CIF CLIMATE INVESTMENT FUNDS

INDUSTRY DECARBONIZATION PROGRAM EVALUATION AND LEARNING TOOLKIT

Maximizing Transformational Intent and Impact of Industry Decarbonization Investments

// September 2024

E&L TOOLKIT SERIES //

Evaluation and Learning Toolkit

CIF Program:
Industry Decarbonization

TOPICS

- Evaluation and Learning
- Industry Decarbonization
- Transformational Change

ACKNOWLEDGMENTS

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This study has been completed by the Climate Investment Funds' Evaluation and Learning Initiative. The study was authored by Michael Ward, Senior Evaluation Specialist, Neha Sharma, Lead for the Evaluation and Learning Initiative, and Alfredo Villavicencio Vieira, Evaluation Specialist. Daniel Morris, Lead for CIF's Energy Programming, and Paul Pulickal Mathew, Climate Finance Specialist, provided technical feedback and strategic guidance.

The author(s) would like to acknowledge Ross Strategic for their contributions to the document.

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Design
Art Direction: Andrea Carega
Graphic Design: Karlien Truyens

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1. BACKGROUND

1.1. CIF Industry Decarbonization Program

The Climate Investment Funds' (CIF) Industry Decarbonization Program aims to "accelerate the transition of high-emitting industries in developing countries to zero-carbon practice and unlock investments in net-zero carbon and climate-resilient business models and technologies."[1] CIF will support MDBs, governments, and the private sector to design and implement innovative strategies and financing instruments to drive investments for emissions reductions in multiple high-emitting, hard-to-abate industry sectors in developing countries.

1.2. Industry Decarbonization Program Investment Criteria

The Industry Decarbonization Program supports the broader CIF impact statement and associated commitment to "Accelerated transformational change and climate finance that enable progress toward net-zero emissions and adaptive, climate-resilient development pathways, in a just and socially inclusive manner."[2] Furthermore, the program seeks to address the "financial barriers that prevent most industrial corporate actors in CIF countries from investing in some of the most innovative and impactful low-carbon, climate-resilient technologies and associated infrastructure, as well as supporting just transitions."[3] The Industry Decarbonization Program helps countries meet key CIF investment criteria, including enhancing the potential for transformational change; GHG emission reduction/avoidance; just transition; financial effectiveness; implementation potential; gender equity and social inclusion; and development impacts.

1.3. Industry Decarbonization Program Monitoring, Evaluation, and Learning (MEL)

CIF regards monitoring, evaluation, and learning as distinct but interrelated functions that build on one another to produce evidence, knowledge, and learning in support of its overall goals and program objectives.[4] The Industry Decarbonization Integrated Results Framework[5] sets out the monitoring approach and the evaluation and learning approach, leveraging different tools, methods, and forms of evidence to enhance accountability and learning. The Industry Decarbonization Monitoring and Reporting Toolkit[6] provides operational guidance on how to measure, monitor, and report on the program results. This document, titled "The Industry Decarbonization Evaluation and Learning Toolkit: Maximizing Transformational Intent and Impact", provides guidance on evaluation and learning approaches related to transformational change, just transition, gender, social inclusion, financial effectiveness, implementation potential, development impacts, and other complex-system considerations within the Industry Decarbonization Program. The evaluation processes draw on data and insight generated by the M&R system while also generating, analyzing, and interpreting additional information to support learning and change.

1.4. Evaluation & Learning to Support Transformational Intent and Impact

Since its inception in 2008, CIF has sought to advance transformational approaches to climate action. In 2015, CIF's Trust Fund Committee (TFC) endorsed a proposal to establish the Evaluation and Learning Initiative to enhance the use of evaluative processes for the purposes of learning, accountability, and

decision-making. CIF's user-focused and demand-led approach to evaluation, guided by an independent Advisory Group and the TFC, ensures timeliness within the program or project lifecycle, and enables the use of a range of methods to generate practical, applied insights.

In 2017, CIF launched the Transformational Change Learning Partnership (TCLP) which brought together an international community that has developed the concepts, methods, and metrics associated with achieving transformational change. The work of the TCLP has been used by an increasing number of climate finance institutions to inform a range of evaluative approaches designed to deepen the transformational intent and impact. TCLP-developed concepts and tools have been incorporated into the design of CIF's programs, including the Industry Decarbonization Program. Incorporating evaluative approaches in program and project design can amplify the transformational intent and extent of systemic change aimed to address the climate crisis. During implementation, evaluation and learning approaches can help programs and projects to reorientate or change approaches to increase their impact by responding to emerging internal and external challenges and opportunities. Programs and projects near the end of their implementation can use summative reviews and other evaluation and learning approaches to enhance accountability and assess transformational impact to enable broader learning. Finally, meta-evaluations that synthesize learning from multiple evaluations and studies can generate insights that deepen both transformational intent and impact of future programs and projects.

