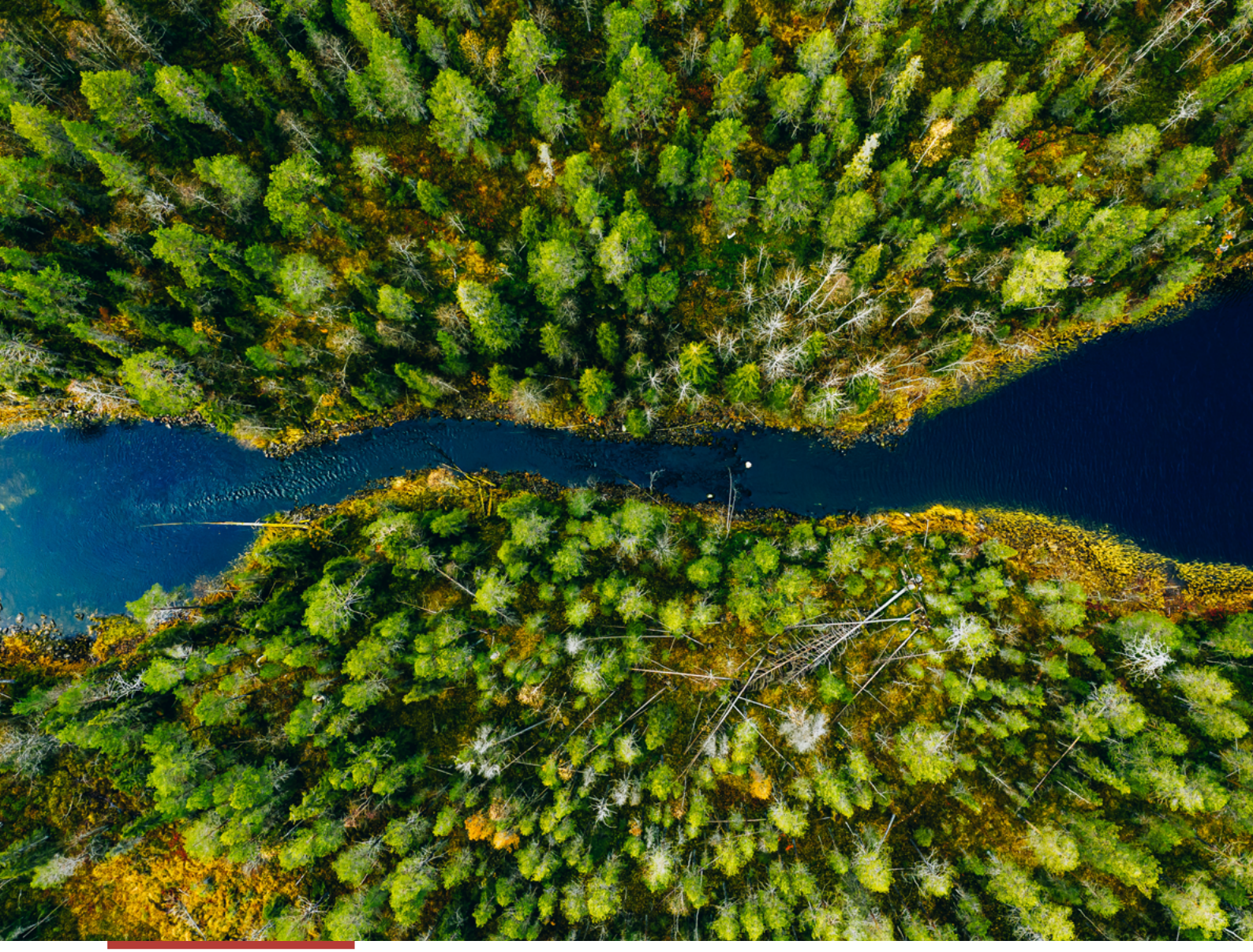

Tracking the Quality of Climate Finance

From Theory to Practice

November 2025

CLIMATE POLICY INITIATIVE

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Responsibility for the information and views set out in this publication lies entirely with the authors.

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ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to support governments, businesses, and financial institutions in driving economic growth while addressing climate change. CPI has offices in Brazil, India, Indonesia, South Africa, the United Kingdom, and the United States.

CONTENTS

GLOSSARY OF TERMS

Term	Meaning
Climate finance	Finance flows that aim to either (i) reduce, avoid or sequester greenhouse gas emissions (mitigation); and/or (ii) reduce vulnerability of, and maintain or increase the resilience of, human and ecological systems to the adverse impacts of climate change (adaptation) (CPI, 2023).
Market-level intervention	Stimulating demand and supply for climate solutions, thereby developing a market ecosystem with a view to scaling. This entails incubating, accelerating and aggregating climate solutions.
Market creation & development	Process of identifying and developing a new market where none previously existed.
Market replicability	Ability of a market or business to be adapted and implemented in different contexts or geographies, while accommodating diverse local conditions, institutional settings, and market dynamics.
Market scalability	Ability of market-building effects to extend beyond the initial investment and to grow or influence larger or multiple markets, often across sectors or regions.
Market inclusiveness	The extent to which diverse actors can access, participate in, and benefit from markets for low-emission, climate-resilient solutions.
System-level intervention	Changing political, social, and economic systems (including guiding paradigms and values; behaviors and attitudes; policies and regulations; and institutional arrangements), thereby inducing a structural shift toward low-emission, climate-resilient and equitable economies.
System-level singular catalytic impact	Pathway in which a single, strategic intervention removes a critical bottleneck or unlocks an enabling condition, thereby contributing to a shift in the wider system.
System-level centralized catalytic impact	Pathway in which a coordinated portfolio or program of interventions is intentionally designed to collectively target multiple parts of a system and drive a specific system-level change.
System-level decentralized catalytic impact	Pathway in which dispersed and independent interventions, often uncoordinated but aligned in intent, cumulatively unlock system-level change over time.
Transformational climate finance	Climate finance that works to deliver positive and sustained change at the market- and/or broader system level within which climate projects or programs are implemented, thereby enabling the achievement of climate goals and broader Sustainable Development Goals.

EXECUTIVE SUMMARY

There is a growing interest in further understanding the quality of climate finance. This requires tracking and assessing quality using common indicators. While methodologies for tracking and assessing climate finance quantity are now relatively well-established (see CPI, 2025a), common approaches—across multiple different types of public climate finance providers[1]—for assessing and tracking its quality are still nascent.

At a time when public budgets are increasingly strained, exposing public climate finance to shifting priorities, the need to build an evidence base on the quality of climate finance is particularly acute. International climate finance discussions have emphasized the need to enhance the quality of climate finance flows, as well as related reporting and transparency (UNFCCC, 2024a). Indeed, an evidence base on the quality of climate finance—in terms of what is working (or not) and for whom—can inform better, more strategic decision-making when allocating scarce public climate finance. However, practical and common approaches for gathering that evidence base remain elusive across public climate finance providers. The current lack of harmonization and, therefore, scope for comparisons inhibits more and better coordination between actors, as well as more targeted use of scarce public climate finance, informed by evidence on the quality of past interventions.

Building on CPI's (2025b) framework for understanding the quality of climate finance, this follow-up paper spotlights and analyzes practical indicators for tracking climate finance quality. CPI's recently published three-level conceptual framework defines climate finance quality at the project, market, and system levels. It ultimately aims to provide users with a means of tracking the extent to which finance delivers sustained transformational change beyond one-off projects—at the market and system levels—toward low-emission, climate-resilient, and equitable economies. Building on this theoretical exploration, the present study seeks to spotlight practitioner-focused indicators for tracking quality at each of the three levels, with a view to laying the groundwork for implementation (data collection, analysis and deriving learnings). To that end, it presents key indicators at the project, market, and system levels, respectively, that could be tracked as part of efforts to build the evidence base on climate finance quality.[2] The study examines the merits and shortcomings of these indicators, with case studies illustrating how public climate finance providers use different results indicators, and concludes with key reflections derived from this exercise.

This paper aims to establish a quantitative basis for assessing the quality of climate finance. Spotlighting practical quality indicators helps progress the conversation toward a set of key and possibly common metrics that multiple public climate finance providers could use. These indicators were drawn from the extensive existing catalogue of results measurement and monitoring approaches used by practitioners at different public climate finance institutions (as well as coalition groups therein), distilling, in particular, those which offer scope for common

1 Including multilateral/bilateral development finance institutions; the vertical climate and environmental funds; and donor governments and their agencies. Note that while certain coalition groups have made progress amongst themselves on joint climate finance results measurement and monitoring, a common approach to understanding and assessing quality across the variety of public providers in the global landscape is still lacking.
2 Key indicators are derived from an extensive review of existing approaches to results measurement and monitoring by a range of public climate (and more general development) finance providers, including: the vertical climate and environmental funds; multilateral/bilateral development finance institutions; donor governments and their agencies; as well as coalition groups therein (e.g. the Joint MDBs; the MDB Taskforce on Mobilization, etc.). A supplementary Excel download contains the full range of indicators reviewed, mapped according to CPI's three-level framework (project-, market-, and system-level).

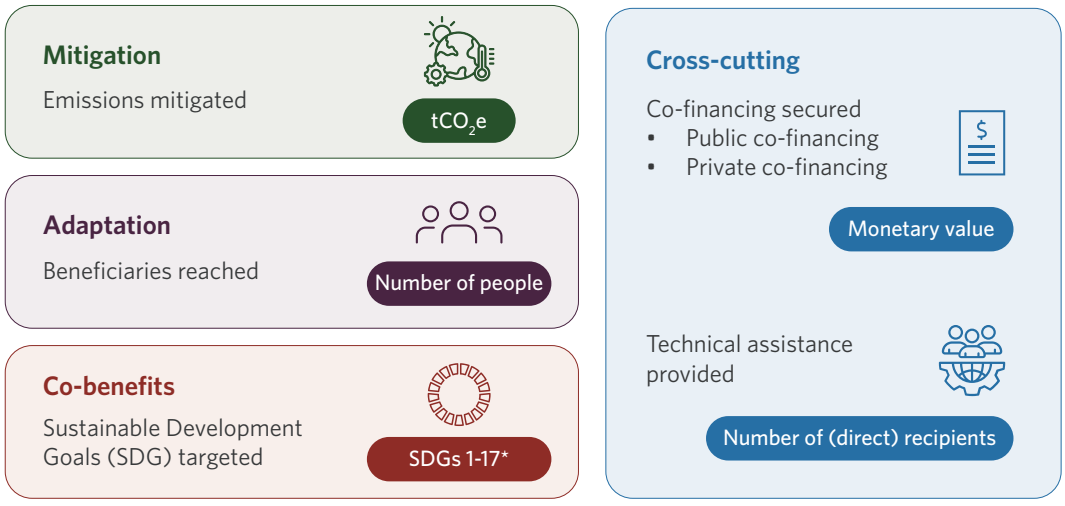
application. This approach aims to reduce the subjectivity associated with judgements on quality, providing a basis for comparing and aggregating across institutions, where possible. At a higher-level, the work contributes to and supports efforts to reduce fragmentation across public climate finance providers, thereby improving the quality of, and coordination underlying, public climate interventions (Ministry of Finance of Brazil, 2025). Overall, this work aims to be a springboard for the following steps:

1. Establishing a common indicator base to track climate finance quality across actors at each of the three levels presented in the theoretical framework.
2. Collecting data and building the evidence base on what is working, for whom, and what may be scaled or replicated accordingly.
3. Using the evidence base generated from tracking quality to inform broader, global discussions on the types of financing needed from different actors and where scarce public climate finance may be strategically and optimally deployed.

PROJECT-LEVEL TRACKING

At the project level, key indicators for assessing quality can be structured in terms of tracking mitigation results, adaptation results, co-benefits and cross-cutting considerations (see Table ES1). Across the three levels of CPI's framework, assessing quality at the project level is most operational and practical, and indeed is foundational to understanding quality at the broader two levels of action (market and system).

Table ES1: Key project-level indicators for harmonized tracking of climate finance quality

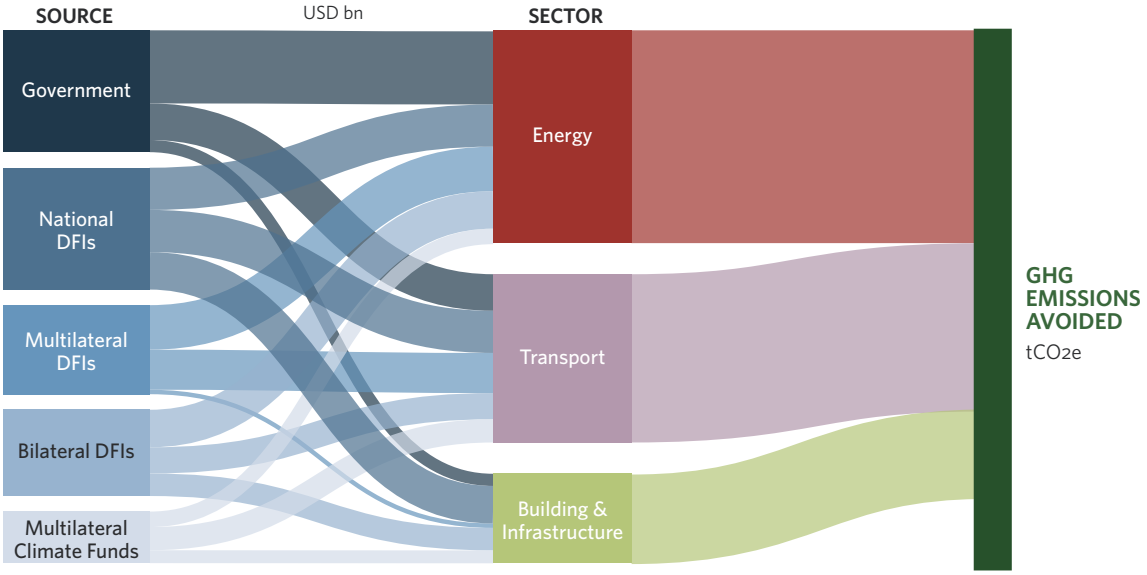


*Excluding SDG 13 Climate action

Within mitigation finance, the core indicator widely adopted across sectors and actors is the *quantity of greenhouse gas (GHG) emissions reduced or avoided*, expressed in metric tonnes of carbon dioxide equivalent (tCO_2e). While this indicator allows for aggregations in theory (see Figure ES1), scope differences among emissions accounting methodologies (for example, whether to count Scope 1, 2 and 3 emissions) can inhibit comparisons across actors in practice. Indeed, GHG emissions accounting is a complex quantitative exercise which requires clarity on the range of GHGs captured, over which time horizon, and the kinds of estimation

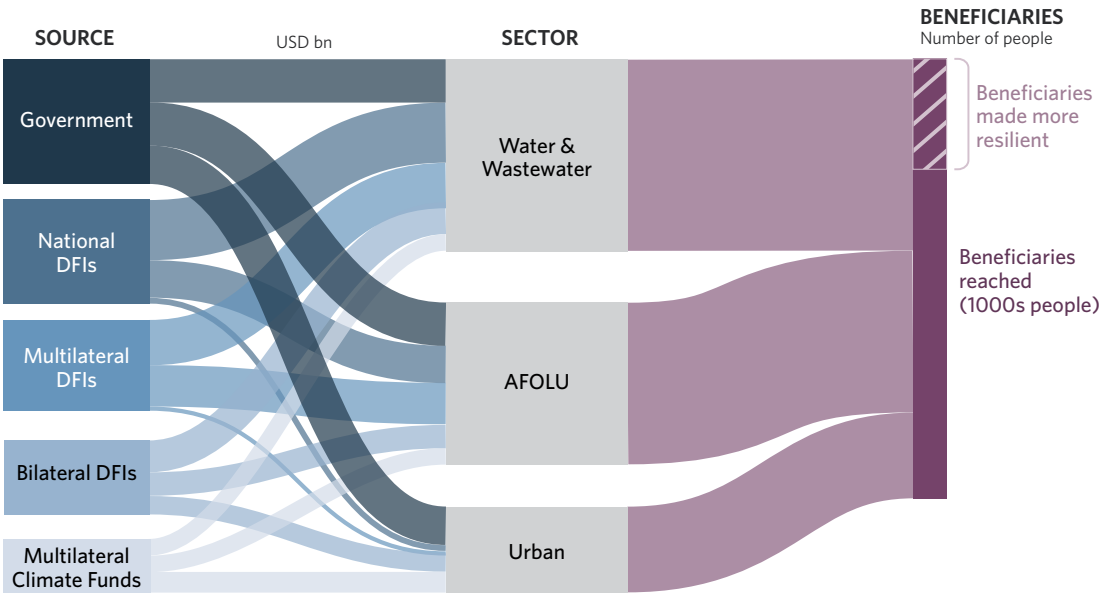
techniques used. Nonetheless, dedicated initiatives have spurred progress in harmonizing GHG measurement approaches across public international financial institutions (IFIs, 2021).

