant agencies. For example, for Armenia, key ministry is the Ministry of Finance, which coordinates work also including the Ministry of Economic Planning, Central Bank, National Development Agency, and other financial institutions (government-owned financial entities).

81 [Improved Decision-Making for Climate Resilient Development in Asia and the Pacific, ADB \(2020\).](#)

Diagnostic work being conducted through TA activities shows promise in mainstreaming climate considerations into macroeconomic policy, medium-term fiscal strategies, annual budget strategy papers, public investment management, and public procurement processes. The TA component supports diagnostic work to provide recommendations for mainstreaming climate resilience considerations into fiscal policies and strategies. It will also help in capacity building of staff from relevant developing member countries ministries, including staff from ministries of finance, ministries of planning, and selected sector ministries, on the use of (a) climate risk information and other hazard information (along with uncertainties in fiscal decision-making) and (b) risk-informed planning tools and guidelines. And finally, strengthening national interagency coordination mechanisms on climate adaptation through regular meetings and dialogue to facilitate climate risk informed fiscal decision-making.

TA is facilitating roundtable dialogues and meetings among various stakeholders can contribute immensely to knowledge exchange and sharing.

The project is expected to help in (i) facilitating roundtable dialogues and meetings between national and local governments, civil society organizations, and the private sector; (ii) conducting regional learning workshops with TA developing member countries and other selected developing member countries; (iii) organizing online and/or in-person peer-to-peer sharing of experiences of TA developing member countries with other developing member countries, especially with developing member countries that implemented similar initiatives under the PPCR under the CIF, which ADB and other multilateral development banks are implementing entities; (iv) sharing experiences by TA developing member countries globally through the GCA's capacity building program for central ministries of finance and planning to support their efforts to integrate climate risks into decision-making processes. Several training activities are also targeted to improve capacity with an expectation that evidence, networking, and training will result in changes in the system for climate responsive planning.

These activities aim to the shift entry point for climate adaptation from project level to upstream fiscal and sector planning. This approach is meant to identify wider processes that influence future pipeline of investments in climate adaptation (for ADB and other donors to finance). There is also an element of engaging the private sector to incentivize adaptation-related investments. The program, therefore, brings a unique and well-defined approach to climate resilience and adaptation focusing on upstream fiscal and sector planning rather than project-level intervention.

The interest of the participating countries vis-à-vis bringing systemic change is a crucial precondition required for effective implementation of TA activities. As highlighted through stakeholder consultation, the success of this program and TA implementation has been achieved because of the interest shown by countries towards integration of climate dimension into their fiscal decision-making and sustainability. This interest reflected through increased participation of countries in knowledge-sharing platforms also helps in fast-tracking the implementation process and hence the result.

Barriers addressed through TA activities help in bringing about long-term structural change and creating enabling environment to achieve the objectives of the program. In this program, TA will help in addressing key barriers including limited availability of climate risk information. For this, data points are identified by national and international experts. Each country has two national experts (PFM and adaptation) and a third expert who is a climate risk specialist to identify data and conduct a modelling exercise. A consulting firm is engaged to look at a global level on the landscape and creating guidance notes to support the whole effort. The teams have also conducted background data collection and gap analysis. They have data on climate scenarios and data and evidence on the fiscal ecosystem, to estimate the current monetary and fiscal policy and their climate responsiveness.

Assessment against review matrix

RELEVANCE AND COHERENCE	Highly relevant especially in the context of COVID-19 pandemic. The vulnerabilities and importance of resilience highlighted by the current pandemic have played a crucial role in integrating climate thinking and the need to integrate climate resilience into fiscal decision-making.
SPEED	The program started in 2020 and is well on time to achieve its goals by 2023.
SCALE	<p>The TA aims to shift entry point for climate adaptation from project level to upstream fiscal and sector planning. This approach is meant to identify wider processes that influence future pipeline of investments in climate adaptation (for ADB and other donors to finance).</p> <p>There is also an element of engaging the private sector to incentivize adaptation-related investments.</p>
SYSTEMIC CHANGE	Through TA, the program aims to address key barriers including limited availability of climate risk information, and evidence on the fiscal ecosystem, and to estimate current monetary and fiscal policy and their climate responsiveness. It also facilitates roundtable meetings, which helped in knowledge sharing and exchange.
ADAPTIVE SUSTAINABILITY	The program has an element of gender analysis, COVID-19 recovery packages' consideration into fiscal policies, and the involvement of private sector contributes to long-term sustainability of the program.

Takeaways

While still in the early stages of implementation, this program reinforces the relevance of stand-alone TA in disseminating knowledge and mainstreaming climate resilience considerations in the context of multicountry or regional projects. The TA program can help in identifying data points, key stakeholders, and setting out work plans to address the key barriers facing the programs. The use of targeted regional dialogues and peer-to-peer learning enhances the integration of climate responsive planning, thereby supporting systemic change.