2. PURPOSE

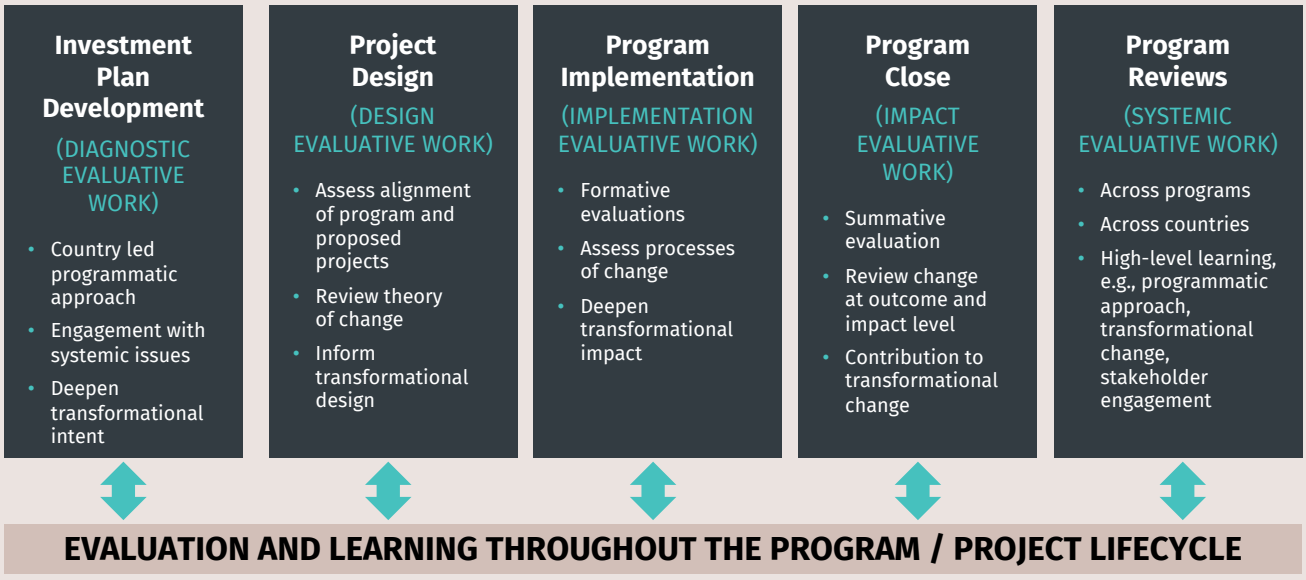
This Industry Decarbonization Toolkit is designed to guide and inform the use of evaluation and learning (E&L) approaches throughout the lifecycle of the Industry Decarbonization program, and associated projects, with the aim of enhancing their transformational intent and impact.

This toolkit uses the terms "evaluation and learning approaches", "evaluative work", and "learning processes" to emphasize the point that evaluation and learning can take place in many ways. Broadly, the purpose of evaluation and learning is to generate credible and useful insight into the value of something (e.g. processes or outcomes) and enhance one's confidence and capacity to make decisions and take action. Thus, while evaluation should be systematic (intentional and purposeful), grounded in key questions — which shape the scope and direction of the evaluation, and inform planning and decision-making — it does not have to be done by an external third party, be time-consuming, or expensive. The intention of this toolkit is to support a variety of stakeholders to use evaluation and learning approaches to enhance the design, implementation, and review of the Industry Decarbonization Program and associated projects.

CIF has identified key moments throughout the Industry Decarbonization Program lifecycle where evaluative approaches can enhance the transformational intent and impact of Industry Decarbonization investments. Key evaluative moments occur prior to investment plan (IP) implementation (ex-ante evaluation), during implementation (formative evaluation), and after implementation (ex-post evaluation). Collectively, the evaluative work at these moments contributes to learning and action that can increase the program's potential, and actual results, relevant to key industry decarbonization investment criteria, such as GHG emissions reduction/avoidance, just transition, gender equality and social inclusion, development impacts, and transformational change.

Figure 1 summarizes the key evaluative moments, identified by CIF, and the kinds of evaluative work that could be conducted at these moments to support decision making. Additional information will be provided in section 5, discussing the evaluation and learning moments in the Industry Decarbonization Program.

FIGURE 1. Evaluation and Learning Approaches for Key Moments in the Industry Decarbonization Program



Source: CIF, 2024

It is important to note that the term "evaluation" refers to a broad range of evaluation approaches that require varying degrees of effort and time intensity. Also, it is possible to undertake evaluative work and answer evaluative questions at each of these phases, without needing to commission evaluations. There are several possible methods with varying degrees of resource and time intensity that can address evaluative questions at each phase. MDBs have their own independent evaluation offices with periodic commitments for accountability at the project level, while CIF complements these activities with programmatic and thematic evaluations and studies that analyze results and lessons within and across CIF programs, and across CIF-supported projects.

This toolkit provides practical evaluation and learning approaches and tools that can be used to maximize the transformational intent and impact of the Industry Decarbonization Program throughout the program and project lifecycle. This includes improving the understanding of what is meant by "transformational change," identifying the dimensions of change that require attention, using questions to help focus attention on these key dimensions, and predicting and tracking expected and unexpected outcomes and impacts through the use of signals and other evaluative methods.

This toolkit includes four sections to guide the E&L approach for the programs and projects of the Industry Decarbonization Program countries:

- **Audience and roles relevant to the Toolkit.** This section provides some insight into the interests and roles that a range of Industry Decarbonization Program stakeholders may have in supporting

evaluation and learning processes across the lifecycle of the Industry Decarbonization Program.

- **Maximizing transformational intent and impact in the CIF context.** This section describes an evaluative framework and concepts that equip Industry Decarbonization Program partners and stakeholders to deepen the transformational intent and maximize transformational impacts throughout the program and project lifecycle.
- **Evaluation and learning moments in the Industry Decarbonization Program.** This section outlines how evaluation and learning approaches that support transformational change can be incorporated into key stages in the Industry Decarbonization Program and its relevant projects.
- **Industry Decarbonization Program questions and signals.** This section identifies specific questions and signals relevant to transformational change that can support partners and stakeholders in determining ways to enhance and track transformational change.

3. AUDIENCE AND ROLES RELEVANT TO THE TOOLKIT

This toolkit is tailored to a diverse set of stakeholders engaged in the Industry Decarbonization Program. By addressing critical evaluative moments across the Industry Decarbonization Program and its associated projects' lifecycles, the toolkit aims to support both internal stakeholders and external partners.