Figure ES1: Indicative visualization of core mitigation results tracking



Within adaptation finance, the most commonly used core indicator across public climate finance providers is the *number of beneficiaries reached by an adaptation intervention*. Here, actors currently report on either this output indicator or a more robust outcome variant: *the number of beneficiaries made more resilient to climate hazards*. The latter is more complex to measure, as it requires before-and-after comparisons to assess changing resilience outcomes over time. The indicator is potentially aggregable (see Figure ES2), however, this is subject to harmonizing several measurement considerations. Moreover, this approach offers only a people-centered lens through which to evaluate the quality of an adaptation intervention (as opposed to a nature-ecosystem lens or more quantitative economic valuations that facilitate cost-benefit analyses).

Figure ES2: Indicative visualization of core adaptation results tracking

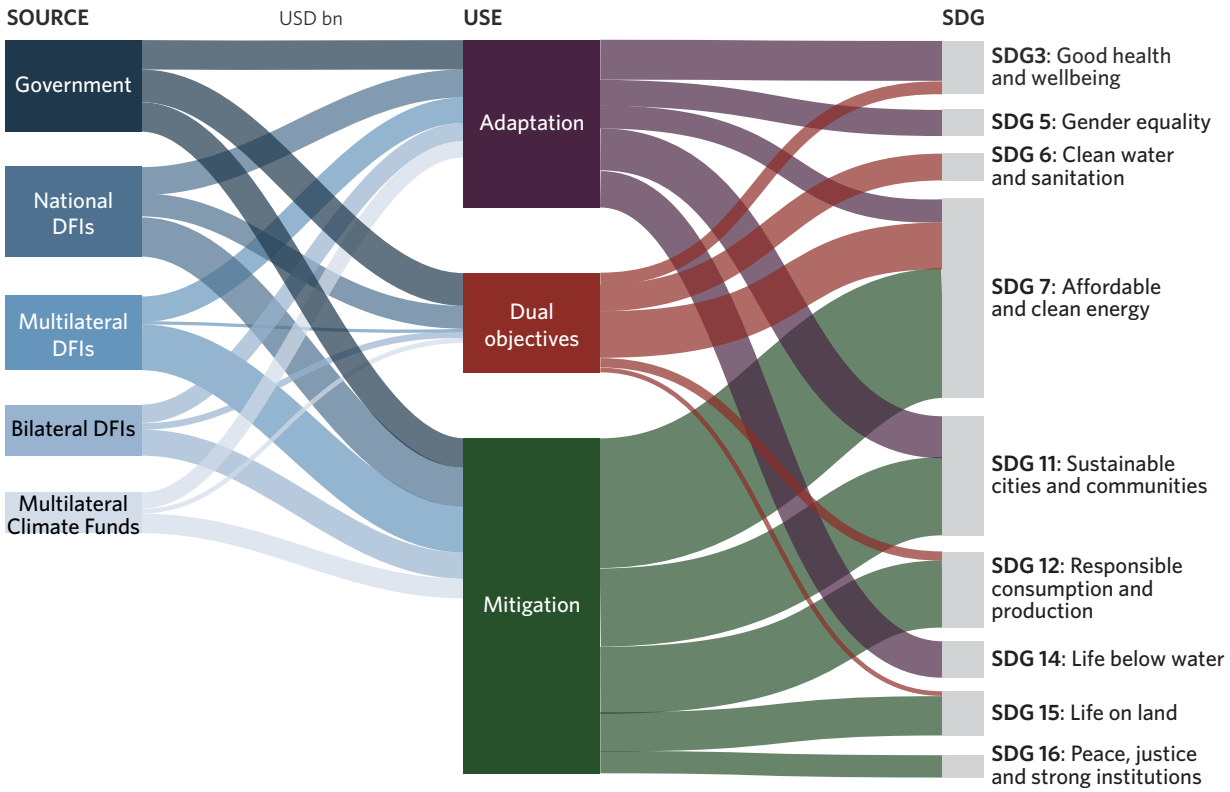


In addition to the above "core" indicators, the paper discusses how a spectrum of complementary sector-specific indicators—at both the output and outcome levels—may be harnessed to assess quality at the project level, for both mitigation and adaptation respectively.

For assessing co-benefits, the analysis focuses on how project quality can be evaluated in terms of whether and how climate finance contributes to broader sustainable development goals (SDGs). Two tracking options are detailed—differing in depth and complexity of analysis—which both use an SDG tagging approach to assess the SDG "multiplier effect" that climate finance may yield (see Figure ES3).

Finally, at the project level, **two key cross-cutting indicators** can be derived which speak to the need for more and better coordination and collaboration across actors (public and private), as well as the importance of building technical skills and capacity in anticipation of future climate action (in the specific region/country or sector in which a project is implemented): (i) co-financing secured; and (ii) technical assistance provided.

Figure ES3: Indicative visualization of SDG co-benefits tracking

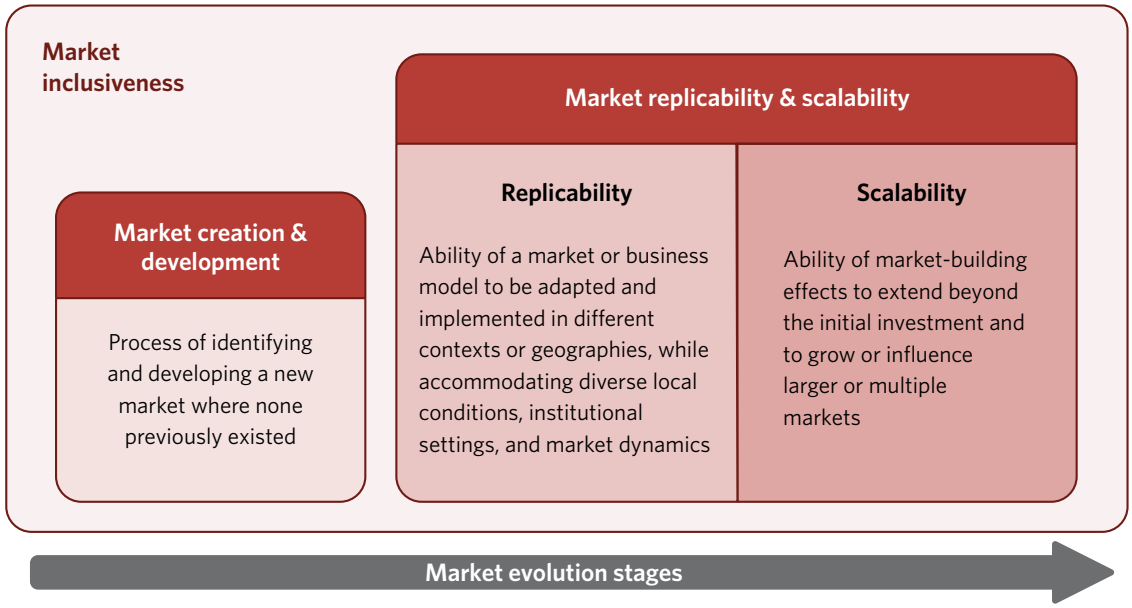


MARKET-LEVEL TRACKING

Tracking the contributions of public climate finance providers to market-level change is a more nascent and complex topic. Such changes are driven by interactions between demand, supply, and enabling conditions, and typically materialize over the medium to long term (CPI, 2025b). Transformational climate finance, therefore, extends beyond immediate beneficiaries or outputs to influence business practices and whole market ecosystems. To facilitate tracking at this level, CPI distinguishes between two key stages inherent to market-level change: market

creation and development, and market replicability and scalability. It also covers one cross-cutting dimension—market inclusiveness—which concerns whether benefits are distributed equitably across diverse actors (see Figure ES4).

Figure ES4: Dimensions of market-level change



Key indicators for assessing contributions to market-level change can be drawn from existing general development finance results monitoring. The current quantitative indicator base used by public climate finance providers to measure their contributions to market-level change is relatively underdeveloped. Market-level changes take time to materialize, data collection can be challenging, and attributing change directly to specific actors or interventions is complex (CPI, 2025b). Following the dimensions of market-level change illustrated in Figure ES4, CPI highlights example indicators that could be leveraged in assessments of climate finance quality at the market level:

- **For market creation and development,** proposed indicators seek to illustrate how climate finance addresses market imperfections, incubates and pilots nascent climate solutions, and fosters technology transfer.
- **For market replicability and scalability,** the proposed indicators aim to demonstrate how climate finance creates a demonstration effect, accelerates early-stage solutions, and catalyzes private investment.
- **For market inclusiveness**, the proposed indicators aim to demonstrate how climate finance promotes financial access and inclusion, and creates jobs.

While a range of indicators are discussed across different dimensions of market-level change, two key indicators emerge as having the most potential for harmonization across multiple public climate finance providers, as a first step (see Table ES2). These indicators—or variants thereof—have been tracked by certain public (development) finance providers to date, though not necessarily on the basis of consistent or comparable definitions or underlying methodologies.

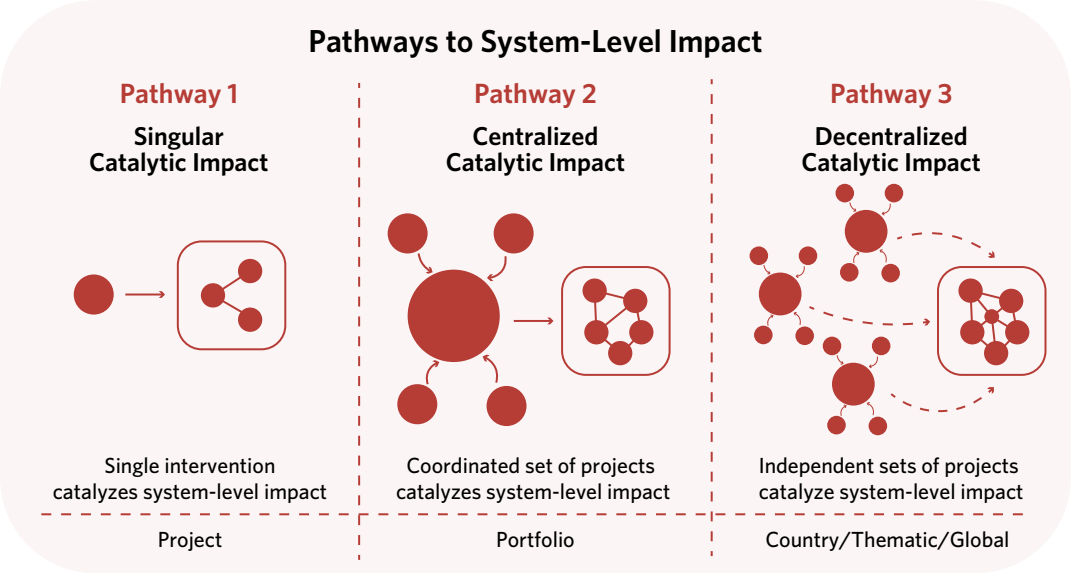
Table ES2: Key market-level indicators for harmonized tracking of climate finance quality

Market inclusiveness	
Number of jobs directly supported	Number of jobs
Market replicability and scalability	
Volume of private finance catalyzed	Monetary value
Percentage of projects which are catalytic	Percentage

SYSTEM-LEVEL TRACKING

Tracking contributions to system-level change, beyond individual projects or markets, is the third and broadest level for assessing the quality of climate finance. Here, CPI delineates three pathways by which public climate finance providers can contribute to system-level change and highlights the variety of indicators that can be used to operationalize tracking for each pathway (see Figure ES5). Following extensive desk-based review of existing practitioner measurement approaches as well as systems-change literature, these pathways arguably capture the different levers by which actors can contribute[3] to system change, in turn requiring differentiated tracking approaches.

Figure ES5: Visualizing pathways to system-level change



3 This section intentionally focuses on contribution rather than attribution, given the difficulty of making causal claims in the context of system-level change.

Pathway 1 depicts a singular catalytic impact, wherein an individual intervention can catalyze broader system-level change by altering guiding paradigms and values, behaviors and attitudes, policies and regulations, and institutional arrangements. Tracking of Pathway 1 involves using narrative evidence (contribution logic) through a theory of change to examine how individual projects are expected to trigger system-level change.

Pathway 2 depicts a centralized catalytic impact, wherein a coordinated set of projects, at the level of a whole portfolio, can be designed to collectively target multiple parts of a system, driving structural change. Accordingly, tracking Pathway 2 involves using portfolio-level indicators that assess how an institution, a program, or a coalition achieves cumulative results across dimensions of system-level change, such as the percentage of a portfolio aligned with 1.5°C pathways.

Pathway 3 depicts decentralized catalytic impact, wherein dispersed interventions, often uncoordinated but aligned in intent, cumulatively converge on system-level change over time. Tracking Pathway 3 involves documenting ecosystem-level trends and tipping points, "backtracking" from aggregate indicators to understand the overall state of the system in relation to targets or goals; for example, this includes country-level indicators such as the number of countries with Nationally Determined Contributions (and accompanying sectoral plans to implement those); while at the thematic level, for example, this includes the percentage of renewable energy in the global energy mix.

Noting that, from the variety of indicators that can be tracked to understand system-level change, especially for Pathway 3, two key indicators emerge as a first step for operationalizing tracking at this level, which arguably have the most potential for harmonization across multiple public climate finance providers (see Table ES3).

Table ES3: Key system-level indicators for harmonized tracking of climate finance quality[4]

Pathway 1	Pathway 2
Theory of change tracking	Percentage of portfolio contributing to system-level change
Narrative evidence	Percentage

TOWARD COMMON INDICATORS OF QUALITY

From the multitude of indicators highlighted in this paper, nine stand out that may serve as an initial focal point for efforts to establish a common approach to assessing the quality of climate finance—at all three conceptual levels and across multiple public actors. These key indicators, shown in Tables ES 1, 2 and 3 respectively, stand out as broadly operational, insightful, and, in some cases, aggregable, for public climate finance providers to start reporting on. Together, they offer a starting point for operationalizing the tracking of climate finance quality across the three levels identified in CPI's initial Scoping Study (CPI, 2025b).

4 Note that the summary table does not highlight an indicator for harmonized Pathway 3 tracking, given the myriad of different indicators that can be tracked to assess progress at the country, thematic and global levels respectively (see Section 4.3; Table 9).

If a consensus can be reached on which indicators are feasible and worthwhile to track quality across public actors, there is a need for harmonized measurement approaches across institutions to enable comparisons and, possibly, aggregation. For all the indicators highlighted in this paper, various decisions must be made regarding the underlying methodology (for example, whether indirect or only direct beneficiaries/jobs are counted, or whether measurement is done ex ante, based on estimates, rather than ex post, based on realized results). To enable fair comparisons across institutions—or, where the indicator allows, aggregation across institutions—there is a need for consistency in measurement approaches. Therein, standardization necessitates setting potentially subjective thresholds (for example, the time horizon over which to measure the number of jobs created).

There is a need to establish a working group of diverse public climate finance providers (and recipients) who are willing and able to foster consensus on indicators with a view toward public reporting. The Climate Finance Advisory Service (CFAS) has called for such a group to decide upon: (i) which indicators should form the basis of climate finance quality tracking; and (ii) how those indicators will be measured in practice (CFAS, 2024). This could emulate processes that have already led to the standardization of key indicators, for example, the *IFI Framework for a Harmonized Approach to GHG Accounting*, the *MDB Task Force on Mobilization* (which has facilitated joint reporting on private finance mobilized across multiple development finance institutions) and the *Joint MDB Common Approach to Measuring Climate Results.*

Converging upon harmonized indicators to assess the quality of public climate finance is essential to understand collective progress and strengthen opportunities for coordinated action. This paper situates itself within broader calls for more harmonized approaches to measuring and monitoring climate results across different public climate finance providers (CPI, AfDB & FiCS, 2025; G20 SFWG, 2025). Indeed, in a variety of high-level forums—including the G20 Sustainable Finance Working Group and the Coalition of Finance Ministers for Climate Action—there has been growing calls for complementary and coordinated approaches to climate results measurement and reporting, in order to enable comparisons across actors and build out a picture of collective progress, or in fact where collective action is falling short or misaligned. More specifically, in the context of UNFCCC processes, harmonized quantitative indicators are essential for monitoring and managing global progress with regard to the New Collective Quantified Goal (NCQG) on Climate Finance, the global goal on adaptation (GGA), and the Global Stocktake (GST).

A key reflection derived from this exercise is the need to complement a set of quantitative indicators with qualitative evidence. While the central proposition is to assess the quality of climate finance using a set of quantitative indicators, these indicators cannot tell the whole story of what is working (and for whom), what is not, and what may be scaled or replicated. Indeed, while quantitative indicators have the benefit of (partially) mitigating the subjectivity associated with judgements on quality, they often fall short of capturing the *how* and the *why* behind observed changes. Across all levels of action (project, market, and system) and all types of indicators (outputs or outcomes), quantitative indicators require context to facilitate meaningful and insightful interpretation. Supplementing these with sector- and geography-specific qualitative information will help public capital allocators to (i) interpret the nature and magnitude of change their interventions are contributing to; and (ii) inform future project or program design and appraisal, based on the learnings from the combined evidence base.