Case study 6 – EcoMicro 2.0 Climate Resilience Through Deep Tech Acceleration in the Caribbean Basin

PROGRAM	PPCR
IMPLEMENTING PARTNER	IDB Lab
PROJECT AMOUNT	US\$1.9 million
CIF TA AMOUNT	US\$1.9 million
BENEFICIARIES	Private sector, start-ups

Project summary

EcoMicro 2.0 aims to promote the innovation of ClimateTech solutions in the Caribbean basin, thereby enhancing climate resilience and restimulating economic sectors impacted by the COVID-19 crisis.⁸² This facility is a direct follow on to the US\$17 million IDB EcoMicro Facility for Green Finance for MSMEs and Low-income Households pilot project that provided TA to FIs that channeled financing to technology providers seeking to adopt RE and efficiency solutions.⁸³ Specifically, this iteration aims to accelerate commercialization of ClimateTech solutions through a combination of advisory services and early-stage, risk-tolerant financing in the form of Contingent Recovery Grants (CRGs). It is managed through the IDB Lab, the IDB Group’s innovation laboratory that uses financing, knowledge, and connections to test early-stage firms.



82 ClimateTech refers to the application of frontier technologies such as artificial intelligence, robotics, and additive manufacturing, among others, to climate challenges.
 83 RG-01698 Final Approval Package, December 2021, December 2022, Internal IDB Document.

COUNTRY	PPCR PRIORITY AREAS
Regional	Agriculture and food security, coastal zone management, tourism, water resource management, health, ecosystem-based adaptation, infrastructure, and land-use planning
Dominica	Agriculture and food security, water quality and quantity, fisheries, climate change impacts on coastal and marine resources, infrastructure and human settlements, tourism, forestry
Grenada	Integrated water resource management, capacity building at the sector level, and data management
Haiti	Agriculture and food security, coastal zone management, and reconstruction are the main areas with subsectors/themes being infrastructure, land planning, and data management
Jamaica	Agriculture, land-use planning, health, water resources, integrated coastal zone management, climate-proofing of national and sectoral plans, tourism, and data management
Saint Lucia	Agriculture, coastal and marine resources, financial sector, forestry, biodiversity, health, human settlement, critical infrastructure, tourism, and water resource management, among others
Saint Vincent and the Grenadines	Monitoring and evaluation of environmental hazards, watershed management, public sensitization and awareness, integrated planning, and data management

Source: RG-O1698 Final Approval Package

US\$953,000 core funding from PPCR supports 2–4 CRGs with an expected value of US\$250,000 to US\$500,000 each. Additionally, IDB Lab is providing funding to engage advisory support in beneficiary selection, program design, and execution of the CRGs. Additionally, the Facility prioritizes firms that express willingness to mainstream a gender consideration across all aspects of their business, including management, operations, and business development.

The implementation mechanism is structured as follows: IDB Lab teams in eligible countries will

mobilize local partners, including implementing agencies of ongoing and previous operations to source ClimateTech start-ups seeking investments to pilot and scale a minimum viable product. To be eligible, firms must be revenue generating and present solutions that align with PPCR focus areas with immediate potential for local adaptation of deep tech innovation such as agriculture, natural resource management, and water management. Finally, beneficiaries must demonstrate potential to contribute to EcoMicro 2.0's twin objectives of resilience and green growth.

Rationale

The facility's operational focus on green recovery and resilient growth through the application of Industry 4.0 technologies has the replication potential for start-ups in other climate disaster-prone regions. Additionally, although the facility is in its early stages, the EcoMicro 2.0 implementation model provides insights on ways to use the CRGs to support early-stage SMEs. This is especially relevant to PPCR target countries that have nascent venture capital markets for ClimateTech. Finally, the facility offers lessons in gender mainstreaming approaches for future TA interventions.

Role of TA

TA linked to CRGs enhances the effectiveness of green financing for early-stage SMEs in the ClimateTech space. As part of the CRG origination process, PPCR MDB Project Implementation

Services funds and MDB fees will be used to hire an individual to provide technical advisory support in the selection, design, and execution of CRGs. This includes the screening of firms sourced by IDB Lab and its partners; preparation of pitches to the IDB Lab IDEATE Jury⁸⁴; support of the design of CRIG project documents such as financial projections, results matrices, program milestones, and beneficiary analysis; and guidance on execution of Gender Action plans; as well as monitoring and evaluation reporting. As a result, beneficiary firms are better positioned to utilize the inflow of green financing.