3.1. Audience for this E&L Toolkit

1. **CIF Industry Decarbonization Program Leads:** Instrumental in providing strategic Industry Decarbonization Program oversight, ensuring the cohesive integration of Industry Decarbonization Program goals, and driving effective implementation aligned with transformational objectives. Industry Decarbonization Program managers have an interest in evaluation and learning activities across all the key Industry Decarbonization Program moments, with particular attention to evaluating investment plans and learning from Industry Decarbonization Program reviews that look across industry decarbonization country programs and use systemic evaluation and learning approaches across programs, sectors, and thematic areas.

2. **Investment Plan (IP) Authors:** Serve a pivotal role in aligning country needs, MDB support, and Industry Decarbonization Program objectives and investment criteria. They will translate strategic goals into tangible and technically sound investment plans to facilitate transformational outcomes and impacts. Diagnostic evaluation and

learning approaches support IP developers to enhance IPs' transformational intent and potential for impact.

3 **Investment Plan Reviewers:** Contribute with technical expertise via rigorous assessments to validate the technical feasibility and alignment of proposed plans, enhancing the program's technical robustness. Familiarity with diagnostic and design evaluation and learning approaches is important for IP reviewers to assess the feasibility and alignment of proposed IPs in achieving Industry Decarbonization Program objectives with enhanced transformational intent.

4 **Project Developers:** Through technical design and execution, project developers, such as country stakeholders and MDBs, play a critical role in designing and implementing projects that align with and support Industry Decarbonization Program investment plans. Design evaluation and learning approaches can help them ensure that projects are well designed to advance transformational change goals outlined in the IP, while implementation evaluation and learning approaches can inform the ongoing execution of projects to enhance success and transformational impact.

5 **CIF Thematic Teams:** To enhance transformational intent, CIF teams, such as the E&L, Monitoring & Reporting (M&R), and Gender and Social Inclusion, bring technical, cross-cutting perspectives (e.g., integrating gender and other considerations, monitoring and results, and learning) into the Industry Decarbonization Program and evaluations. CIF teams engage across all the key Industry Decarbonization Program moments, giving particular attention to evaluation and learning approaches that enhance implementation (formative evaluation), impact (summative) evaluations, and systemic evaluations used to assess the collective effectiveness and impact of the Industry Decarbonization Program across projects and countries.

6 **Case Study and Evaluation Commissioners:** Ensure that a transformational lens is applied on evaluative processes to deepen the transformational intent, maximize transformational impact, and support learning to advance better practices. Case study and evaluation commissioners may have an interest in E&L activities across all the key Industry Decarbonization Program moments, with particular attention to implementation and impact evaluations that seek to capture and share insights from Industry Decarbonization Program and projects.

7 **Case Study Developers:** Contribute technically by documenting and disseminating technically rich insights from successful program strategies, offering technical best practices for future industry decarbonization initiatives. Case study developers may have an interest in E&L activities across all the key Industry Decarbonization Program moments, with particular attention to design, implementation, and/or impact evaluations that seek to capture and share insights from specific industry decarbonization programs and projects.

8 **Independent Evaluation Teams (External from CIF):** Bring technical objectivity to the assessment process by conducting independent, technically rigorous evaluations to assess the design, implementation, and impact of the Industry Decarbonization Program and identify insights and areas for improvement. External teams may have an interest in E&L activities across all the key Industry Decarbonization Program moments, with particular attention to the type of evaluation they are commissioned to conduct.

3.2. Roles for Implementing the Industry Decarbonization E&L Toolkit

The "CIF Monitoring, Evaluation, and Learning (MEL) Policy and Guidance" document outlines general roles for evaluation and learning activities in the context of CIF programs.[7] The policy describes the specific roles and expectations for CIF units, MDBs, recipient countries, and CIF observers relevant to E&L activities in CIF programs. In practice, E&L activities are typically a collaborative endeavor, and approaches and roles should be tailored to the specific needs, opportunities, and capacities relevant to the country that undertakes the Industry Decarbonization Program. The specific E&L approach and plan, informed by this Industry Decarbonization E&L toolkit, should be clearly described in the country's industry decarbonization investment plan, as discussed in Section 5.1 in this guidance.

4. MAXIMIZING TRANSFORMATIONAL IMPACT IN THE CIF AND INDUSTRY DECARBONIZATION CONTEXT

This section describes a framework for understanding transformational change in the CIF context, which provides a foundation for enhancing the transformational intent and impact of the Industry Decarbonization Program, IPs, and projects. The Transformational Change Learning Partnership (TCLP) defines transformational change as "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, equitable, resilient, and sustainable development pathways."[8] The potential for transformational change is central to CIF's mission and is one of the key investment criteria for the CIF Industry Decarbonization Program.[9] Transformational change can also advance other key focus areas included in the industry decarbonization investment criteria, such as the potential for reducing or avoiding GHG emissions; the potential to significantly contribute to the principles of just transition; the gender equality and social inclusion impact potential; and the potential for transformational climate finance and development impact.

The transformational change framework is used to deepen the transformational intent and impact of CIF programs and projects across the program areas and investment criteria. Thus, for example, CIF's Just Transition (JT) Framework highlights both procedural justice (who decides) and distributional justice (who gets what). In addition, the JT framework seeks to deepen the transformational intent across these two aspects of justice, and it is here that the work on transformational change detailed below provides a valuable framework for evaluation and learning. Similarly, the CIF Gender Action Plan (Phase 3)[10] highlights the importance of "gender-transformative change", and the transformational change framework enhances the focus on systemic issues related to gender, and the scale and speed at which change needs to be generated.