1. INTRODUCTION

The impetus to track and assess climate finance quality continues to build. While approaches to tracking and assessing climate finance quantity are now relatively well-established (see CPI, 2025a), common approaches for assessing and tracking its quality are still nascent. International climate finance discussions have consistently referenced the need to improve the quality of climate finance flows and, accordingly, transparency and reporting on quality (UNFCCC, 2024a). However, practical approaches for doing so—based on a common understanding across different public climate finance providers—remain elusive. At a time when public budgets are increasingly strained, exposing public climate finance therein to shifting priorities, the need to build this evidence base on the quality of climate finance is particularly acute and timely.

Building on CPI's (2025b) framework for understanding the quality of climate finance, this follow-up paper spotlights and analyzes practical indicators for tracking climate finance quality. CPI recently published a three-level conceptual framework for understanding climate finance quality at the project, market, and system levels, respectively. Building on this theoretical exploration, the present study seeks to spotlight practitioner-focused[5] indicators for tracking quality at each of the three levels, with a view to laying the groundwork for implementation (data collection, analysis and deriving learnings). To that end, it presents key indicators at the project, market, and system levels, respectively, that could be tracked as part of efforts to build the evidence base on climate finance quality.[6] The study examines the merits and shortcomings of these indicators, with case studies illustrating how public climate finance providers are using different results indicators, and concludes with key reflections on tracking climate finance quality derived from this exercise.

This paper covers a mix of established practitioner indicators for monitoring core climate (and sector-specific) results, as well as more frontier[7] approaches to tracking market- and system-level change (see Box 1). Given that results (outputs/outcomes) are typically tracked for individual project-level interventions, a relatively comprehensive indicator base exists at the project level. As such, our project-level analysis covers core climate results indicators, and example[8] sector-specific results indicators—for mitigation and adaptation, respectively—and details an approach for tagging and tracking project-level co-benefits as well as cross-cutting considerations. On the other hand, results measurement at the market and system levels is relatively nascent (in the climate finance context). Therefore, we spotlight example indicators for initiating climate finance results tracking at these two conceptual levels. This approach recognizes that existing quantitative options are more limited and complex—given issues concerning attribution and dynamic tracking over time—compared to the more exhaustive project-level indicator base. Overall, while this study offers a menu of relevant and practical

5 The focus on practitioner-oriented indicators—those that are already or could be used by public climate finance providers—aims to build on existing work, with a view to implementing practical tracking without imposing excessive or unrealistic reporting burdens.

6 Key indicators are derived from an extensive review of approaches to results measurement and monitoring by a range of public climate finance providers, including: the vertical climate and environmental funds; multilateral/bilateral development finance institutions; donor governments and their agencies; as well as coalition groups therein (e.g. the Joint MDBs; the MDB Taskforce on Mobilization, etc.). A supplementary Excel download contains the full range of indicators reviewed, mapped according to CPI's three-level framework (project-, market-, and system-level).

7 Either: frontier approaches, writ large; or frontier specifically in the climate finance context but with a more established track record within traditional development finance.

8 The wide range of possible sector-specific results indicators means that the sub-section only provides examples of key indicators rather than a full coverage from which to choose. The nature of the particular climate intervention will determine the selection of the sector-specific results indicators that should be tracked.

indicators for tracking climate finance quality at all three levels, universal application is challenging and may even be unrealistic, given the need to balance demands for more insightful results data with the practical constraints of limited project budgets.

Spotlighting practical indicators helps progress the conversation toward a set of key and possibly common indicators that could be tracked across multiple public climate finance providers to assess the quality of their climate finance. While recognizing that quantitative indicators may well fall short of capturing the *how* and the *why* behind observed changes, this paper seeks to establish a quantitative basis for tracking climate finance quality. These indicators were drawn from the extensive existing catalogue of results measurement and monitoring approaches used by practitioners at different public climate finance institutions (as well as coalition groups therein), distilling, in particular, those which offer scope for common application. This approach aims to reduce the subjectivity associated with judgments on quality, offering a basis from which to start aggregating and comparing across institutions, where possible. At a higher-level, the work contributes to, and supports efforts to reduce, fragmentation across public climate finance providers, thereby improving the quality of, and coordination underlying, public climate interventions (Ministry of Finance of Brazil, 2025). Overall, this work aims to be a springboard for the following steps:

1. Establishing a common indicator base to track climate finance quality across actors at each of the three levels presented in the theoretical framework.
2. Collecting data and building the evidence base on what is working, for whom, and what may be scaled or replicated accordingly.
3. Using the evidence base generated from tracking results indicators to inform broader, global discussions on the types of financing needed from different actors and where scarce public climate finance may be strategically and optimally deployed.

Relatedly, these indicators can help to monitor and better manage progress with regard to key global processes, including, for example, the New Collective Quantified Goal (NCQG), the global goal on adaptation (GGA), and the Global Stocktake (GST), all anchored within the UNFCCC.

The intended audience for this paper spans three stakeholder groups, all in the context of public climate finance (see Box 1):

1. **Monitoring, evaluation and learning (MEL) professionals** working on assessing and learning from climate finance results generated by their public institutions' interventions.
2. **Capital allocators** within these public institutions who need an evidence base on portfolio-level results in order to guide future allocation of scarce climate finance, across geographies and sectors.
3. **Actors working toward more and better coordination** for transformational outcomes (specifically with regard to results measurement harmonization) in the global public climate finance landscape, maximizing synergies and avoiding duplicate action.

The report is structured as follows:

- **Section 2** maps and spotlights project-level indicators, for tracking mitigation and adaptation results as well as co-benefits from climate projects and cross-cutting considerations.
- **Section 3** maps and spotlights market-level indicators, for tracking contributions to market creation and development, market replicability and scalability, and market inclusiveness.
- **Section 4** maps and spotlights system-level indicators for tracking contributions to system change at the project, portfolio, and ecosystem levels.
- **Section 5** concludes and offers some reflections for tracking climate finance quality, moving from theory to practice.

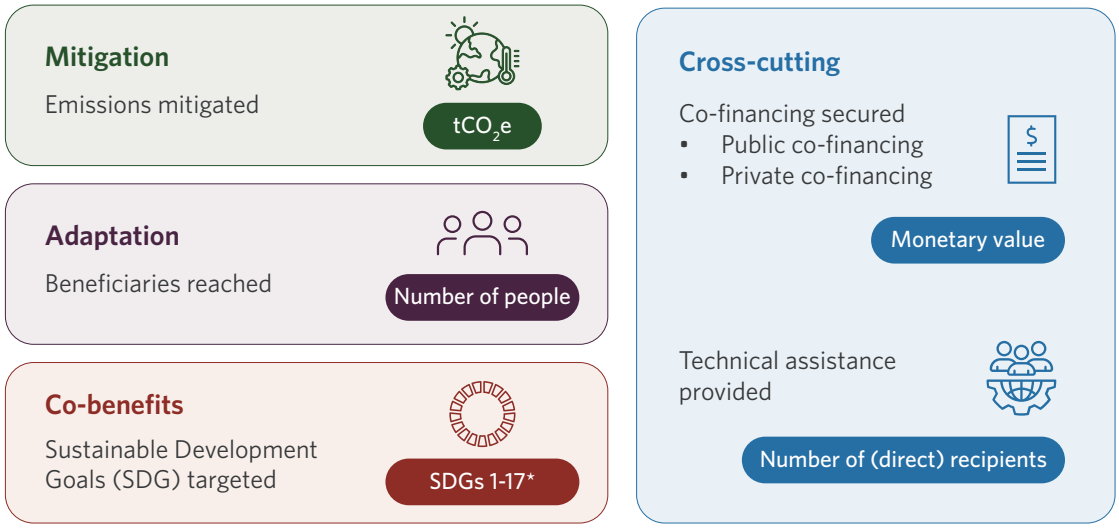
Box 1: Scope and approach

CPI's work on Understanding and Tracking Climate Finance Quality has, to date, focused on public climate finance providers, given their generally comparable mandates and priorities. As such, the research process underlying this study included reviewing results measurement approaches used by: donor governments and their agencies; multilateral/bilateral development finance institutions (DFIs); and the vertical climate and environmental funds (so-called VCEFs); as well as certain coalition groups therein already working collaboratively on results measurement and monitoring. While the initial focus was on these public institutions' results measurement for climate finance, for the nascent topics of market- and system-level results measurement, indicators were also drawn from their broader development finance work. Desk-based review covered institution-specific results measurement documents and impact reports, joint publications by coalition groups, and academic or grey literature concerning market and systems change.

Overall, the existing indicator base for project-level sector-specific results tracking is very comprehensive. The indicators highlighted in the respective subsections on mitigation and adaptation finance are useful examples that provide a basis for discussion of measurement approaches, their merits and shortcomings. A separate Excel download accompanying this study provides a more complete synopsis of the range of indicators reviewed. This download provides a repository of indicators that are or could be tracked as part of efforts to assess and monitor the quality of climate finance. Nonetheless, the overall thesis or objective underlying this study is the need to harmonize and standardize a set of indicators so that tracking climate finance quality across multiple public actors becomes a reality in the near future. To that end, each of the following chapters starts with an initial synopsis of the key indicators discussed therein that, arguably, have the greatest potential for harmonization.

2. PROJECT-LEVEL INDICATORS

Summary Table 1: Key project-level indicators for harmonized tracking of climate finance quality



*Excluding SDG 13 Climate action

2.1 TRACKING MITIGATION RESULTS

Mitigation refers to efforts to reduce emissions and/or to enhance carbon sinks (UNFCCC, 2025e). A project's avoided emissions are the emissions it prevents compared to what would have happened otherwise (CFAS, 2024). This section examines how the core and sector-specific results of mitigation finance may be tracked.

A common, high-level indicator has emerged for mitigation projects, enabling the aggregation of results across diverse portfolios, sectors, and possibly actors. More granular indicators for specific sectors (e.g., energy, transport) can be used alongside the core indicator to provide context-specific insights. Using a combination of core and sector-specific indicators can capture a broader picture of mitigation finance results, from headline GHG reductions to their underlying drivers.

A. TRACKING CORE MITIGATION RESULTS

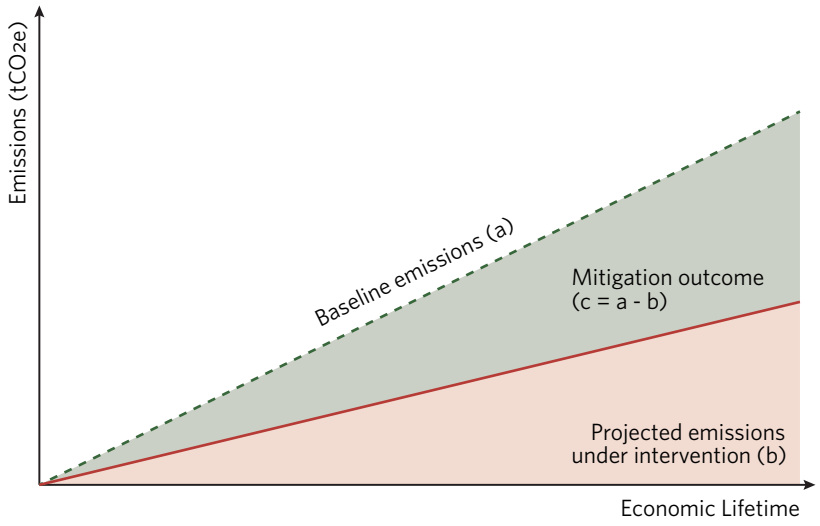
The core indicator for mitigation results tracking is the quantity of GHG emissions reduced or avoided, expressed in metric tonnes of carbon dioxide equivalent (tCO_2e). This outcome-level indicator is typically assessed by:

a) Calculating the baseline or "business-as-usual" emissions that would occur without the intervention, often based on historical data or a no-project scenario;

b) Calculating the projected emissions with the intervention; and

c) Calculating the difference (a–b), as illustrated in Figure 1.

Figure 1: Visualizing net mitigation outcomes



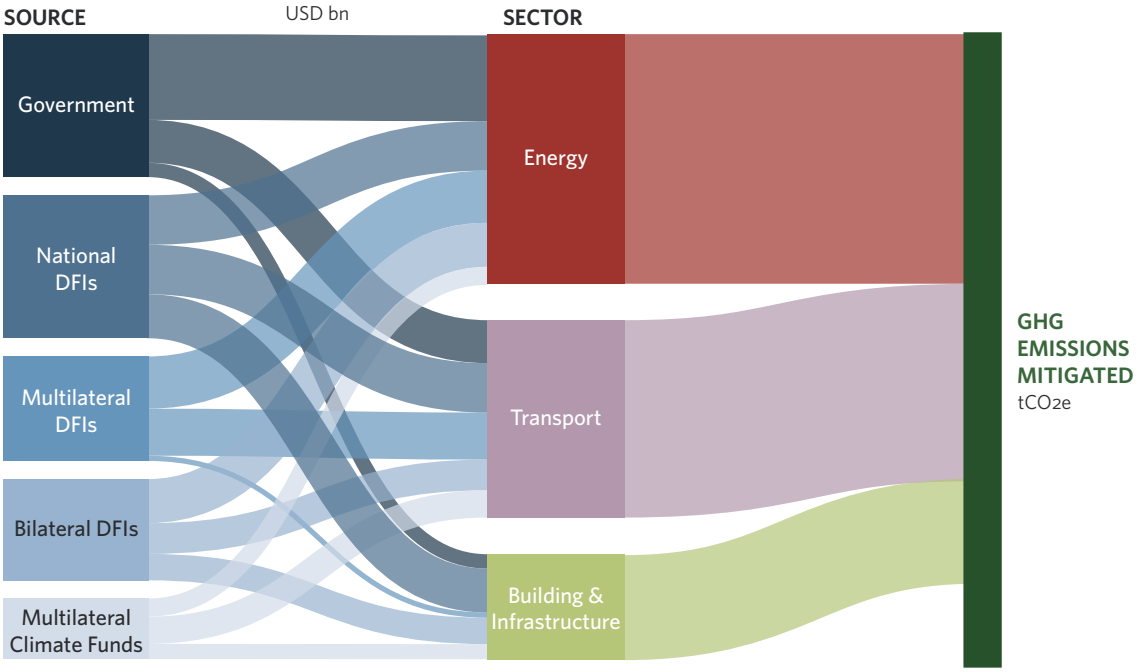
Source: *CPI based on World Bank, 2023a*

This indicator provides a common denominator across projects, allowing, for instance, a renewable energy program and a reforestation project to be compared in terms of tCO_2e mitigated. Table 1 summarizes the core mitigation results indicator, while Figure 2 illustrates how this could be tracked and visualized across different public climate finance providers and sectors.

Table 1: Core mitigation results indicators

Area	Level	Indicator	Unit
Mitigation	Outcome	GHG emissions reduced or avoided	Tonnes of carbon dioxide equivalent (tCO_2e)

Figure 2: Indicative visualization of core mitigation results tracking



This core indicator has been widely adopted as a key mitigation outcome measure across public climate finance providers. For example, the Green Climate Fund (GCF) results framework includes a mitigation core indicator defined as the "total tons of CO_2 equivalent avoided or reduced" by a project (GCF, 2021a). Likewise, the Climate Investment Funds (e.g., the Clean Technology Fund) require reporting of "tons of GHG emissions reduced or avoided" as their first results indicator in monitoring and evaluation (CIF, 2014). The Joint-MDB group has also converged on a similar result indicator: "Relative[9]/Absolute GHG emissions per year" (Joint MDBs, 2024).

MEASUREMENT CONSIDERATIONS

Public finance providers may calculate core mitigation results using varied approaches, complicating aggregation across different portfolios. Various GHG accounting considerations implicit to calculating "tCO_2e reduced" are shown in Table 2.

Table 2: Key dimensions of GHG accounting approaches

Dimension	Description	Typical categories
Scope of emissions coverage	Define which types of GHG emissions are considered within project boundaries	• Scope 1 (direct emissions from owned/controlled sources) • Scope 2 (indirect emissions from electricity/heat use) • Scope 3 (other indirect emissions, e.g., supply chain, user-phase)[10]
System boundary type	Define how wide the accounting boundary is	• Activity-based (emissions directly resulting from project activities) • Life-cycle-based (upstream and downstream emissions along a project/system life cycle)
GHGs included	Identify which greenhouse gases are counted	• CO_2 only • Kyoto gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF6, NF3) • Other short-lived climate pollutants (if applicable)
Methodological approach	Describe how emission reductions are calculated	• Baseline-and-Project Approach (BAU vs. with-project scenario) • Direct Measurement (sensor-based quantification) • Emission Factor-Based Estimation (using default or national factors) • Sector-Specific Models (e.g. energy dispatch simulation, IPCC models) • Hybrid Approaches (combined methods)
Lifespan	Specify the duration over which emission reductions are estimated	• Project implementation period only • Technical/economic lifetime of investment • Extended or transformational impacts (for indirect effects)

Having a common mitigation indicator has significant merits, and efforts are underway to harmonize GHG accounting across institutions. A transparent, standardized indicator allows for clearer links to global targets (e.g., how finance contributions align with the Paris Agreement goals) and easier comparison across targets and projects. It also facilitates the calculation of the

9 Relative GHG emissions measure the difference between the project emissions and baseline emissions.
10 Including Scope 2 and 3 emissions can lead to double counting when aggregating across entities, so these metrics are more reliable for assessing an individual organization's footprint than for aggregate analysis or project-level impact.

cost-effectiveness of interventions (that is, calculating the number of dollars spent per tCO_2e mitigated) (see Box 2).