84 IDB Lab IDEATE Jury is a committee of multidepartmental experts, including IDB Lab CEO and Operational Unit Chiefs, who are responsible for reviewing, providing feedback on, and giving the go-ahead to (or rejecting) funding proposals. Once the IDEATE Jury gives the go-ahead, a project is deemed eligible for financing and project teams can proceed to design and approval.

The extensive use of TA in the first phase of the initiative enabled a downstream towards supporting a nascent ClimateTech market, highlighting the knock-on effects of TA.

EcoMicro 1.0 supported microfinance institutions and financial intermediaries in the region by providing know-how to develop sustainable financial products.⁸⁵ These efforts facilitated green finance in region as FIs placed loans across 3,000 beneficiaries in 19 countries. As a result, current beneficiaries of the Facility may benefit from the increased capacity of FIs to execute green financing.

The use of CRGs in a region where venture capital financing represents a meager US\$300 million or less than 7% of venture capital investments in deep tech start-ups has the potential to accelerate the impact of ClimateTech.

Assistance in the form of financial support and advisory services could help bring new innovative technologies to the market. ClimateTech applications include smart irrigation, artificial intelligence technologies for weather predictions, sustainable livestock and fisheries, and biotechnologies that promote greater climate resilience.

Gender Action Plans are incorporated into the design of CRGs so that beneficiary firms’ mainstream gender-sensitive approaches and strengthen climate-resilient and gender outcomes.

This includes operational considerations such as involving women in the research and design of products and services, developing gender-responsive marketing strategies, and acknowledging potential differences in the ways that men and women avail of their products and services. Additionally, these may include commitments such as increasing the percentage of women in leadership positions, promoting gender equity in hiring practices, and gender-responsive procurement to support women in their supply chains. Finally, the Gender Action Plan may include recommendations for stakeholder engagement activities that contribute to the overall policy dialog in counties where beneficiary firms are located.

The project provides financial support to climate tech start-ups that also support female founders, thereby contributing to the establishment of a vibrant ClimateTech ecosystem in the region.

In line with the IDB Lab’s broader mandate supporting innovation communities through knowledge, financing, and connections, the Facility will help plug-in the new start-ups into the opportunities for engagement, events, and forums where they engage with contacts around their product offering and communities of practice are being fostered.

Assessment against review matrix

RELEVANCE AND COHERENCE	The project aims to promote climate resilience and reactivate the sectors impacted by coronavirus crisis in the Caribbean basin, via the promotion of 4IR technologies. For this, TA supports the commercialization of ClimateTech solutions through advisory services to the early-stage MSMEs and start-ups.
SPEED	The program started in 2022 and is expected to deliver outcomes in 2026.
SCALE	Assistance in the form of financial support and advisory services helps bring new innovative technologies to the market. This further helps in creating a favorable market environment and thus increase investments in climate solutions.
SYSTEMIC CHANGE	Technical and know-how supported provided by EcoMicro 1.0 helps to facilitate green finance in the region as FI places 300 loans across 19 countries. As a result, current beneficiaries benefit from increased capacity of FIs to execute green finance.
ADAPTIVE SUSTAINABILITY	The program is highly innovative and enables the incorporation of climate resilience across sectors that are crucial, especially in the backdrop of coronavirus pandemic, by promoting ClimateTech solutions and equipping the stakeholders with appropriate technical and advisory support. It also supports the establishment of vibrant and robust ClimateTech ecosystem by incorporating a gender action plan that mainstreams gender-sensitive approaches and increases the involvement of women in operations.

85 [The IDB’s Multilateral Investment Fund program EcoMicro wins United Nations climate solutions award | IADB, IDB \(2014\).](#)

Takeaways

- Increased access to finance alone is not sufficient to build climate resilience of SMEs and the communities in which they operate. Innovation in the supply of commercially viable ClimateTech solutions is needed to accelerate and scale efforts of governments, SMEs, and households to achieve long-term objectives in climate resilience, decarbonization, and sustainable green economic recovery.
- Integrating gender considerations in the design phase of a project contributes to enhanced development outcomes.