4.1. Dimensions of Transformational Change

Transformational change requires attention to five context-specific dimensions — Relevance, Systemic Change, Speed, Scale, and Adaptive Sustainability. To be considered transformational, climate actions are expected to address all five dimensions to at least some extent. Box 1 includes brief descriptions for each dimension, along with key questions relevant to each (see questions in the section below for more information). For a detailed explanation of the TCLP transformational change dimensions and concepts, see the TCLP's Transformational Change Concepts Learning Brief.

BOX 1. Transformational Change Dimensions + Questions

RELEVANCE: Alignment with and attentiveness to goals and context through time

➔ What is required, what is planned, and are they aligned?

SYSTEMIC CHANGE: Fundamental shifts in system structures and functions

➔ What systems need to change and how? Who needs to be involved and how?

SPEED: Accelerate impacts to achieve the appropriate speed of change

➔ What is the relationship between urgency and complexity?

SCALE: Contextually large change processes and impacts

➔ What scaling is required?

ADAPTIVE SUSTAINABILITY: Robustness, resilience, and adaptiveness of change

➔ What capacity will be built to achieve sustainable development pathways?

Source: CIF, 2024

TRANSFORMATIONAL CHANGE IN THE INDUSTRY DECARBONIZATION CONTEXT: Illustrative Example

Accelerating industry decarbonization requires attention to a wide range of economic, social, and environmental factors to mitigate adverse impacts and to ensure that the transitions address key governance, people, technology, and commercial needs. **Relevant** industry decarbonization investment plans (IPs) and projects are fully aligned with national development goals and Nationally Determined Contributions (NDCs) under the Paris Agreement, and are responsive to additional social, economic, and technical contextual factors. The IPs and projects are also attentive to supporting the needs of women and vulnerable populations to ensure just energy transitions. IPs and projects address **systemic changes,** such as governance and regulatory frameworks, technical and supply chain capacities, and workforce development programs. Concessional financing and engagement of investors help de-risk investments in ways that **speed** up and **scale** the deployment of industry decarbonization technologies. Insights from the program and project implementation inform the **adaptive sustainability** management of programs, and national and corporate systems are strengthened to support the sustainability of national energy transitions. Sustainability here refers both to sustaining the benefits of initiatives and ensuring ecological, social, and economic sustainability.

4.2. Questions to Support Exploration of Transformational Intent and Impact

The contextual, complex, contested, and emergent nature of climate change impacts and responses means that the answers and ways of working are not entirely predictable. Advancing transformational change requires an open-ended, evaluative, and learning orientation. Inquiry is a powerful tool for exploring and characterizing the transformational potential, implementation, and impact of change in specific country program and project contexts. Industry Decarbonization Questions, set out in Section 6 in this toolkit, support users to: (1) think through the most important aspects within each dimension of transformational change, with reference to their specific contexts, perspectives, and time frames; and (2) identify clear signals that demonstrate transformational progress connected to the Industry Decarbonization Program and associated projects.

TCLP has intentionally used the term, **"signals,"** instead of "indicators," in order to highlight that these signs of change are highly context-specific and temporal. This is because universal measures or metrics are often inappropriate for assessing transformational change across different scales, sectors, institutions, etc. (Williams, Dickman, and Smurthwaite 2020).

5. EVALUATION AND LEARNING MOMENTS IN THE INDUSTRY DECARBONIZATION PROGRAM

This section outlines evaluative work and associated learning approaches that are relevant to each of the key moments in the Industry Decarbonization Program, investment plan, and project lifecycles. These key moments in the Industry Decarbonization Program are summarized in Figure 1 in Section 2 of this document. This evaluative work is important for ensuring and enhancing the transformational intent and impact of industry decarbonization programs, IPs, and projects, and, therefore, the work should be scoped and tailored to the unique needs and context of each country. The Industry Decarbonization Operational Guidelines for the development of the investment plan[11] include a section for providing a clear and tailored description of the evaluation and learning approaches and plan that are anticipated to be relevant during the design, implementation, and review of the Industry Decarbonization Program investment plans in each country.[12]

CIF is developing more detailed evaluation guidance and support, for a range of stakeholders, focused on each of these key moments in CIF program, investment plan, and project lifecycles. These guidance notes are referenced in each section below as appropriate.

5.1. Evaluation and Learning Approaches to Diagnostic Work: Industry Decarbonization Investment Plan Development[13]

Diagnostic evaluative work plays an important role in helping Industry Decarbonization Program partners and stakeholders to identify and consider opportunities to enhance the transformational intent of the country-led, MDB-supported industry decarbonization investment plan.[14] These approaches help ensure that the full suite of Industry Decarbonization Program objectives and investment criteria are advanced through the IP development. Diagnostic evaluation is an intentional, systematic process to assess contextual factors, underlying dynamics, and potential solutions that inform the design and refinement of interventions. The transformational potential of a country's Industry Decarbonization Program is contingent upon robust systems diagnostics at the outset of the IP development and during review processes. Country teams and their MDB partners are encouraged to use a collection of relevant diagnostic evaluation methods to support the development of specific sections in both Scoping Mission Aide Memoires and the industry decarbonization investment plans.[15]

5.2. Evaluation and Learning Approaches to Design Work: Industry Decarbonization Project Design

Evaluative approaches also play an important role in the design of investments (projects) under the industry decarbonization investment plan. **Design evaluative work** is particularly useful to assess the extent to which an investment (or portfolio of investments) aligns with the investment plan and supports CIF's intention to advance a **programmatic approach**. This evaluative work assesses program and project design to ensure and enhance transformational alignment and potential. CIF is

developing more detailed guidance (forthcoming in 2024) to inform and support the selection and use of design evaluation approaches and methods.