International financial institutions have been collaborating on harmonization in this regard. Notably, in 2015 a group of international financial institutions agreed on common accounting approaches for major sectors, and many now follow broadly similar GHG calculation principles (IFIs, 2021). Alongside the IFI harmonization, UN-led standards guide the field. The GHG accounting practices draw on the Greenhouse Gas Protocol and on UNFCCC methodologies developed under mechanisms like the Clean Development Mechanism (CDM) (UNFCCC, 2022) as well as the Paris Agreement transparency framework. These international standards establish common definitions (e.g., what constitutes a "baseline" or which different GHGs to include) and encourage the use of conservative, peer-reviewed methods for calculating emission reductions.

Box 2: Assessing cost-effectiveness of mitigation interventions

One established approach to assessing mitigation finance quality is the cost-effectiveness of interventions, expressed as dollars per tonne of CO_2 reduced (USD/tCO_2e). This metric indicates the financial input required to avoid 1 tonne of emissions. Using USD/tCO_2e, funders can compare projects on the efficiency of their climate impact, building an evidence base to guide decision-making.

For example, analysis by the Center for Global Development of 127 real-world mitigation projects in developing countries (80 from the Clean Technology Fund and 47 from the GCF) revealed a wide range of cost-effectiveness outcomes. In approximately one-sixth of those cases, the expected cost exceeded USD 100 per tonne of CO_2; in a few cases, it reached several thousand dollars per tonne; whereas in the most efficient projects, it was below USD 10/tCO_2. This significant variation highlights how **some projects deliver far greater emissions reductions per dollar spent than others** (CGD, 2021).

By examining USD/tCO_2e across a portfolio, stakeholders can identify outliers and ask critical questions: Why are certain projects so costly per ton? Can future resources be shifted toward more cost-effective approaches? In this way, the USD/tCO_2e indicator supports evidence-based learning and more strategic allocation of climate finance. Over time, tracking cost-effectiveness can encourage practitioners to design interventions that maximize climate outcomes for each dollar spent (or to justify a high cost per tonne in light of other benefits). Indeed, a recent study argues for a "renewed focus on cost-effectiveness" across international climate finance, estimating that better prioritization of cost-effective mitigation solutions could yield substantially more mitigation from the same investment (CGD, 2021).

It is important, however, to use USD/tCO_2e as a guide rather than the sole deciding factor for allocating scarce public mitigation finance. **A low cost per tonne is not the only marker of a worthwhile mitigation project, and, conversely, a high cost per tonne does not automatically signify wasted resources**. One limitation of USD/tCO_2e comparisons is that they may undervalue projects with significant co-benefits or "strong synergies" (CGD, 2021). Many mitigation projects pursue other objectives (development, health, etc.) alongside emissions reduction. If an intervention yields large non-climate benefits, it might justify a higher cost per tonne.

Another limitation is the uncertainty in the underlying data: as noted previously, emissions reductions are often estimated with complex models and assumptions. If those estimates are inaccurate, the calculated USD/tCO_2e will change accordingly. Differences in accounting methodologies between projects can further skew comparisons. Moreover, the sectoral context matters—what counts as a "good" cost per tonne in one sector might be infeasible in another. For instance, renewable energy and forestry projects often achieve relatively low USD/tCO_2e (since they can mitigate large volumes of carbon at moderate cost), whereas sectors like transport or industrial innovation might inherently have higher costs per tonne due to technology and infrastructure expenses. These variations mean that cross-sector comparisons of cost-effectiveness should be made carefully and with the specific sectoral context in mind.

Despite these caveats, **assessing USD/tCO_2e is one viable approach to evaluating the quality of mitigation finance** at the project (or portfolio) level. It provides a quantitative lens into how efficiently mitigation finance yields emissions reductions. Used alongside qualitative considerations, it can support evidence-based decision-making, helping funders prioritize interventions that deliver greater mitigation outcomes per dollar, or at least to be conscious of when they are paying a premium for co-benefits.

B. TRACKING SECTORAL MITIGATION RESULTS

It is important to complement core mitigation results tracking with a sector-specific lens. Desk-based reviews of public climate finance providers' results reporting indicate an array of sector-specific indicators, yet aggregating and comparing across institutions remains limited, as each institution tends to use its own tailored metrics. **Developing a set of common sector-specific mitigation indicators—going beyond sectoral emissions mitigated—is important to assess whether and how mitigation finance is (or is not) driving tangible sectoral change.**

Tracking sector-specific mitigation results can be approached via a two-tier framework:

(i) Output indicators, which quantify infrastructure or actions implemented (often during the project lifespan).

(ii) Outcome indicators, which quantify the effects or utilization of those outputs (often linked to emissions reductions or other benefits realized).

For illustrative analysis, it is useful to spotlight example indicators for the three mitigation-relevant sectors that received the majority of tracked public climate finance between 2018 and 2023:[11] Energy, transport, and buildings and infrastructure (CPI, 2025a). Table 3 below presents a snapshot of example mitigation indicators for these sectors, organized by output and outcome. The remainder of this subsection unpacks these examples, including reflections on their aggregability and their potential usefulness for building an evidence base on the quality of mitigation finance at the project level.

11 and which together accounted for more than 90% of total tracked mitigation finance in 2023 alone.

Table 3: Examples of sector-specific indicators

Sector	Level	Indicator	Unit	Source
Energy	Output	Renewable energy capacity enabled	Gigawatts (GW)	Joint MDBs, 2024
	Outcome	Renewable energy generated	Megawatt-hours (MWh) (per year)	GBP, 2019
Transport	Output	Number of low-emission vehicles introduced	Number (#)	Adapted from GBP, 2019
	Outcome	Number of passengers by low-carbon mode or vehicles	Number (#)	Joint MDBs, 2024
Buildings & infrastructure	Output	Floor area with emission reductions in new or retrofitted buildings	Square meters (m^2)	Joint MDBs, 2024
	Outcome	% of energy use reduced/avoided vs local baseline/building code	Percentage (%)	GBP, 2019

In the energy sector, output-level indicators focus on the deployment of new low-carbon generation capacity and technologies. For example, a project might report the *renewable energy capacity enabled* (in GW), which measures the new renewable power capacity installed or facilitated by a project. This output metric assesses the scale of infrastructure or equipment delivered by the project. Though output metrics signal progress in building renewable energy assets, they do not reveal how effectively these assets are utilized. Therefore, they may be complemented with outcome-level indicators, for example, renewable energy generated (in MWh) over a given period (e.g., annually), to quantify the actual amount of clean power produced by the project. Actual energy generation reflects the real contribution of the new capacity to the energy supply mix and, by extension, to emission reductions. These indicators are generally straightforward to measure and aggregate within the energy sector, offering a clear link to the core mitigation goal of reducing power-sector emissions.

In the transport sector, mitigation projects often aim to shift mobility toward low-carbon modes or technologies. Output indicators here might include physical additions and assets, such as the *number of low-emission vehicles introduced* (#). This indicator captures the project's immediate deliverables and scale. On their own, however, they do not show whether these outputs are leading to the adoption or uptake of low-carbon transport in practice. For example, the number of passengers using these vehicles may not increase in proportion to the number of vehicles due to barriers such as range limitations and charging infrastructure constraints. Therefore, outcome-level indicators are used to gauge the utilization and effectiveness of those outputs. A key example is the *number of passengers by low-carbon mode or vehicles* (#). An increase in passengers suggests that commuters are indeed shifting from higher-emission modes (like private cars) to the low-carbon option, which is the intended behavioral outcome of the intervention.

For buildings and infrastructure, mitigation efforts typically center on energy efficiency improvements and green construction. Output-level indicators, therefore, often quantify the number of buildings retrofitted and measures implemented (e.g., heat pumps installed; walls, floors, and roofs insulated). These outputs convey the scope of infrastructure directly modified by the project. On the other hand, outcome indicators are employed to measure the effects of those efficiency measures. A common outcome metric is *energy savings* (MWh/year), i.e., the *reduction in energy consumption (per year) in buildings influenced by the project relative to baseline usage*. This can be measured through energy audits or post-retrofit metered data. Another

outcome indicator is the *reduction in energy intensity per floor area* (kWh/m^2), which normalizes energy use by building size to show improved efficiency. These outcome metrics directly relate to emission reductions, since energy saved (especially in fossil-fuel-based grids) translates to avoided CO_2 emissions. They are also useful for comparing effectiveness across projects of different sizes. Many development finance institutions track annual energy savings as a key result of energy efficiency projects, and this indicator can often be aggregated across portfolios (e.g., totaling the megawatt-hours saved annually from all building retrofit projects).

MEASUREMENT CONSIDERATIONS

There are notable limitations and challenges in applying these sector-specific indicators in practice. Many sector-specific results are context-specific and cannot be easily summed across projects. A kilometer of transit line in one city is not necessarily equivalent to a kilometer in another city in the sense of realized outcomes such as service uptake or passenger volumes. Similarly, one retrofitted building might yield far greater energy savings than another, depending on local conditions and the quality of the retrofit itself. Another key limitation is the measurement timeframe. Output indicators are usually recorded by the end of a project's disbursement period, but outcomes often materialize over a longer-term horizon and may not be consistently tracked *ex-post*.

2.2 TRACKING ADAPTATION RESULTS

Variation is integral to adaptation: it encompasses a range of interventions responding to different climate risks across varied geographies, making unified results tracking notably more complex. However, results tracking is nonetheless critical to inform optimal and strategic use of scarce public adaptation finance. Vulnerable populations are increasingly exposed to climate-related hazards, including floods, droughts, heatwaves, and rising sea levels. These hazards not only cause economic losses, such as damage to infrastructure, crops and livelihoods, but also non-economic losses, such as displacement, deteriorating health, and the erosion of cultural assets and ecosystems (UNFCCC, 2024b). In this context, adaptation interventions intended to reduce vulnerability and bolster resilience must be carefully evaluated to ensure effective, equitable, and durable outcomes.

Existing literature indicates that assessing the quality of adaptation finance faces challenges, including: a reliance on near-term, process-based indicators (e.g., monetary inputs) (CI, 2017; GCA, 2020); complexity in units of adaptation success (benefits of adaptation often accrue over extended periods, across boundaries such as socioeconomic groups, geographical locations, and beyond the initial project scope) (IIED, 2016; UNEP DTU Partnership, 2016); data availability and cultural compatibility issues (for example, a tension between formal data collection and more traditional practices or knowledge systems) (IIED, 2016); challenges in establishing harmonized standards (lack of universal outcomes metrics) (UNEP DTU Partnership, 2016); and generally limited access to the technical tools or capacity that are needed to measure complex results.

A. TRACKING CORE ADAPTATION RESULTS

Public climate finance providers have emphasized a set of core adaptation indicators that can be applied across sectors and geographies, allowing for comparability and possibly

aggregation. The *number of beneficiaries reached* and, where possible, the *number of beneficiaries made more resilient*, have emerged as a common starting point (see Table 4). These indicators provide a tangible link between project-level interventions and the broader objective of reducing vulnerability. However, they also reveal the methodological and practical challenges inherent to capturing the depth and durability of adaptation outcomes.

Table 4: Core adaptation results indicators

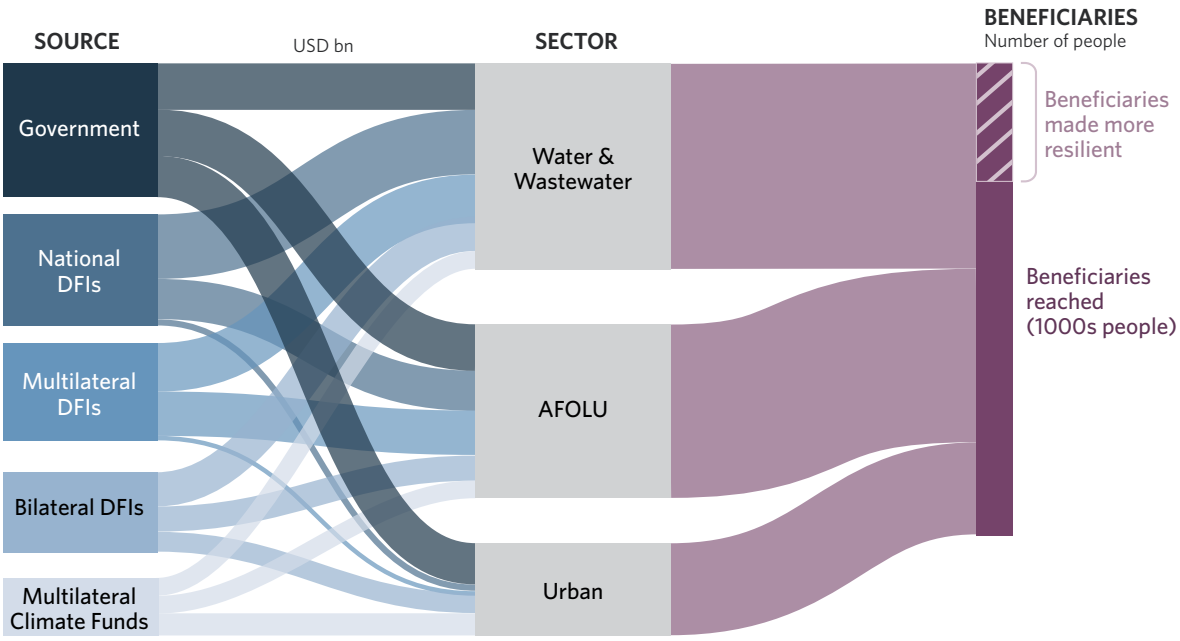
Area	Level	Core Indicator	Unit
Adaptation	Output	Number of beneficiaries reached	Number of individuals (#)
	Outcome	Number of beneficiaries made more resilient[12] to climate hazards	

***Number of beneficiaries reached* is a core output indicator used by several public adaptation finance providers to assess and aggregate adaptation project results.** The *Joint MDBs Common Approach to Measuring Climate Results* (2024) identifies this as a core indicator across multiple sectors, including water, food and agriculture, and poverty eradication and livelihoods. Similarly, vertical climate funds (VCEFs) such as the GCF, the Adaptation Fund (AF) and the Least Developed Countries Fund (LDCF) within the Global Environment Facility (GEF) have adopted "number of beneficiaries" as a central measure of adaptation performance (CFAS, 2024). Likewise, the UK Government reports on this indicator in the context of its International Climate Finance projects or programs (UK ICF, 2024b). Annex 1 contains details on institutional-specific measurement approaches for assessing the number of adaptation beneficiaries.

The number of beneficiaries who are more resilient to climate hazards is a more compelling, but less widely used, core outcome indicator for assessing and aggregating adaptation project results. This indicator is more compelling in the sense that it helps to validate whether beneficiaries reached by the adaptation intervention did indeed experience improved resilience over time. Measuring this indicator involves conducting at least two surveys at different points in time to compare individuals'/households' exposure, sensitivity, and vulnerability to climate hazards before and after the adaptation intervention (UK ICF, 2024a). It follows that any actor able to measure this stronger core adaptation *outcome* indicator will, by logical extension, be able to measure the simpler *output* indicator (see Box 3) (UK ICF, 2023a). Figure 3 illustrates how this core adaptation results indicator tracking could look, in theory, across multiple public climate finance providers and multiple sectors, demonstrating how *beneficiaries made more resilient* are a subset of the total adaptation beneficiaries reached.

12 Adaptation involves specific actions taken to adjust to current or expected climate impacts, such as building sea walls or changing agricultural practices. Resilience, on the other hand, is the broader capacity to prepare for, respond to, and recover from climate-related shocks, encompassing social, economic, and environmental dimensions. (LSE, 2022)

Figure 3: Indicative visualization of core adaptation results tracking



MEASUREMENT CONSIDERATIONS

For both core adaptation results indicators, a number of dimensions need to be clarified and applied consistently to enable aggregation and comparisons, firstly across projects and then across institutions. For one, the scope of potential beneficiaries included needs to be well defined: there is a difference between counting only direct beneficiaries of interventions, or also including indirect (community) beneficiaries, who accrue second-order benefits as a result of a primary intervention. Beneficiaries may also be measured at different levels, such as the individual or household level. If beneficiary data is at the household level, it needs to be converted to the number of people using a typical/average household size for the target location or sub-population (UK ICF, 2024a). When gathering information on beneficiaries, certain characteristics may be disaggregated, subject to data collection processes, including gender, age, socioeconomic status, and location, among others (see Box 3). Moreover, measurement may be operationalized through either direct, comprehensive surveying of beneficiaries within projects/programs or through select, representative sampling. Additionally, data on beneficiaries may come from project-level M&E systems or third-party audits/evaluations. Finally, there is a need to determine how often, and within what timeframe, beneficiary information will be collected across the project cycle: from *ex-ante* project approval to mid-term/post-implementation evaluations.