ANNEX B: PROJECTS ANALYZED – PORTFOLIO SAMPLE

PROJECT ⁸⁶	COUNTRY	MDP	PROGRAM
Advancing Financial Innovation to Scale-up Climate Action	Rwanda	World Bank	PPCR
Bangladesh Scaling-up Renewable Energy Project	Bangladesh	World Bank	SREP
Building Capacity for Climate Resilience	Tajikistan	ADB; World Bank; EBRD	PPCR
Building Climate Resilience in Latin America and Caribbean Through Financial Instruments	Regional	IDB	PPCR
Business Models for Private Sector-led Mini-grid Energy Access Project	Nepal	World Bank	SREP
Cambodia: Mainstreaming Climate Resilience into Development Planning*	Cambodia	ADB	PPCR
Caucasus GEF – SREP Armenia Renewable Energy Grant Support	Armenia	EBRD	SREP
Chile CTF-IDB CSP Project*	Chile	IDB	CTF
Chile Geothermal Risk Mitigation Program	Chile	IDB	CTF
Climate Resilience Through Deep Tech Acceleration in the Caribbean Basin	Regional	IDB	PPCR
Colombia Sustainable Energy Finance Program	Colombia	IFC; IDB	CTF
Colombia: Renewable Energy Financing for Non-Interconnected Zones	Colombia	IDB	CTF
Commercializing Sustainable Energy Finance Program for Turkey	Turkey	IFC	CTF
Private Sector Business Development for Climate-resilient Agribusiness Projects in Asia and the Pacific	Regional	ADB	PPCR
CTF Renewable Energy Financing Facility (CTF/REFF)*	Mexico	IDB	CTF
Dedicated Private Sector Programs (DPSP-III)	Global	IFC	CTF
DPSP-III: Investment grant for the financing and risk transfer program for geothermal power	Colombia	World Bank	CTF
Distribution Efficiency Project/M&E TA: Mainstreaming Climate Change Mitigation into National Infrastructure	Vietnam	World Bank	CTF
DPSP III: ADB Ventures Facility	Regional	ADB	CTF

86 The “*” indicates projects whose total project values (counterpart and MDB financing) exceed the \$50 million threshold that generally applied to projects analyzed as part of the review.

PROJECT ⁸⁶	COUNTRY	MDP	PROGRAM
DPSP III: Indonesia Geothermal Resource Risk Mitigation Project	Indonesia	World Bank	CTF
Ecocasa Program (Mexico EE Program Part II)	Mexico	IDB	CTF
Electricity Access and RE Expansion Project (Phase 2)	Solomon Islands	World Bank	SREP
GRPV*	India	World Bank	CTF
Improved Decision-making for Climate Resilient Development in Asia and the Pacific	Regional	ADB	PPCR
India: Rajasthan RE Transmission Investment Program*	India	ADB	CTF
Innovation in Solar Power and Hybrid Technologies	India	World Bank	CTF
Investment Plan for the Caribbean Regional Track of the PPCR	Regional	IDB	PPCR
Kazakhstan Energy Infrastructure Program, Advisory Services Component – Part of Kazakhstan Energy Infrastructure Program	Kazakhstan	IFC	CTF
Knowledge Management Grant – Impact Assessment Study of CTF-financed Clean Energy Projects in Turkey	Turkey	EBRD; IFC; World Bank	CTF
Lesotho RE and Energy Access Project	Lesotho	World Bank	SREP
Liberia RE Project	Liberia	AfDB	SREP
MENA CSP TA Program	Regional	World Bank	CTF
Mini Hydropower Plants and Related Distribution Networks Development Project	Mali	AfDB	SREP
Pacific RE Investment Facility Kiribati: South Tarawa RE Project	Kiribati	ADB	SREP
Pacific Resilience Program	Regional	World Bank	PPCR
Program for Electrification in Isolated Areas	Honduras	IDB	SREP
Proposed Loan and Administration of Grants, Kingdom of Cambodia: Grid Reinforcement Project	Cambodia	ADB	SREP
South Africa Sustainable Energy Acceleration Program*	South Africa	IFC; AfDB	CTF
Strengthening Risk Information for Disaster Resilience in Bhutan	Bhutan	World Bank	PPCR
Structuring and Launching the Caribbean Water Utilities Insurance Company	Regional	IDB	PPCR
Support to FIRA for the Implementation of an EE Financing Strategy for the Food Processing Industry	Mexico	IDB	CTF
Support to the National Transmission Project	Honduras	IDB	SREP
Supporting the Design of Long-term Adaptation Pathways in the Face of Climate Risks in Peru and Colombia	Regional	IDB	PPCR

PROJECT ³⁶	COUNTRY	MDP	PROGRAM
Sustained Climate Finance Center Operation	Kyrgyz Republic	EBRD	PPCR
“Promoting Climate-resilient Agriculture and Food Security” and Feasibility Study for a Pilot Program of Climate-resilient Housing in the Coastal Region	Bangladesh	IFC	PPCR
TA for Sustainable Geothermal Development	Chile	World Bank; IDB	CTF
Thailand RE Accelerator Program	Thailand	IFC	CTF
Turkey Geothermal Development Project	Turkey	World Bank	CTF
Turkish Sustainable Energy Financing Facility	Turkey	EBRD	CTF
Upscaling RE Sector Project	Mongolia	ADB	SREP



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