5.3. Evaluation and Learning Approaches to Implementation Work: Industry Decarbonization Program and Project Implementation

Implementation evaluation is useful to assess program and project performance during their execution to determine if they are achieving immediate objectives and progress towards transformational goals. By assessing the operational context and implementation process; identifying successes, challenges, and lessons learned; and integrating stakeholder perspectives, implementation evaluations inform adaptive management that responds to contextual changes and contribute to transformative outcomes. These formative evaluation approaches can directly inform near real-time learning and the design and implementation of other investments. CIF is developing more detailed guidance (forthcoming in 2024) to inform the use of implementation evaluative approaches and methods and show how they can assess progress towards program and project goals and transformational impacts relevant to the Industry Decarbonization Program investment criteria.

5.4. Evaluation and Learning Approaches to Impact Assessment: Industry Decarbonization Project and/or Country Program Close

Impact evaluative work, broadly understood, is useful to assess both intended and unintended outcomes and impacts of a project-level investment or group of investments, whether positive or negative and direct or indirect. Impact evaluative approaches and methods can also play an important role around the culmination of a country's Industry Decarbonization Program, informing summative evaluative discussions and future work. Impact evaluative work provides a more comprehensive, systemic understanding of broader systemic changes and the underlying factors contributing to observed impacts, offering valuable insights into what triggers transformational learning and change to inform future programming, strategic decision-making, and change. CIF is developing more detailed guidance to inform the use of impact evaluative approaches and methods and show how they can be used to assess progress towards project and program goals and transformational impacts relevant to the Industry Decarbonization Program investment criteria.

5.5. Evaluation and Learning Approaches to Synthesis and Systemic Work: Industry Decarbonization Program Reviews

Synthesis or systemic evaluative work can leverage past evaluations across multiple Industry Decarbonization Program countries. Synthesis evaluation is most relevant to the overall Industry Decarbonization Program to assess systemic transformation beyond discrete programs or projects and over time. Synthesis evaluation approaches help "connect the dots" and synthesize learning from multiple evaluations or studies to generate higher-level insights and learning on cross-cutting issues, thematic workstreams, and longer-term strategies to leverage and drive transformational change. Industry Decarbonization Program reviews and synthesis evaluation are most likely to be commissioned by the CIF Secretariat and/or its MDB partners, often as a collaborative effort. CIF will develop more detailed guidance to inform the use of synthesis evaluation approaches and methods and show how they can be used to assess progress towards program goals and transformational impacts relevant to the Industry Decarbonization Program and investment criteria.

6. INDUSTRY DECARBONIZATION QUESTIONS AND SIGNALS

This section provides key questions that help to focus attention on dimensions of transformational change in ways that are relevant to the Industry Decarbonization program. Engaging with these questions can help deepen the transformational intent and understanding of the transformational impact for the Industry Decarbonization Program, investment plans, and projects.[16] These questions are also useful to explore how attention to the Industry Decarbonization program investment criteria may be enhanced during design and implementation and assessed during project and program close stages.

The questions focus on what changes are required and how they may be realized. The **"what" questions** relate to outcome signals, which are aligned to global and country goals and provide direction for action, while the **"how" questions** are connected to the process signals needed for moving toward the identified goals. Industry Decarbonization program and project teams are encouraged to engage with and use these questions throughout the program, IP, and project lifecycles. Changing the tense in questions (e.g., how will/could, how are, how did) can make them relevant at different program and project stages. The Industry Decarbonization Questions and Signals section includes specific "what" and "how" questions for each dimension that are relevant to many Industry Decarbonization program investments.

Because the answers to the questions may be more, or less, transformational depending on the levels of understanding, existing structures, and vested interests it is useful to develop shared and explicit statements or expected 'signals of change'. These signals of transformational change are powerful tools that help to clarify anticipated and actual changes in a specific country and program context. Signals can be found in both outcomes and processes.

Signals of transformational change are referenced in the evaluative components of the Industry Decarbonization Integrated Results Framework and are separate from, but complementary to, the indicators outlined in the Industry Decarbonization Program Monitoring and Reporting Toolkit.[17]

- **Outcome signals** relate to specified objectives or outcomes and the progress toward transformational impacts. Outcome signals are evident at emerging or advanced stages.
- **Process signals** recognize the complex, non-linear, and emergent nature of many systems and the corresponding need for adaptive management.
- **Emerging signals** suggest that transformational change processes are likely underway and provide a line of sight to connecting lower-level (community and project levels) and higher-level (sector, national, and global levels) systems that may deliver transformational impact.
- **Advanced signals** are those of large-scale positive impacts that can be identified within larger systems, with line of sight to contributions from specific project interventions.

Signals of transformational change can (1) capture change at multiple levels from individual/community-level programs or policies to wider systems levels, such as by sector, country, region, or globally; and (2) evolve over time. Hence, they are not static measures but are able to adapt as the Industry Decarbonization program and projects progress.

The section below summarizes emerging and advanced outcome and process signals that are likely to be relevant in the context of Industry Decarbonization programs and projects.

Periodically engaging with and answering the questions and identifying relevant signals is encouraged to enhance the transformational intent and impact throughout the program, IP, and project lifecycles, and to support expected evaluation and learning activities. The annex to this toolkit includes a fillable template that can be used to further tailor signals of transformation to specific Industry Decarbonization country and project contexts.

RELEVANCE: Each Investment Plan and project proposed for CIF financing should demonstrate relevance to advancing the strategic objectives and investment criteria of CIF's Industry Decarbonization program through aligning the context, goals, and action. Specifically, the alignment of context (for example, renewable energy resource development potential in the country, environmental stress, technology/finance challenges, economic development, social justice, and climate policies and governance), goals (for example, Industry Decarbonization's strategic objectives, national development plans, NDCs, and other country commitments), and action (for example, specific programs and projects) need to be considered. Essentially, Industry Decarbonization investments should be aligned with a country's NDCs and other energy transition or national development priorities, including social inclusion. In addition, Industry Decarbonization investments should ideally be aligned with and complementary to initiatives and investments advanced by other relevant partners and stakeholders to ensure coherence in national energy transition efforts.