Despite their relative merits in terms of measurability and aggregability, these core adaptation results indicators fall short in and of themselves. Tracking the number of beneficiaries of adaptation interventions, while informative, entails several limitations and practical challenges. The output level—*number of beneficiaries reached*—does not shed light on the depth or durability of adaptation benefits. In addition, unless number of beneficiaries can be meaningfully benchmarked (e.g., as a proportion of the total population residing within the project focus area), it may be misinterpreted or overemphasized. Moreover, collecting

beneficiary data can be arduous and resource-intensive, particularly at the outcome level, where before-and-after comparisons are required. Indeed, producing outcome-level results requires a dedicated budget for monitoring, evaluation and learning processes. In a context of scarce resources, public climate finance providers need to balance the benefits of generating high quality, insightful data with the practical constraints of project budgets. Thinking in broader terms, beyond strictly human beneficiaries, these core results indicators cannot account for the value of ecosystem benefits delivered through adaptation interventions, nor do they lend themselves to second-order impacts that arise via more technical information-based adaptation interventions (for example, climate information services that are a key component of building resilience but for which the direct human beneficiaries are not necessarily clear nor countable).

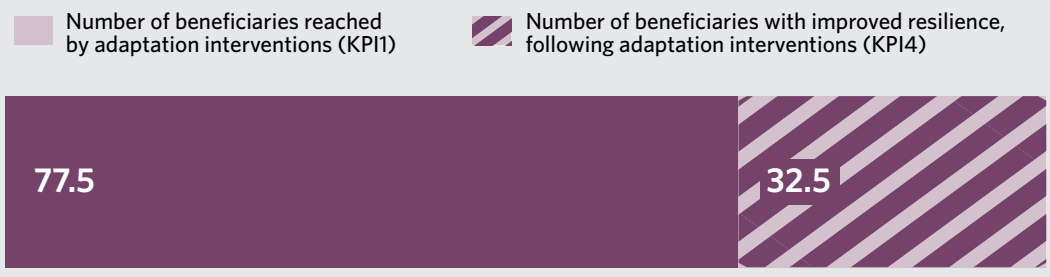
Box 3: Tracking adaptation beneficiaries—UK ICF

The UK Government reports on results generated through its International Climate Finance (ICF) projects and programs, via a set of 15 KPIs. Therein, two KPIs are focused on adaptation, taking a number of beneficiaries approach: KPI1 tracks the number of people supported to better adapt to the effects of climate change; while KPI4 tracks the number of people whose resilience has been improved.

In its most recent ICF results publication, the UK Government reported that, from April 2011 to March 2024, a total of 110 million people were directly supported to adapt to climate change (KPI1), reflecting direct beneficiaries of UK adaptation interventions (rather than also those who indirectly benefit as part of the wider community). Therein, the results indicate that a total of 32.5 million people saw their resilience improve (KPI4) (UK ICF, 2024b). That is, only approximately one-third of total adaptation beneficiaries to UK-funded interventions are deemed to have improved resilience, whereas there is no evidence on resilience outcomes for the remaining beneficiaries.

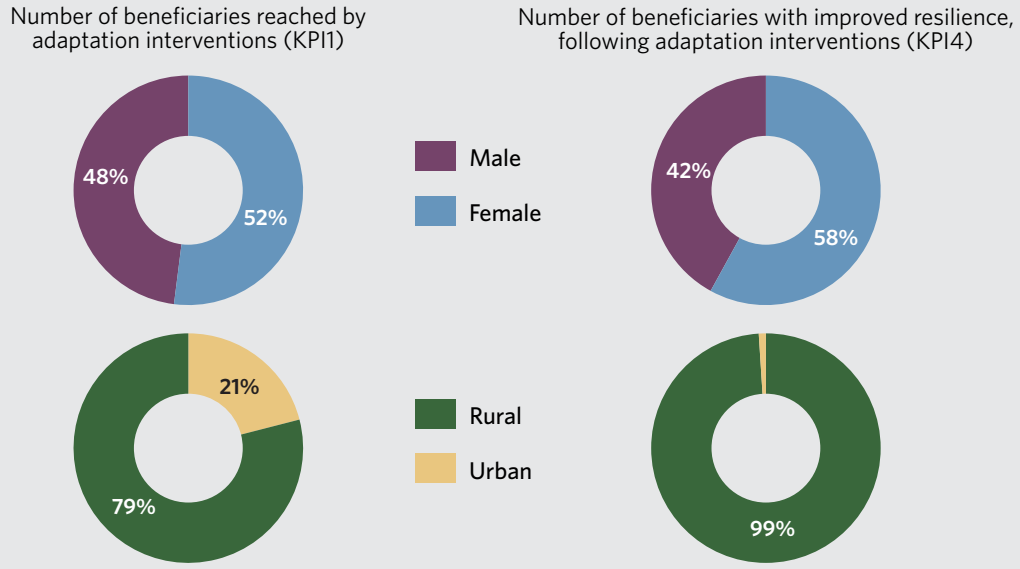
As shown in Figure 4, KP1 is embedded within KPI4. Figure 5 depicts the profile of adaptation beneficiaries, as reported by the UK Government, by gender and geographical location.

Figure 4: Breakdown of adaptation beneficiaries (UK ICF, 2011-2024)



Source: CPI based on UK ICF, 2024b

Figure 5: Adaptation beneficiaries' profile (UK ICF, 2011-2024)



Source: CPI based on UK ICF, 2024b

Tracking and disaggregating data on adaptation beneficiaries can help guide capital allocators in public institutions on where and to whom adaptation finance should be directed. Figure 5 shows that the gender of adaptation beneficiaries in UK ICF interventions was either broadly evenly split (KPI1) or slightly favored male beneficiaries (KPI4). As such, capital allocators wishing to use adaptation finance to improve gender equality could use the reported data on KPI1 and KPI4, relative to institutional targets, to inform whether more gender-targeting needs to be embedded in adaptation project/program delivery.

Likewise, the results show that UK ICF adaptation interventions are heavily skewed toward rural populations. Indeed, for KPI4, 99% of beneficiaries were in rural areas. This suggests that MEL professionals find it more feasible to conduct household-level surveys assessing resilience before and after an intervention in rural contexts, where they may have more direct contact with beneficiaries due to the nature of the intervention. Capital allocators wishing to use adaptation finance to increase resilience among urban populations could use the reported data on KPI1 and KPI4, relative to institutional targets, to inform whether more urban-level adaptation projects/programs need financing.

B. TRACKING SECTORAL ADAPTATION RESULTS

It is important to supplement core adaptation results tracking with a sector-specific lens. Establishing a set of common sector-specific adaptation indicators is essential to begin collecting evidence on whether and how adaptation finance is building resilience within specific sectors across multiple adaptation interventions. Sector-specific indicators vary widely in the adaptation context, depending on the objectives and priorities of the particular intervention and the associated funder.

A desk-based review of public climate finance providers' results reporting indicates a very comprehensive indicator base from which public actors draw to report their sector-specific

adaptation results. The extensive indicator list derived as part of the global goal on adaptation (GGA) process is illustrative in this regard (UNFCCC, 2025a). Consequently, aggregating and comparing sector-specific adaptation results across fragmented actors is currently limited.

Tracking sector-specific adaptation results can follow a two-tier approach: simpler people-based indicators complemented with relatively more complex adaptation outcome indicators. Possible sector-specific indicators are highly comprehensive, as per the UAE-Belem work program on indicators under the GGA workstream (UNFCCC, 2025a). For illustrative analysis, we spotlight example indicators for the three sectoral categories that together received 80% of tracked public adaptation finance from 2018 to 2023: agriculture, water and wastewater, and cross-sectoral (CPI, 2025a). Table 5 shows example key adaptation indicators for these sectors, illustrating how sector-specific adaptation results tracking could be operationalized at two levels of tracking:

(i) The number of people benefiting from adaptation measures in the sector; and/or

(ii) Changes with regard to the key objective or agenda for that sector.

Table 5: Examples of key sector-specific adaptation indicators

Sector	Level	Indicator	Unit	Source
Agriculture	1	Number of farmers or agricultural producers/enterprises with new or improved access to adaptation measures	Number of people	Joint MDBs, 2024[13]
	2	Increased and/or maintained agricultural productivity (yield) following implementation of adaptation measures	Tonnes yield	Joint MDBs, 2024
Water & wastewater	1	Number of people with new or improved access to WASH[14] in a climate-related water-stressed context	Number of people	Joint MDBs, 2024
	2	Increased and/or maintained volume of water made available in a climate-related water-stressed context	m^3	Joint MDBs, 2024
Cross-sectoral	1	Number of households/individuals covered by new or improved early warning systems	Number of people	GCF, 2021a
	2	Reduction in number of days of weather-related disruption that renders systems or elements thereof inoperable	Days/year	EBRD, 2024

In the agriculture sector, adaptation projects often aim to increase the uptake of, or the capacity to implement, planting practices that reduce farmers'/agricultural enterprises' vulnerability to climate risk. As such, a level 1 indicator may focus on the number of farmers or agricultural producers/enterprises with new or improved access to adaptation measures. Here, adaptation measures may include resilient crop planting practices, adaptation-relevant

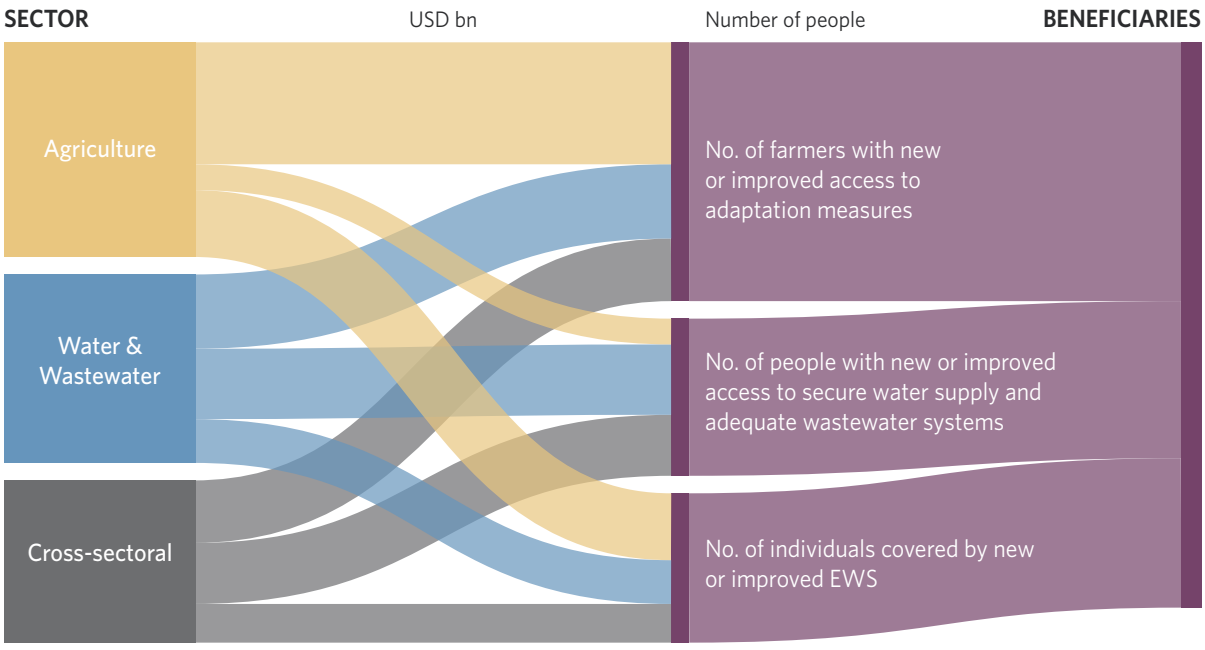
13 The precise wording has been adapted here in order to achieve consistency with other sector-specific level 1 indicators in Table 5
14 Water, sanitation and hygiene

information, insurance, capacity-building, and general finance (Joint MDBs, 2024), assessing the intervention's reach. Moving to level 2, a common outcome indicator for adaptation in agriculture measures the change in agricultural yield (for example, in tonnes) following the implementation of adaptation measures. However, such outcome indicators would require long-term monitoring, possibly on an annual basis, to determine whether outcomes improved and were sustained over time (EBRD, 2024b).

In the water sector, adaptation projects often aim to reduce water losses or increase water conservation in the context of climate change-induced water stress or persistent drought. A level 1 indicator may focus on the number of people with new or improved access to a secure water supply and adequate wastewater systems, assessing the intervention's reach. At level 2, a common adaptation outcome indicator in the water sector regards change in water availability (e.g., measured in cubic meters) following the implementation of adaptation measures. Here, changing water availability includes the volume of water saved and/or the volume of additional usable water made available, including via water treatment, recycling, and reuse (Joint MDBs, 2024).

In cross-sectoral[15] **adaptation interventions,** disaster risk management is often a focal point, increasing preparedness for a climate hazard. For example, a level 1 indicator may focus on the number of people (households/individuals) covered by a new or improved early warning system, assessing the intervention's reach. At level 2, a common outcome indicator in this context is the change in the number of days of weather-related disruption that renders systems, or elements thereof, inoperable (Joint MDBs, 2024). Figure 6 illustrates how level 1 sectoral adaptation tracking could look across sectors, noting the potential for overall comparability and aggregation, with the common unit being the number of people.

Figure 6: Indicative visualization of sector-specific adaptation results tracking—Level 1



15 Within CPI's Other & Cross-sectoral category for adaptation finance, Disaster Risk Management accounts for the largest share of total tracked finance, hence the focus on Early Warning Systems as an illustrative example.

MEASUREMENT CONSIDERATIONS

The Level 1 sector-specific indicators—number of people benefiting from adaptation measures within a specific sectoral context—are operational, measurable, and aggregable, but they **still present certain shortcomings.** While the level 1 indicators are measurable by project implementation teams, they need to be complemented with additional context. For example, establishing that 200 farmers had new or improved access to adaptation measures following the intervention is not, in and of itself, insightful. There is a need to benchmark against the broader context; for example, how many farmers are working in the particular geography without access to new or improved adaptation measures, or the extent to which farmers in the locality are vulnerable/exposed/sensitive to the particular climate risk(s). Setting the goalposts will allow capital allocators to understand the relative scale of beneficiaries and establish targets for broader uptake of adaptation measures in that particular sector and locality. Indeed, the level 1 indicator could then be used to calculate the proportion of the population with, for example, new or improved access to agricultural adaptation measures or a secure and adequate water supply (UNFCCC, 2025b).

Additionally, level 1 sector-specific indicators can and should be disaggregated by certain characteristics (for example, gender, age, socioeconomic status) to provide more granular insights into the profile of beneficiaries, which can, in turn, facilitate targeted, tailored future interventions according to who capital allocators seek to reach. Finally, level 1 indicators need to clearly establish the geographical scope, which is likely defined by the project itself, and set the supplementary context accordingly (e.g., 200 farmers had new or improved access to adaptation measures out of 400 farmers growing the same crops within the same locality).

The Level 2 sector-specific indicators are harder to measure and cannot be aggregated across sectors. However, these more complex indicators facilitate insights into the extent to which the key objective or agenda for that specific sector is being met. The level 2 indicator examples outlined in Table 5, relating to changes in agricultural yield, water availability, and days of weather-related disruption, are more complicated to measure and would depend on the technical capacity and resources available to project implementation teams. Stakeholders consulted as part of CPI's initial Scoping Study (CPI, 2025b) indicated that public climate finance providers have varying technical capacities and internal resources, meaning not all are currently able to measure these level 2-type indicators. For those who can (see Box 4), there is a need to establish realistic, "without-project" baselines against which to compare changing outcomes, which can be resource-intensive. While they facilitate more specific insights into adaptation outcomes, the different units used for level 2 indicators mean that they cannot be compared or aggregated across sectors, while within-sector comparisons and aggregations across institutions would require harmonization of the underlying measurement methodologies.

Box 4: Measuring and tracking sector-specific adaptation outcomes—EBRD

The European Bank for Reconstruction and Development (EBRD) assesses its climate resilience results via a series of six so-called climate resilience outcomes (CROs):

CRO No.	Physical climate resilience outcome	Physical outcome (units)
1	Increased water availability	Δ m_3/year
2	Increased energy availability	Δ MWh/year
3	Increased agricultural potential	Δ tonnes/hectare/year
4	Improvements to human health and/or productivity	Δ quality-adjusted life years (QALYs)
5	Reduced weather-related disruption	Δ days/year
6	Reduced weather-related damage	Δ risk frequency

These quantifiable outcomes are measured on an annualized basis, as the change that the adaptation intervention delivers relative to a "without-project" baseline, using relevant physical units per year: for example, increased water availability is measured as the change in cubic meters of water per year (EBRD, 2024a). The EBRD goes one step further to be able to compare these outcomes across sectors by valorizing each CRO into a Euro amount; for example, the Euro value of additional water made available (€), applying a shadow price of water.

Documentation from the EBRD's project "ANP Climate Resilience, Morocco" offers insight into the process for and use case of these CROs, in a sector-specific context: enhancing the climate resilience of several ports along Morocco's highly vulnerable coastline. By integrating international standards and best practices for building resilience within ports, the project was expected to reduce the costs of weather-related damage (CRO 6) to port infrastructure and assets, as well as reduce weather-related disruption to port operations (CRO 5) (EBRD, 2022).