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What fundamental changes and large-scale positive impacts, relevant to industry decarbonization and just, inclusive energy transitions, need to be brought about?	**Outcome (O):** The Industry Decarbonization program's country investment plans, supporting policies, programs, and investments, are aligned with NDCs/Paris Commitments and meaningfully contribute to their achievement, as characterized by progress toward the 1.5C targets and socioeconomic goals (e.g., just transition, positive development impacts, gender equity, and social inclusion).	**Outcome (O):** The country policy/programs/investments and implementation are aligned with NDCs/Paris Commitments and meaningfully contribute to their achievement, as characterized by progress toward 1.5C targets and socioeconomic goals (e.g., just transition, positive development impacts, gender equity, and social inclusion).
How	**Context:** How is the intervention relevant to global, national, and local priorities?	**Process (P):** Transparent, country-led stakeholder engagement and consultation processes to develop country investment plans that are aligned with commitments to decarbonization and socially inclusive transitions.	
	Proposed Action: How is the intervention logic (theory of change) relevant to industry decarbonization?	**P:** Industry decarbonization efforts place a priority on enabling the development, advancement, and deployment of climate technologies across industrial operations and supply chains and the integration of climate considerations into institutional and sectoral decision-making.	
	Alignment: How is the intervention aligned with the social, economic, and environmental goals and impacts of industry decarbonization, such as equity and inclusion, just transitions, sustainable development, and ecological integrity, and how is integrating them?	**P:** Policy, regulation, and governance structures are in place and operational for addressing barriers to Industry Decarbonization, just transitions, improved energy efficiency, and accessing green financial markets.	
		P: Market mechanisms have been developed to incentivize investments in clean technologies and to improve monitoring, reporting, and verification. These efforts support economic and supply chain development while also ensuring social benefits for vulnerable communities.	

SYSTEMIC CHANGE: Each investment plan and project proposed for CIF Industry Decarbonization financing should demonstrate how it will lead to fundamental shifts in the structures and functions of energy systems to enhance Industry Decarbonization by identifying and defining strategic systems, removing entrenched barriers, opening new opportunities or pathways, and shifting power dynamics within and between key systems. This requires a process (for example, stakeholder consultations, social and economic planning, and technology reviews) to identify the most strategic system elements (for example, materials supply chains, production processes, legal and regulatory frameworks, commercial and financial markets, technology systems, governance systems, related social systems, and ecosystems) to address. Within those systems, the most significant barriers to accelerating decarbonization (for example, institutional, regulatory, and policy failures; market failures; financial barriers; and knowledge and technical capacity barriers) will need to be addressed, and opportunities for change (for example, through economic diversification, supportive policy and regulatory frameworks, and improved energy efficiency) will need to be identified.

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What systems need to be changed, and what change is required between and within these systems?	**O:** Key governance structures have a clear mandate and associated support to successfully plan for industry decarbonization in ways that are socially just and ecologically beneficial. **O:** Early shifts in key systems and structures (including institutions, knowledge, policy, financing, market systems, and technology) that address barriers and advance opportunities to successfully plan for industry decarbonization in socially just and ecologically beneficial ways, have occurred.	**O:** Key governance structures are leveraging institutional capabilities to implement major industry decarbonization efforts in ways that are socially just and ecologically beneficial, in line with country and global targets. **O:** Developed shifts in key systems and structures (including institutions, knowledge, policy, financing, market systems, and technology) for implementing major industry decarbonization efforts in socially just and ecologically beneficial ways, in line with country and global targets, have occurred.
How	**System Identification:** How have the system and its boundaries, related to industry decarbonization, been identified and defined (for example, through systems mapping, market studies, and stakeholder consultations)? **Barriers and Pathways:** How does the intervention remove entrenched barriers and open new pathways for systemic changes required to ensure industry decarbonization? **Power:** How does the intervention elevate the influence of beneficiaries and other stakeholders, including marginalized and vulnerable groups, to contribute to and benefit from industry decarbonization?	**P:** Efficient institutional dialogues, along with long-term coordination and planning processes between stakeholders, are identifying the underlying governance, financial, technological, infrastructure, and social barriers and opportunities concerning industry decarbonization that would be safe and just. **P:** Stakeholder engagement is taking into consideration systems transformation and supports inclusive processes for responsive planning, economic diversification, social justice, and environmental restoration. For example, national capacity development and training programs are developed in key ministries to support industry decarbonization.	

SPEED: Each investment plan and project proposed for the Industry Decarbonization Program financing should demonstrate how it will balance the speed of change required by the urgency of addressing climate change with the time required to ensure social inclusion, just transitions, and to address system complexities. Accelerating industry decarbonization requires identifying and overcoming barriers to change while simultaneously identifying and enhancing enabling conditions (for example, policy coherence, strategic planning, individual and institutional capacity, access to technology, and funding) in ways that are safe and just.

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What will it take to achieve industry decarbonization in a time frame that is aligned with the urgency and complexity of the climate crisis?	**O:** The required pace of industry decarbonization has been identified and aligned with the country context (e.g., % electrification of industrial processes and communities supported during the transition).	**O:** The acceleration of industry decarbonization is aligned with national and global plans and commitments (e.g., 60% of heavy industry emissions reductions by 2050 and livelihoods supported/jobs created)
How	**Acceleration:** How does the intervention accelerate progress towards industry decarbonization? **Complexity and Inclusivity:** How does the intervention use safeguards, impact assessments, and socially inclusive processes to ensure adequate and inclusive engagement with complex and contested issues associated with industry decarbonization?	**P:** Ongoing capacity enhancement is taking place to expedite decarbonization efforts, social development, technology innovation, and market incentives associated with decarbonization. **P:** Coordinated actions among stakeholders are accelerated through enhanced institutional structures that support both top-down and bottom-up leadership, focusing on just transitions and the implementation of appropriate infrastructure projects (both ecological and built). **P:** Socially inclusive and gender transformative processes ensure that industry decarbonization efforts have sufficient time to incorporate just transition and social inclusion considerations.	

SCALE: Each investment plan and project proposed for the Industry Decarbonization financing should demonstrate how it will deliver contextually large-scale impacts, such as explicit strategies for enabling the subsequent scale-up or replication of CIF-funded interventions and wider sustainability impacts. This may involve a combination of scaling pathways within and beyond the intervention, including: vertical (for example, policy/implementation, such as national budgets supporting clean technology commercialization projects); horizontal (for example, numbers or geographic spread, such as the number of industries simultaneously pursuing decarbonization); and depth (for example, understanding and support, such as an understanding of strategic points within the supply chain of a specific material).

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What contextually large changes need to be scaled within and beyond the intervention?	**O:** Barriers to scaling industry decarbonization programs have been identified, with governance, financial, technological, infrastructure, and social improvements that are in line with the country's commitments. **O:** Innovative technologies, appropriate market mechanisms, and new business models are researched and piloted.	**O:** Industry decarbonization and just transitions are accelerated to achieve country and international commitments to climate goals. **O:** Innovative technologies, appropriate market mechanisms, and new business models have been demonstrated to be transformative and are being scaled up and out.
How	**Depth scaling:** How does the intervention deepen the understanding of and support for industry decarbonization? **Vertical scaling:** How does the intervention support scaling pathways within and across policy and implementation processes needed for industry decarbonization? **Horizontal scaling:** How does the intervention increase the number of people and institutions or expand the geographic areas engaged with or benefitting from industry decarbonization?	**P:** Launch multi-stakeholder engagement processes that build the understanding of and commitment to industry decarbonization. **P:** Build policy and governance support through long-term planning, stakeholder engagement, policy coherence, and institutional-capacity development. **P:** Coordinated actions by governments, businesses, labor, and local communities to align their priorities and mobilize solutions and investments for industry decarbonization. **P:** Scaled up, flexible, and predictable public- and private-sector finance to drive technological innovation to support industry decarbonization.	

ADAPTIVE SUSTAINABILITY: Each investment plan and project proposed for the Industry Decarbonization Program financing should demonstrate how it will contribute to transformational impacts relevant to the Industry Decarbonization Program's investment criteria in ways that are sustainable over the long term. This includes considering how progress will be sustained after concessional finance and/or technical assistance support ends, as well as how investment outcomes and systemic changes are configured to adapt to evolving contexts. It must also consider how integrated ecological, social, and economic sustainability is enhanced through the program and project outcomes and impacts. This involves building the capacity of relevant stakeholders and institutions to, understand, formulate, implement, maintain, and monitor industry decarbonization efforts in ways that are ecologically safe, socially just, and economically viable. Interventions should enable experimentation with new technologies, policies, and business models, along with the flexibility to learn and course-adjust during and after implementation to achieve sustainable development. Programs should also support adaptive capacity of institutions and individuals to prevent backsliding, for example, through solidifying demand for clean technologies and business models, strengthening monitoring, reporting, and verification processes/requirements, and budgeting support. These processes should progressively build, refine, and sustain climate-neutral, inclusive, resilient, and sustainable development pathways.

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What relevant changes are sustained and advanced beyond the intervention to achieve sustainable development?	**O:** The governance and social systems, together with the financial, technological, and infrastructure systems needed for industry decarbonization are in place and self-sustaining. **O:** The intervention contributes to global evidence based on effective climate action, enabling internal and external learning.	**O:** The governance and social systems, together with the financial, technological, and infrastructure needed for industry decarbonization are in place at the levels appropriate to achieve national and international sustainable development commitments.
How	**Flexibility:** How does the intervention enable experimentation and flexibility, including the ability to learn and course-correct when necessary? **Capacity:** How does the intervention build the capacity of stakeholders and institutions to advance change along sustainable development pathways? **Resilience:** How does the intervention insulate change from backsliding due to internal and external pressures or shocks, and enable recovery when required?	**P:** Resilient, responsive, and influential institutions and policies are supported to sustain and accelerate clean technology commercialization and industry decarbonization. **P:** Ongoing monitoring, evaluation, and learning processes, based on multi-stakeholder and cross-sectoral engagement, are in place, to ensure the enhanced relevance of (and accountability for) targets/impacts, and to enable refining and course-correcting for industry decarbonization in ways that are socially and environmentally beneficial and sustainable. **P:** New technologies, market mechanisms, and coalitions are enabled through policies, new business models, and social support to sustain and accelerate investments in industry decarbonization.	

ANNEX: INDUSTRY DECARBONIZATION QUESTIONS AND SIGNALS TEMPLATE

RELEVANCE

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What fundamental changes and large-scale positive impacts, relevant to industry decarbonization and just, inclusive energy transitions, need to be brought about?	Outcome (O):	Outcome (O):
How	Context: How is the intervention relevant to global, national, and local priorities? Proposed Action: How is the intervention logic (theory of change) relevant to industry decarbonization? Alignment: How is the intervention aligned with the social, economic, and environmental goals and impacts of industry decarbonization, such as equity and inclusion, just transitions, sustainable development, and ecological integrity, and how is integrating them?	Process (P): P: P:	