Project documentation indicates that EBRD personnel calculated ex-ante estimates of the relevant CROs, in both physical units and in valorized (monetary) terms. The first CRO measured was that of the reduction in the average annualized cost of routine and periodic maintenance of the port infrastructure assets due to sea level rise and extreme weather events; while the second CRO measured was that of the reduction in disruption at ports, based on anticipated loss in revenues due to the effects of climate change impeding working conditions at the ports (EBRD, 2022).

The precise CROs have been redacted from project documentation; therefore, there is no data for external parties to analyze in this context. Nonetheless, the insights from the two aforementioned CROs can be assumed: measuring the reduction in weather-related damage and disruption respectively, associated with EBRD's adaptation intervention, can tell capital allocators at the bank the extent to which their adaptation finance is indeed working in the specific sectoral context: that is, the extent to which the costs associated with weather-related disruption and damage are being reduced, directly as a consequence of the bank's interventions. This example demonstrates that a public climate finance provider has sufficient internal resources and technical capacity to perform ex-ante calculations of expected sector-specific adaptation outcomes. In other words, the 6 CROs at EBRD are analogous to the level 2-type sector-specific indicators illustrated in Table 5. However, it is important to note that these are ex-ante estimates rather than ex-post verifications and therefore require various assumptions to facilitate calculation. Ideally, such outcomes would be verified ex-post, following completion of the adaptation intervention, to provide concrete evidence of the realized extent of change in adaptation outcomes.

2.3 TRACKING CO-BENEFITS

Beyond direct climate benefits, climate finance can also deliver co-benefits for sustainable development. As recognized by the UNFCCC (2025d), climate policies have "benefits related to sustainable development, including improved air quality, improved health outcomes, restoring biodiversity, and other benefits relating to livelihoods and poverty reduction." Recognizing and tracking these co-benefits is vital to communicate the quality of climate finance and in order to ensure alignment of climate investments with broader sustainable development objectives.

Tracking co-benefit results can be conceived via a two-tier approach: (a) Level 1-SDG Tagging; and (b) Level 2-Evidence-Based SDG Impact Assessment.[16] Each requires different levels of data granularity: SDG tagging can be done using a relatively brief project description, whereas the evidence-based approach requires detailed project documentation. Simple SDG tagging is currently the approach most used by public climate finance providers under the *OECD's Total Official Support for Sustainable Development (TOSSD)* framework (OECD, 2022), but the evidence-based approach offers scope for more robust tracking of co-benefits.

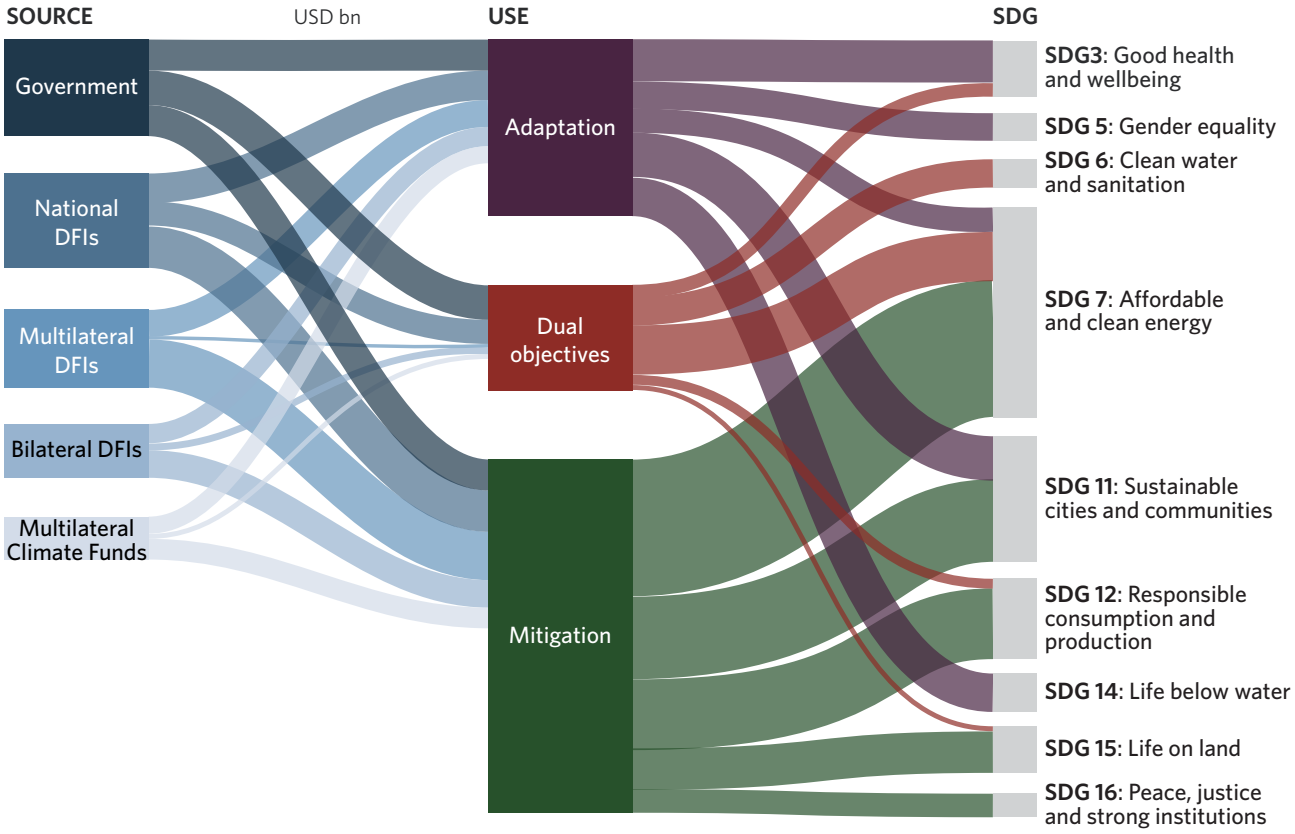
A. LEVEL 1: SDG TAGGING

At Level 1, each climate finance project is mapped to all plausible SDGs that it could support by scanning its stated objectives and activities for relevant keywords. Project officers or analysts (or even automated text analysis tools) identify key terms in project documents and tag the project with any SDG goals or targets to which those terms are linked. The outcome of Level 1 is essentially a checklist of SDGs per project that merit further assessment as potential co-benefit areas. Crucially, SDG tagging casts a wide net: its purpose is not to miss any potential co-benefits, while running the risk of over-inclusion.

In practice, external third-party organizations (such as CPI) can conduct Level 1 tagging provided they have access to sufficient project descriptions. Because this approach relies on descriptions rather than measured outcomes, it does not require highly granular data; it can be completed through document review and simple keyword mapping or through natural language processing tools. For instance, CPI's own analyses have applied automated keyword searches to project titles and descriptions (using Python scripts) to flag likely air quality co-benefits (see Box 5). This kind of tagging can be done for an entire portfolio as a first step. Figure 7 below illustrates a hypothetical example of SDG mapping at Level 1, where climate projects by multiple different public actors trigger a multiplier effect across various SDGs.

16 In this section, we focus on mapping co-benefits against the Sustainable Development Goals (SDGs), given the SDG framework's universal acceptance as a benchmark for environmental and social progress. There are other complementary approaches for impact assessment – for example, corporate ESG standards and ISO guidelines for sustainability reporting – but SDGs provide a common language to start with that aligns well with public climate finance providers' priorities and general mandates.

Figure 7: *Indicative visualization of SDG co-benefits tracking*



However, relying only on Level 1 tagging can overemphasize the magnitude of co-benefits delivered. Some projects might "namecheck" SDG buzzwords in their titles or descriptions without delivering results on those goals (OECD, 2017). This underscores the value of Level 2 verification. Indeed, best-practice guidelines for sustainable finance now urge issuers and project sponsors to provide details on how each SDG is substantively addressed, rather than simply listing SDG icons (ICMA, 2022).

B. LEVEL 2: EVIDENCE-BASED SDG TRACKING

At Level 2, a project's actual contributions to each SDG target identified in Level 1 are verified and quantified. Rather than relying solely on keywords, it asks whether the project measurably moved the needle on each SDG target flagged.

For example, a clean cookstoves project tagged for SDG 3 (Good Health) at Level 1 because its description mentioned "air quality" improvements. The Level 2 process would examine project results relating to SDG Target 3.9 (substantially reduced deaths and illnesses from air pollution by 2030) and the corresponding Indicator 3.9.1 (mortality rate attributed to household and ambient air pollution). This would gather evidence on whether the project had reduced indoor air pollution or related adverse health outcomes. If the project can demonstrate a quantifiable improvement, then SDG 3 is confirmed as a relevant co-benefit. In contrast, if no concrete data supports the health impact, the initial tagging for SDG 3 might be deemed inapplicable.

Another aspect of Level 2 is assessing significance. Not all co-benefits are equal—some projects are explicitly designed to deliver a particular co-benefit (making that SDG a principal

objective), while others only incidentally support an SDG as a side-effect (significant but secondary). **To capture this distinction, each SDG captured is rated as either Principal (P), Significant (S), or Not Applicable (N/A) for the project.** A Principal rating means the project's primary objectives explicitly include advancing that SDG; a Significant rating means a positive impact exists, but as a secondary benefit of the intervention; finally, Not Applicable means the project has no substantial link to that SDG beyond perhaps superficial rhetoric. In theory, if precise budget allocations to each objective are available, one could attribute the exact amounts to each SDG. Often, however, such granular breakdowns are not available, so a proportional scoring approach—analogous to that of the Rio Markers (OECD, 2024)—may be used. For instance, 100% of a project's investment might count toward an SDG marked as Principal objective, whereas 30% (a typical heuristic) might count toward an SDG marked Significant, with 0% for Not Applicable. This approach mirrors established practice in development finance: e.g., the OECD's "Rio Markers" system uses 100% vs 30% weights to account for projects' principal versus significant contributions to climate and environmental objectives (OECD, 2011).[17]

A rigorous Level 2 assessment requires much more detailed data than Level 1. It relies on outcome indicators, evaluations, or monitoring reports that can be directly mapped to SDG metrics. Such data often must come from project implementers or dedicated project evaluations. Ideally, the mechanisms for collecting this information (e.g., baseline and endline surveys; SDG-linked performance indicators) should be built into the project's design and reporting mechanisms from the outset. Without early planning, projects might lack the evidence needed to substantiate co-benefit claims later.

Box 5: Tagging and tracking development finance with air quality benefits—CPI & CAF

An example of Level 1 mapping in practice is CPI and CAF's State of Global Air Quality Funding study, which tracks air quality benefits delivered via development finance (CPI & CAF, 2024). Together with the Clean Air Fund (CAF), CPI has built a database of thousands of development interventions funded by international public providers via international development finance, and has used a systematic keyword mapping approach to identify which projects have air quality benefits.

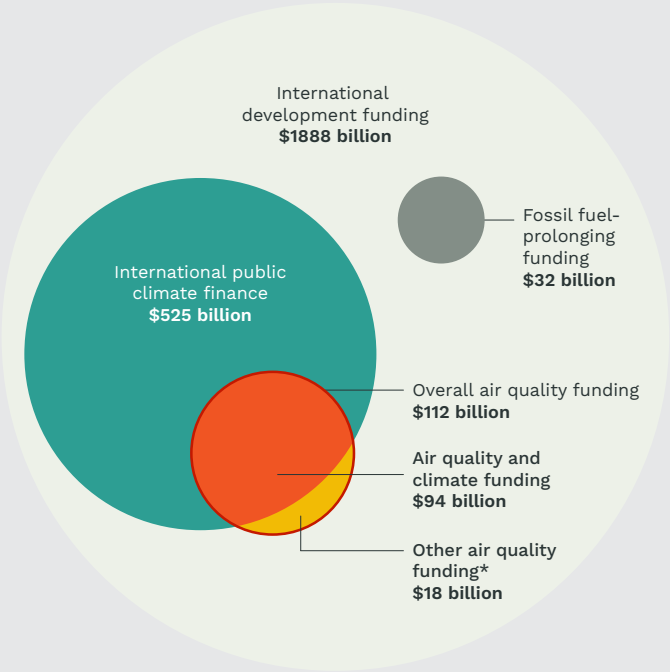
Specifically, CPI developed curated lists of keywords related to air quality (e.g., "pollution," "clean cookstoves," "particulate," etc.) and ran an automated search through project names and descriptions to flag any positive matches. This text mining was implemented in Python and accounted for variations in language and spelling—project descriptions in languages other than English were translated, and both US and UK English terms were included to ensure coverage. The result was an initial tag of each project as either an "air quality project" or not, based on keyword matches.

Since automated tagging can sometimes capture false positives (for example, a term like "train" might appear in a context irrelevant to transport, such as education and training), CPI conducted manual verification checks on a subset of the data. High-value projects and any entries triggered by high risk keywords were reviewed row by row to confirm alignment with the intended criteria; projects that failed to meet the defined air quality benefit criteria were removed from the final database.

17 The weighting can vary across reporting countries.

This combination of broad keyword scanning and targeted manual cleaning allowed CPI to sift a large dataset for likely co-benefits and then refine the results for accuracy. Such keyword-driven mapping is a practical starting point for tracking co-benefits across portfolios, as long as there is recognition of its limits which require deeper follow-up validation (analogous to a Level 2 approach). Figure 8 illustrates the results of the 2024 air quality finance mapping exercise, including the cross-over between air quality and climate funding.

Figure 8: Interlinkages between international development funding, air quality funding, climate finance, and fossil fuel-prolonging funding



*'Other air quality funding' refers to air quality funding that does not address climate change. This category includes projects from both outdoor air quality funding and funding with air quality co-benefits. Examples of 'other air quality funding' include efforts to improve the monitoring and modelling of air pollution and measures for the reduction of dust.

Source: CPI & CAF, 2024

2.4 TRACKING CROSS-CUTTING RESULTS

Across both mitigation and adaptation projects, and in addition to project-level co-benefits, two key cross-cutting results indicators can be derived which speak to the need for more and better coordination and collaboration across actors (public and private), as well as the importance of building technical skills and capacity in anticipation of future climate action (in the specific region/country or sector in which a project is implemented): (a) co-financing; and (b) technical assistance.

a) Co-financing: Tracking project-level co-financing entails summing the total finance which is provided by all other public and private sources in connection with the publicly-funded project-level intervention (World Bank, 2018b). It is important and insightful to distinguish between public and private co-financing respectively:

1. Public co-financing: is the investment made by a public entity, (additional to the primary public investor/project implementer);
2. Private co-financing: is the investment made by a private entity[18] (World Bank, 2018b).

Tracking co-financing yields insights into quality at the project-level in different respects. Firstly, it can be an indication of the extent to which the project is designed or implemented in such a way as to improve coordination and collaboration across stakeholders. Indeed, coordinated financing of climate/development projects can reduce transaction costs, reducing duplication across public actors, streamlining processes and harnessing synergies by capitalizing on comparative advantages (World Bank, 2023b). For example, the VCEFs, MDBs and NDBs all have respective strengths which can be leveraged in joint interventions to deliver effective and efficient climate action, fostering strategic and optimal alignment in otherwise fragmented public resources (CPI, AfDB & FiCS, 2025). In addition, tracking co-financing is important to give a sense of additional resource mobilization at the project-level in a resource-constrained setting. Indeed, public (concessional) climate finance is, increasingly, scarce, underscoring long-standing calls for public actors to ensure that their projects are designed and/or implemented in such a way as to mobilize private capital (FiCS, 2025). Box 6 elaborates on the MDB Task Force on Mobilization's collective approach for measuring and reporting their private finance mobilization figures (which excludes public co-financing by definition and captures the direct and indirect private finance associated with individual interventions).

Box 6: Attracting additional investment—MDB Task Force on Mobilization

The MDB Task Force on Mobilization, a collective of multilateral (or regional) and bilateral DFIs, reports on their total private finance mobilized across all development operations (climate and otherwise). In 2023, they reported a total of USD 220 billion in private finance mobilized across operation countries, with USD 87.9 billion of that mobilized for low- and middle-income countries (LICs and MICs), reflecting both direct and indirect mobilization data (Joint MDBs, 2025). **The Task Force has been working to harmonize measurement approaches for mobilization indicators across DFI members, enabling them to report aggregated figures within the joint report.**

The results of the most recent reporting indicate that, overall, MDBs are mobilizing more over time (documenting a 24% increase in private finance mobilized to LICs and MICs in 2023) (Joint MDBs, 2025). At a more granular level, their data shows that, across all geographies, a slight majority was calculated as indirect private capital mobilized (54%), with direct mobilization accounting for 46% of the total (Joint MDBs, 2025). This is consistent with the expectation that direct mobilization figures are harder to account for (providing evidence of the public financier's direct and active role in attracting the private investment that flowed to the project). Disaggregating the data by geography shows that, in the Latin America and Caribbean region, for example, total private mobilized was strictly among high- and middle-income countries, with no private finance mobilized in LICs, and the Least Developed Countries (LDCs), in the region (Joint MDBs, 2025).