SYSTEMIC CHANGE

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What systems need change, and what change is required between and within these systems?	O: O:	O: O:
How	System Identification: How have the system and its boundaries, related the industry decarbonization, been identified and defined (for example, through systems mapping, market studies, and stakeholder consultations)? Barriers and Pathways: How does the intervention remove entrenched barriers and open new pathways for systemic changes required to ensure industry decarbonization? Power: How does the intervention elevate the influence of beneficiaries and other stakeholders, including marginalized and vulnerable groups, to contribute to and benefit from industry decarbonization?	P: P:	

SPEED

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What will it take to achieve industry decarbonization in a time frame that is aligned with the urgency and complexity of the climate crisis?	O:	O:
How	Acceleration: How does the intervention accelerate progress towards industry decarbonization? Complexity and Inclusivity: How does the intervention use safeguards, impact assessments, and socially inclusive processes to ensure adequate and inclusive engagement with complex and contested issues associated with industry decarbonization?	P: P:	

SCALE

	QUESTION	EMERGING SIGNALS	ADVANCED SIGNALS
What	What contextually large changes need to be scaled within and beyond the intervention?	O:	O:
How	Depth scaling: How does the intervention deepen the understanding of and support for industry decarbonization?	P:	
	Vertical scaling: How does the intervention support scaling pathways within and across policy and implementation processes needed for industry decarbonization?	P:	
	Horizontal scaling: How does the intervention increase the number of people and institutions or expand the geographic areas engaged with or benefitting from industry decarbonization?	P:	

ADAPTIVE SUSTAINABILITY

	QUESTIONS	EMERGING SIGNALS	ADVANCED SIGNALS
What	What relevant changes are sustained and advanced beyond the intervention to achieve sustainable development?	O:	O:
How	Flexibility: How does the intervention enable experimentation and flexibility, including the ability to learn and course-correct when necessary?	P:	
	Capacity: How does the intervention build the capacity of stakeholders and institutions to advance change along sustainable development pathways?	P:	
	Resilience: How does the intervention insulate change from backsliding due to internal and external pressures or shocks, and enable recovery when required?	P:	

ENDNOTES

CLICK ON ANY NOTE TO GO BACK TO THE REFERENCED PAGE

→ 1 CIF. Industry Decarbonization Integration Program Design Document. (Washington D.C.: 2024a)

→ 2 CIF. CIF Results & Impact, n.d.

→ 3 Op Cit. CIF (2024a)

→ 4 CIF. *Monitoring, Evaluation, and Learning (MEL) Policy and Guidance.* (Washington D.C.: 2022). CIF Monitoring, Evaluation, and Learning (MEL) Policy and Guidance | Climate Investment Funds.

→ 5 CIF. Industry Decarbonization Integration Integrated Results Framework. (Washington D.C.: 2024b)

→ 6 CIF. Industry Decarbonization Program Monitoring and Reporting Toolkit: Operational Guidance on the Industry Decarbonization M&R System. (Washington D.C.: 2024c).

→ 7 CIF. *Monitoring, Evaluation, and Learning (MEL) Policy and Guidance.* (Washington D.C.: 2022). CIF Monitoring, Evaluation, and Learning (MEL) Policy and Guidance | Climate Investment Funds.

→ 8 CIF Transformational Change Learning Partnership. Transformational Change Concepts Learning Brief (September 2021), p. 6.

→ 9 CIF. Industry Decarbonization Integration Program Design Document. (Washington D.C.: 2024a)

→ 10 CIF. CIF Gender Action Plan – Phase 3 (June 2020).

→ 11 CIF. Operational Guidelines for CIF Industry Decarbonization Program Investment Plan Development Process (2024d).

→ 12 See in Section VIII (Monitoring and Evaluation) of the Industry Decarbonization Program Investment Plan outline.

→ 13 The term "Diagnostic Evaluation" will be used from now on to talk about "Evaluation and Learning Approaches to Diagnostic Work" for simplification purposes. It is important to highlight again, however, that the term "evaluation" refers to a broad range of evaluative approaches that will require varying degrees of effort and time. Commissioning of evaluations may not be required to answer evaluative questions at each of these phases. The same point applies to "Design Evaluation" instead of "Evaluation and Learning Approaches to Design Work"; and to "Implementation Evaluation", "Impact Evaluation", and "Synthesis Evaluation".

→ 14 See Operational Guidelines for CIF Industry Decarbonization Program Investment Plan Development Process for information on the process and expectations relevant to developing Industry Decarbonization Investment Plans.

→ 15 See the forthcoming publication by the CIF's Evaluation and Learning Initiative entitled "Diagnostic Evaluation Toolkit for CIF Program and Project Partners" that is intended to support a range of stakeholders involved in the development of Investment Plans and associated projects.

→ 16 Changing the tense in questions (e.g., how will/could, how are, how did) can make them relevant to different program and project stages (e.g., design, implementation, close).

→ 17 CIF. Industry Decarbonization Program Monitoring and Reporting Toolkit: Operational Guidance on the Industry Decarbonization M&R System. (Washington D.C.: 2024c).

THE CLIMATE INVESTMENT FUNDS

The Climate Investment Funds (CIF) were established in 2008 to mobilize resources and trigger investments for low carbon, climate resilient development in select middle and low income countries. Fourteen contributor countries have pledged over US$11 billion to the funds. To date CIF committed capital has generated an additional US$62 billion in co-financing for mitigation and adaptation interventions at an unprecedented scale in 72 recipient countries. CIF's large-scale, low-cost, long-term financing lowers the risk and cost of climate financing. It tests new business models, builds track records in unproven markets, and boosts investor confidence to unlock additional sources of finance. The CIF is one of the largest active climate finance mechanisms in the world.

CIF CLIMATE INVESTMENT FUNDS

The Climate Investment Funds
c/o The World Bank Group
1818 H Street NW, Washington, D.C. 20433 USA

Telephone: +1 (202) 458-1801
Internet: www.cif.org

@CIF_action
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