18 Defined as a legal entity established for business purposes which is financially and managerially independent from national or local government (World Bank, 2018b).

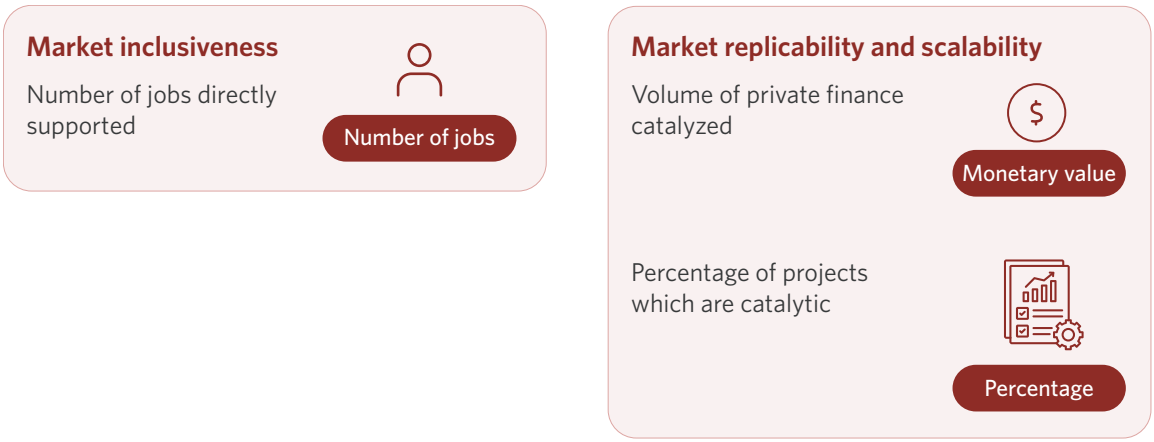
The latter datapoint is illustrative of the **need for granularity and disaggregation when reporting on private finance mobilized by a public actor's initial investment.** If private finance is only being mobilized in high- or middle-income countries it suggests that: (a) these particular markets are more mature, and therefore have the requisite conditions for attracting private investment; and (b) the particular markets in lower-income countries, where private finance is not being mobilized, are not yet at a stage of maturity where additional private finance can flow. In the climate context, this is particularly acute when considering adaptation projects in fragile contexts (G20 IHLEG, 2024). As such, simply tracking a monetary indicator of private finance mobilized does not tell capital allocators why private finance is not flowing into the market or how they may strategically influence this. That is, this indicator needs to be supplemented with sector- and geographic-specific context to facilitate meaningful insights that may inform the design and appraisal of future interventions that help crowd-in additional finance.

(b) Technical assistance: Technical assistance is a form of non-financial support which can take the form of information, data and expertise sharing, and direct training, among others (UK Government, 2023b). In short, it is about building know-how on the ground such that, in this context, climate action may be pursued independently of, or following, the original (publicly-funded) project intervention. Tracking the extent of technical assistance (TA) provided via projects is typically done on the basis of counting the number of recipient individuals or organizations receiving support (UK Government, 2023b).[19] Whether individuals or organizations are tracked, in both cases there is scope for data disaggregation to better understand the profile of TA recipients (as well as the precise type of TA offered). For example, disaggregating by gender, socioeconomic status or geographical location of recipients can offer insights into whether TA is being provided in an equitable manner to underserved groups. Overall, tracking TA provided at the project-level can offer insights into important dynamics such as local access and ownership of interventions, which are integral to assessments of climate finance quality (CPI, 2025b). However, as with all indicators spotlighted in this paper, clarifying certain measurement considerations is crucial, for example, whether only direct recipients are counted or if the measurement scope also includes indirect beneficiaries of TA.

19 See supplementary Excel download with full repository of indicators reviewed.

3. MARKET-LEVEL INDICATORS

Summary Table 2: Key market-level indicators for harmonized tracking of climate finance quality

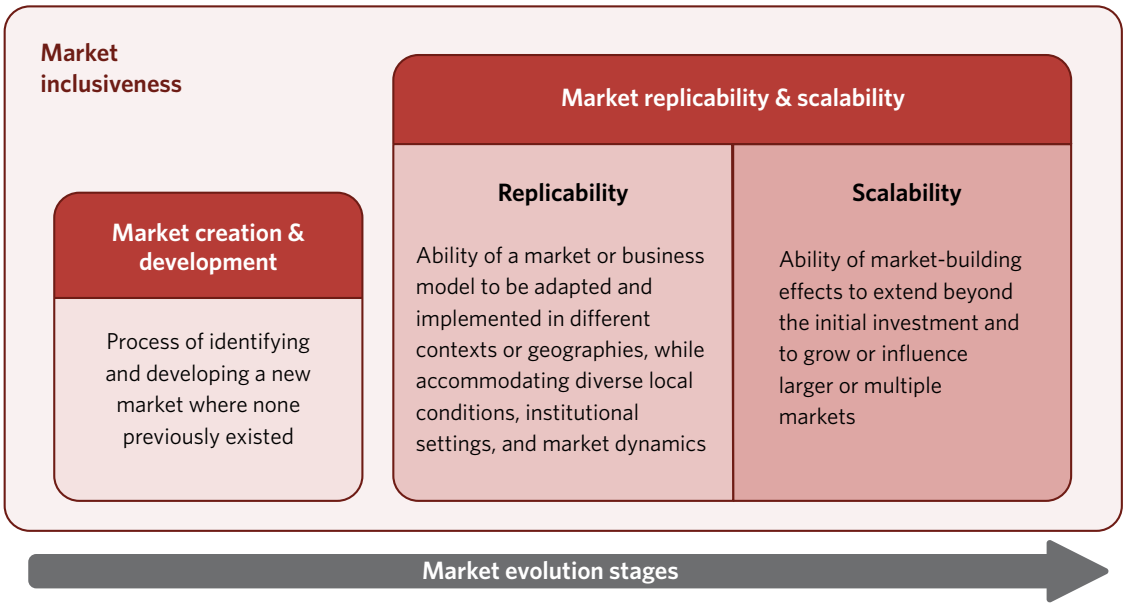


Evaluating the quality of climate finance at the market level requires approaches that go beyond project-level results and capture contributions to market development. Market-level changes are driven by complex interactions between demand, supply, and enabling conditions and typically materialize over the medium- to long-term (CPI, 2025b), a dynamic which is, increasingly, conceptualized in terms of so-called "private finance catalyzation" (OECD, 2025). The transformational impacts of climate finance are partially reflected in broader market shifts that extend beyond immediate beneficiaries or outputs to influence business practices and whole market ecosystems. Such shifts manifest through the creation of new markets where none previously existed, changes in the degree of market development, and changes in market structures (that is, who is able to participate in the market). Tracking change at this level is therefore essential for assessing whether climate finance is laying the foundations for low-emission, climate-resilient solutions to take off.

Tracking public climate finance providers' contributions to, or progress in fostering, market-level change is a frontier topic. Indicators are essential for tracking the contributions of public climate finance providers across the different stages of market evolution (see Figure 9). However, aside from more qualitative case studies, the current quantitative indicator base used by public actors to capture their contributions to market-level change is still nascent (see Annex 2). This is largely because market creation and development often involve early-stage interventions where outcomes may take time to materialize, data can be difficult to collect, and attributing change directly to specific actors or interventions is complex (CPI, 2025b).

To operationalize tracking, market-level change can be conceptualized into a sequence of two stages with one cross-cutting aspect: market creation and development is the initial early stage; followed by market replicability and scalability; with market inclusiveness—ensuring benefits are distributed equitably, across diverse actors—a cross-cutting dimension, relevant to all stages (see Figure 9). This section spotlights possible quantitative indicators for tracking market-level changes initiated by public climate finance, structured in terms of: (i) market creation and development; (ii) market replicability and scalability; and (iii) market inclusiveness.

Figure 9: *Dimensions of market-level change*



3.1 TRACKING MARKET CREATION AND DEVELOPMENT

Market creation is the process of identifying and developing a new market where none previously existed. Activities may involve addressing market imperfections, incubating or piloting new climate solutions, and enabling technology transfer (CPI, 2025b). In doing so, public climate finance providers can stimulate investment in climate solutions, sectors and/or geographies where it would otherwise be lacking (IFC, 2021).

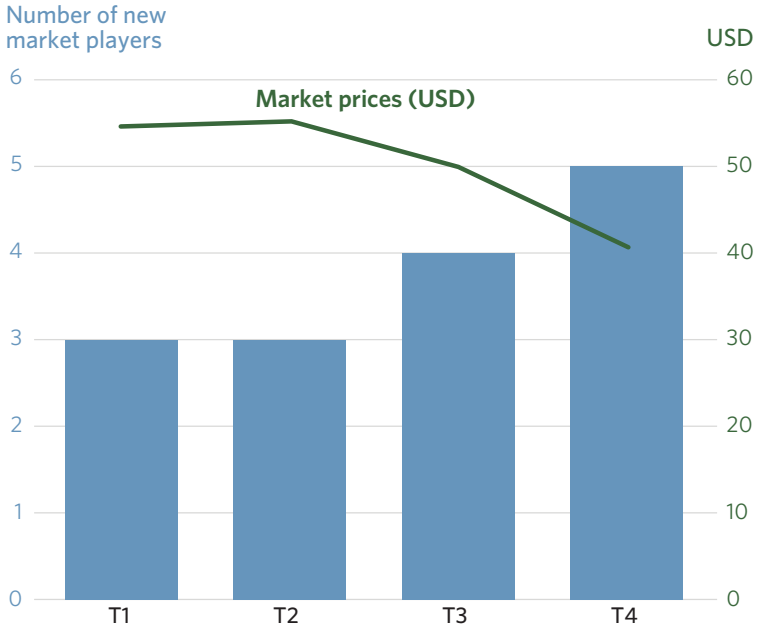
Table 6 shows some (non-exhaustive) examples of initial entry points for quantitatively tracking whether public climate finance is contributing to market creation and development. These indicators are structured according to the relevant key dimensions identified in CPI's initial Scoping Study (CPI, 2025b): that is, the capacity of public climate finance to address market imperfections; to incubate or pilot nascent climate solutions; and to enable technology transfer. Supplemented with additional context, they may provide insights into whether new market participants and innovation ecosystems are emerging. These indicative examples provide a basis for discussing each market creation and development dimension as a first step toward deriving key, potentially common indicators for tracking market creation and development across multiple public climate finance providers.

Table 6: Examples of key market creation & development indicators

Market Creation & Development dimension	Indicator	Unit	Source
Addressing market imperfections	Number of new market players	Number of enterprises/ firms (#)	BII, 2025; World Bank IEG, 2019; HIPSO, 2025
	Evolution (reduction) in market prices	Prices ($)	Adapted from IWorld Bank IEG, 2019
Incubating and piloting nascent solutions	Number of incubator/pilot programs established/supported	Number of programs (#)	Adapted from UK TA KPIs, (UK IFC, 2023),
	Number of organizations that have benefited from an incubator/pilot program	Number of organizations (#)	Adapted from UK TA KPIs, (UK IFC, 2023),
Technology transfer	Number of new technologies/solutions transferred or licensed	Number of technologies/ solutions (#)	GCF, 2021b

Addressing market imperfections with a view to creating well-functioning, competitive markets is integral to market creation and development. The WBG defines well-functioning, competitive markets as characterized by the following: ease of entry and exit for market participants; the absence of significant monopoly power; widespread availability of information; the absence of negative externalities; and the achievement of public-interest objectives (World Bank IEG, 2019). Based on the current literature, practical indicators for tracking progress on addressing market imperfections include: (i) *the number of new players entering a market following the initial public intervention*; and (ii) *the evolution (specifically, any observed reduction) in the market price of a climate solution/technology, following the initial public intervention* (see Box 7). These indicators lend themselves to time-series analysis, showing changes in market competition—market participants and market prices—over time (see Figure 10). However, defining the time horizon for measurement and subsequent analysis—that is, the number of months or years in which the evaluator measures changes in market competition—is inevitably arbitrary. Nonetheless, dynamic tracking is important to demonstrate the persistence of actors in the market, indicating survival rates among new players, and the longer-term evolution of market prices.

Figure 10: Visualizing indicators for addressing market imperfections



Box 7: Addressing market imperfections—IFC

Within the IFC's Anticipated Impact Measurement and Monitoring (AIMM) framework, the institution's contribution to market-level outcomes is defined and assessed as the project's ability to catalyze systemic changes beyond those brought about by the intervention itself (World Bank IEG, 2021). Importantly, IFC caveats that any market-level claims are explicitly in terms of institutional contribution, rather than attribution (World Bank IEG, 2021). One key market outcome that is assessed by IFC is "competitiveness" and maps to the "addressing market imperfections" activity within CPI's taxonomy of market creation & development activities (see Table 6).

In 2019, the Independent Evaluation Group of the World Bank Group undertook an evaluation of 16 IFC investments across three key sectors (agribusiness/agriculture; financial inclusion; ICT), seeking to determine whether and how these projects contributed to the IFC's market-creation agenda. Therein, one set of indicators focused on increased market size or reach, and increased competition (by lowering barriers to entry or increasing the number of market participants). While the results were presented only in aggregate across the 16 cases, increased competition and price reductions were observed mainly in the ICT sector following IFC's investment. For example, in Kenya, the construction of the East African Submarine Cable System (EASSy), supported by the IFC, led to a drop in ICT prices, while additional bandwidth supply—increasing competition in the sector—lowered prices for final users. Indeed, more recent analysis of the EASSy cable in Kenya showed that broadband prices dropped by more than 90% within a few years of the IFC's intervention, and Kenya has since become a regional hub for digital innovation, boasting an ecosystem of tech startups and mobile money services (IFC, 2025).

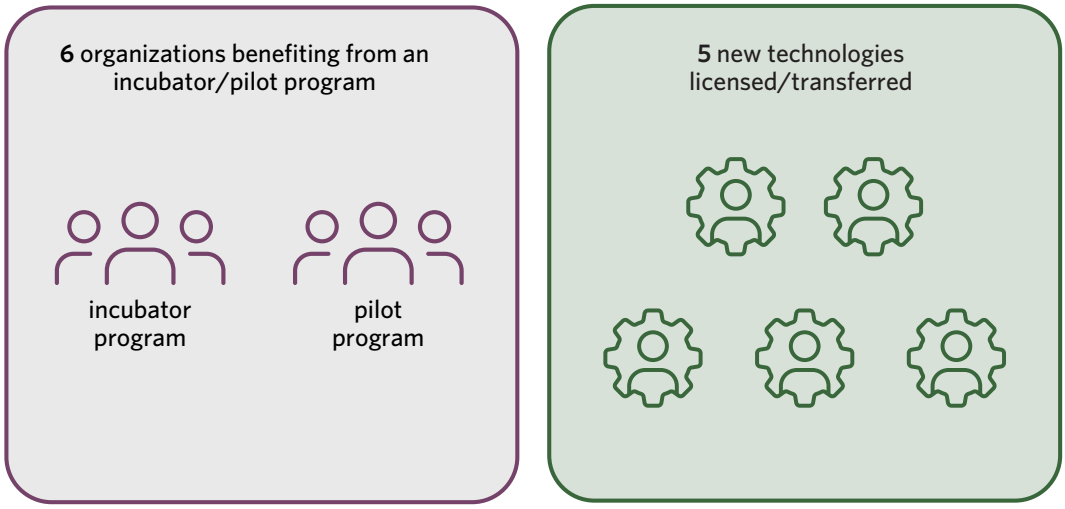
The IFC's approach to assessing and tracking their contributions to market competitiveness—the number of new players entering the market, and the change in price structure, following their initial intervention—provides a generic example in the context of development finance that could be applied to assess the quality of climate finance at the market level. These indicators would need to be tracked as time series, showing changes over time following the public climate finance intervention, thereby providing capital allocators with a picture of how public climate finance is working to create and/or develop nascent markets for low-emission, climate-resilient solutions.

Incubator and pilot programs are a key means of market creation and development. Incubator programs are defined by the UNFCCC as any sort of environment designed to support startup organizations, offering a range of services: physical infrastructure (including a location for doing business); business services; market services; technical services; financial support; and networking and information (UNFCCC, 2018). A pilot program is a small-scale, short-term experiment to showcase how a larger-scale project might work in practice (UNESCWA, 2023). Such programs aim to provide information about the desirability and feasibility of a climate project, with evidence indicating that, often, pilot projects have many advantages from the perspective of efficient use of public resources (Kotchen & Costello, 2018). Analogous to existing indicators for tracking public actors' TA contributions, practical indicators for tracking the state of the incubator and pilot program landscape can be derived in terms of (i) the number of incubator/pilot programs established/supported, and (ii) the number of organizations

that have benefited from those incubator/pilot programs. For (i), this is simply a matter of counting and aggregating the number of incubator and pilot programs established/supported in the public climate finance landscape (or for a specific sector therein) over a given period (i.e., on an annual basis). For (ii), analogous to the approach laid out in the UK's TA KPI 2 (UK ICF, 2023b), only direct and targeted organizations would be included in the calculation: for example, the companies receiving specialist, targeted support via the incubator. Importantly, these numbers can be supplemented with additional granularity on the type of actors receiving support (public, private, academia, civil society/NGO), and the relevant sectors in which they sit (UK ICF, 2023b). However, merely supporting and establishing incubator/pilot programs does not imply long-term or sustained success, in the sense of subsequent replication and scaling-up (see Section 3.2).

Technology transfer can be defined (in the climate context) as developing and transferring technologies to support action on climate change. Indeed, since the beginning of UNFCCC processes, technology transfer has been the focus of specific provisions that urge developed country Parties to promote, facilitate and finance the transfer of, or access to, climate technologies among developing country Parties (UNFCCC, 2025c). Following the GCF's *Integrated Results Management Framework,* which has a specific indicator to track their contribution to technology deployment and dissemination, a practical indicator for tracking progress on this dimension of market creation and development is: *the number of new technologies/solutions transferred or licensed* (GCF, 2021b). This indicator would give a sense of the extent to which public climate finance providers are transferring or licensing new technologies to geographies that would otherwise lack access, thereby indicating their contributions to market creation and development.

Figure 11: Aggregating and communicating (annual) contributions to market creation and development



3.2 TRACKING MARKET REPLICABILITY & SCALABILITY

Replicability refers to a market or business model's ability to be adapted and implemented across different contexts and geographies while accommodating diverse local conditions, institutional settings, and market dynamics. **Scalability** captures the ability of market-building effects to extend beyond the initial investment and proliferate in subsequent, larger investments (CPI, 2025b).

Assessing and tracking the replicability and scalability of market interventions requires a dynamic approach (VUNA, 2016). The intensity and durability of adoption rates, the responsiveness of local actors, and the capacity of institutions to support expansion are key characteristics of successful replication or scaling. Indeed, replication and scaling are inherently non-linear, iterative processes, characterized by cycles of experimentation, learning, adjustment and reinvestment (VUNA, 2016). Assessing replicability and scalability involves examining whether climate-positive practices or solutions have been embedded, normalized, or mainstreamed within markets.

Table 7 provides examples of initial entry points for quantitatively tracking whether public climate finance is contributing to market replicability and scalability. These indicators are structured according to the relevant dimensions identified in CPI's initial Scoping Study (CPI, 2025b): that is, the capacity of public climate finance to provide a demonstration effect, accelerate early-stage climate solutions, and to catalyze private capital. Supplemented with additional context, they could provide insights regarding whether public climate finance providers are contributing to replicability and scalability, in the context of market development for low-carbon, climate-resilient solutions. As before, these examples are indicative rather than exhaustive, providing a basis for discussing each dimension.

Table 7: Examples of key market replicability & scalability indicators

Market replicability & scalability dimension	Indicator	Unit	Source
Accelerating early-stage solutions	Number of accelerator programs established/supported	Number of programs (#)	Adapted from UK TA KPIs, (UK ICF, 2023b)
	Number of organizations that have benefited from an incubator/pilot program	Number of organizations (#)	
Providing a demonstration effect	Number of similar projects/solutions initiated in the same market	Number of projects/solutions (#)	Adapted from ICAT, 2020; IFC, 2021
Catalyzing private investment	Volume of private finance catalyzed	Monetary value	(World Bank, 2025 (OECD DAC, 2025)
	Percentage of projects which are catalytic	Percentage	

Accelerating early-stage solutions is a key means of scaling. Following incubator programs (which come first in the timeline of market-building), accelerator programs offer intense mentoring, peer review, and skills transfer over a limited period of time, with a view toward reaching a level at which the solution can be pitched to potential investors (UNFCCC, 2018). Analogous to tracking incubators at the market creation and development stage, practical indicators for tracking the state of the accelerator program landscape can be thought of in terms of: (i) *the number of accelerator programs established/supported*; and (ii) *the number of*

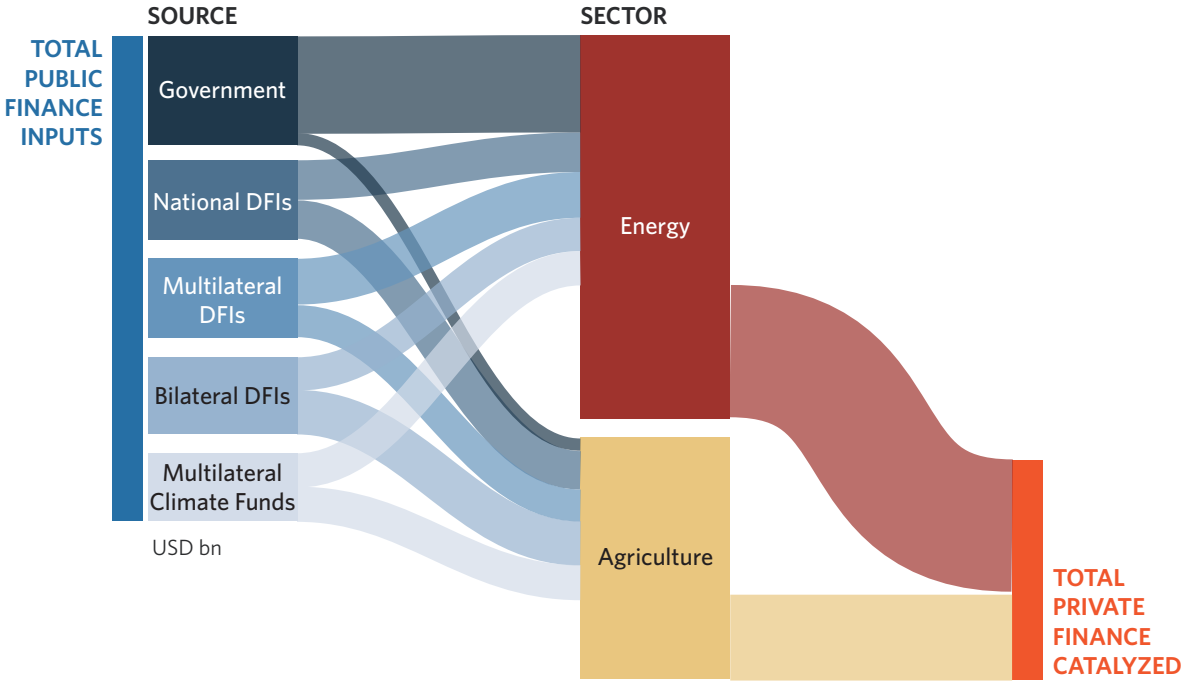
organizations that have benefited from those accelerators. For (i), this is simply a matter of counting and aggregating the number of accelerator programs established/supported in the public climate finance landscape over a given period (i.e., on an annual basis). For (ii), analogous to the approach laid out in the UK's TA KPI 2 (UK ICF, 2023b), only direct and targeted organizations would be included in the calculation: that is, the companies receiving specialist, targeted support via the accelerator. Importantly, these numbers can be supplemented with granularity on the types of actors receiving support (public, private, academia, civil society/NGO) and the relevant sectors in which they operate (UK ICF, 2023b). However, merely supporting and establishing accelerator programs, with a view toward scaling, does not indicate long-term success; instead, it would require dynamic tracking of beneficiary organizations/enterprises over time.

Providing a demonstration effect is a key means of enabling other actors to replicate the initial public intervention. According to a study by several public DFIs working collaboratively to foster a shared language (and measurement approaches) regarding market-level impact investing, a demonstration effect can entail pioneering a new business model or proving the viability of a market that is not yet mature (BII, 2025). The former approach speaks more to market creation and development (see incubator and pilot programs in Section 3.1), whereas the latter is relevant to the replicability and scalability stage of market development. Indeed, the coalition notes that proving profitability where the market has not yet been convincingly demonstrated can encourage others to copy the (public) first mover. An approach to assessing demonstration effects is to track, over a set period of time and within the set (geographical) boundaries of the particular market, the number of similar projects/solutions *initiated since the initial public actors' intervention*. However, as with indicators for addressing market imperfections (see Section 3.1), the timeframe for measuring the extent of the demonstration effect—the number of similar projects/solutions initiated—is inevitably arbitrary. Moreover, demonstration effects can entail knowledge spillovers beyond the immediate market of interest, which this tracking approach would not capture (Nemeh et al., 2024).

Catalyzing private investment is also a key indication whether public climate finance interventions may be replicated or scaled, or already in the process of doing so. Approaches for assessing private finance catalyzed by a public intervention are currently still in development or require institutions to be relatively sophisticated (that is, well-resourced) in terms of their results measurement and monitoring capacities. The concept of private finance catalyzed speaks to a shift in the enabling environment, signalling that new investment opportunities are unlocked beyond the direct co-financing of interventions at the project level. Indeed, the World Bank Group, for example, already reports on the volume of total private capital enabled at the level of its portfolio (World Bank, 2025), while ongoing work has outlined options for quantifying catalyzation in OECD DAC statistics. The latter, however, notes the complexities associated with quantification, with some stakeholders therefore stressing the need for such assessments to remain qualitative in nature, on a case-by-case basis (including using a taxonomy-based approach with the support of case studies to illuminate where and when catalyzation is happening) (OECD DAC, 2025). Overall, as shown in Figure 12, if measured in monetary values, this indicator is comparable across sectors, allowing capital allocators to derive insights on where (which sectors/solutions) they are performing well at catalyzation and where further targeted public finance is needed to lower risks and crowd in additional investment. Though aggregation across actors presents a risk of double-counting, Figure 12 illustrates how this indicator could facilitate insights into the extent of the multiplier effect by public actors;

that is, the ratio of public climate finance inputs (left-hand side) to total private climate finance catalyzed (right-hand side).

Figure 12: Indicative visualization of private investment catalyzed by public climate finance providers



3.3 TRACKING MARKET INCLUSIVENESS

Inclusiveness is a central, cross-cutting characteristic that is important to assess at every stage of market development to ensure markets benefit a diverse set of actors, particularly underserved groups. It refers to the extent to which people can access, participate in, and benefit from markets for low-emission, climate-resilient solutions. Indeed, inclusive market systems are essential for ensuring that climate finance interventions reach a diverse set of actors and the benefits are equitably distributed. The overarching objective here is to reduce poverty and inequality via public climate finance interventions.

Table 8 provides examples of initial entry points for quantitatively tracking whether public climate finance is contributing to market inclusiveness. These indicators are structured according to the capacity of public climate finance to promote financial access and inclusion and to create jobs. Supplemented with additional context and granularity, they may provide insights regarding whether the prior two phases of market change—market creation and development, and replicability and scalability—are yielding inclusive, equitable outcomes. As before, these examples are indicative rather than exhaustive, providing a basis for discussing each market inclusiveness dimension. While tracking and reporting on these already exist, they tend to be in a generic development finance context rather than specifically for climate finance results measurement and monitoring.

Table 8: Examples of key market inclusiveness indicators

Market Inclusiveness dimension	Indicator	Unit	Source
Financial access & inclusion	Number of individuals with new or improved access to payment/banking services	Number of people (#)	Adapted from World Bank IEG, 2019 World Bank, 2021
	Number of enterprises with new or improved access to (affordable) finance	Number of enterprises (#)	Adapted from AfDB, 2024
Job creation	Number of jobs directly supported	Number of full-time equivalent positions (#)	Adapted from HIPSO, 2025, EIB, 2021
		Number of part-time positions (#)	

Financial access and inclusion is a key indicator of whether diverse actors may benefit from and participate in the (climate) markets that public actors help develop. The current literature broadly frames financial access and inclusion in terms of two key units: individuals and enterprises, the latter often disaggregated into micro, small, and medium-sized enterprises (MSMEs), depending on the context. Accordingly, two key indicators for tracking public actors' contributions to this cross-cutting aspect of market development are: (i) *the number of individuals with new or improved access to payment or banking services*; and (ii) *the number of enterprises with new or improved access to (affordable) finance*. For both indicators, data disaggregation can help elucidate whether benefits are being distributed equitably. For example, the number of individuals with new or improved access to payment/banking services (see Box 8) can be disaggregated by gender, age, and socioeconomic status, among others. For (ii), enterprises may be disaggregated in terms of the number of MSMEs with new or improved access to finance, which has long been documented as a key constraint to private-sector development in EMDEs (AfDB IDEV, 2020), with additional granularity on the terms of that finance—market-rate, or below-market-rate—so as to give an indication of affordability.

Box 8: Universal Financial Access 2020 Initiative—World Bank Group

The Universal Financial Access 2020 (UFA2020) initiative, adopted in 2015, reflects a commitment by the World Bank Group to enable 1 billion people to gain access to a payment/banking account via targeted interventions in 25 priority countries where almost 70% of all financially excluded people live (World Bank IEG, 2019). In addition to creating an enabling regulatory environment for financial inclusion ("system-level" interventions, according to CPI's three-level framework; see Section 4), it directly works to expand access to banking (for example, via more access points and digitizing financial services) among underserved or disadvantaged populations, such as women and rural producers (World Bank IEG, 2019).

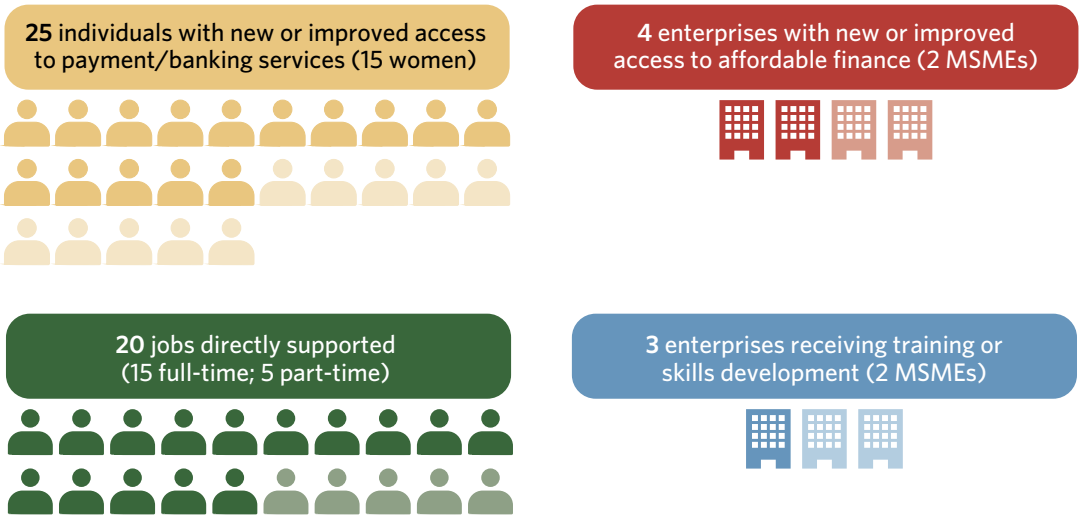
Progress toward the UFA2020 is communicated in terms of the number of new accounts opened, and, concurrently, the number of people reached, supplemented with additional sub-indicators (World Bank, 2018a). Indeed, monitoring and evaluation for the initiative benefits from a rich database of surveys on financial access including: the Global Payment

Systems Survey (GPSS); the Global Financial Inclusion and Consumer Protection (FICP) survey; and the Financial Access Survey (FAS), all administered by the World Bank and the IMF. Given that these surveys provide data on the extent of financial exclusion, tracking the number of new banking accounts (and the number of people with new or improved access) facilitates insights into progress on financial inclusion relative to established targets.

Adopting this approach from the general development finance context and applying it specifically for climate finance interventions would allow public climate finance providers to assess their contributions to market inclusiveness; that is, how their strategies for developing low-emission, climate-resilient markets are also contributing to financial access and inclusion in parallel. Accordingly, this would help to ensure that public climate finance is of a high quality at the market level, ensuring equitable outcomes among beneficiaries.

Job creation is another key indicator of the extent to which people are benefitting from and participating in the (climate) markets that public actors help develop. Based on a review of the literature, tracking job creation can be operationalized by counting the *number of jobs directly supported by a public intervention* (acknowledging that an intervention may also indirectly support jobs along the supply chain) (EIB, 2021). Therein, jobs can be distinguished into full-time and part-time positions (HIPSO, 2025) to differentiate between decent jobs with longer-term prospects and those that may be more temporary (BII, 2023). Indeed, while the number of jobs created is informative—which is a proxy for improving household income and, in turn, poverty reduction—it is important to also determine the quality of those jobs, in terms of pay and long-term prospects, to ensure markets are delivering decent work for all, without precarious conditions for workers (ILO, 2023). As with the other indicators examined, job creation data can be disaggregated by gender, age, and socioeconomic status, among other characteristics, to better understand who exactly is benefiting from these new jobs. As with other output indicators assessed in this chapter, the number of jobs created should be benchmarked meaningfully against broader datapoints, such as total employment or unemployment in a comparable market within the same geography, to facilitate meaningful interpretation.

Figure 13: Aggregating and communicating (annual) contributions to market inclusiveness



4. SYSTEM-LEVEL INDICATORS

Summary Table 3: Key system-level indicators for harmonized tracking of climate finance quality[20]

Pathway 1

Theory of change tracking

Narrative evidence

Pathway 2

Percentage of portfolio contributing to system-level change

Percentage

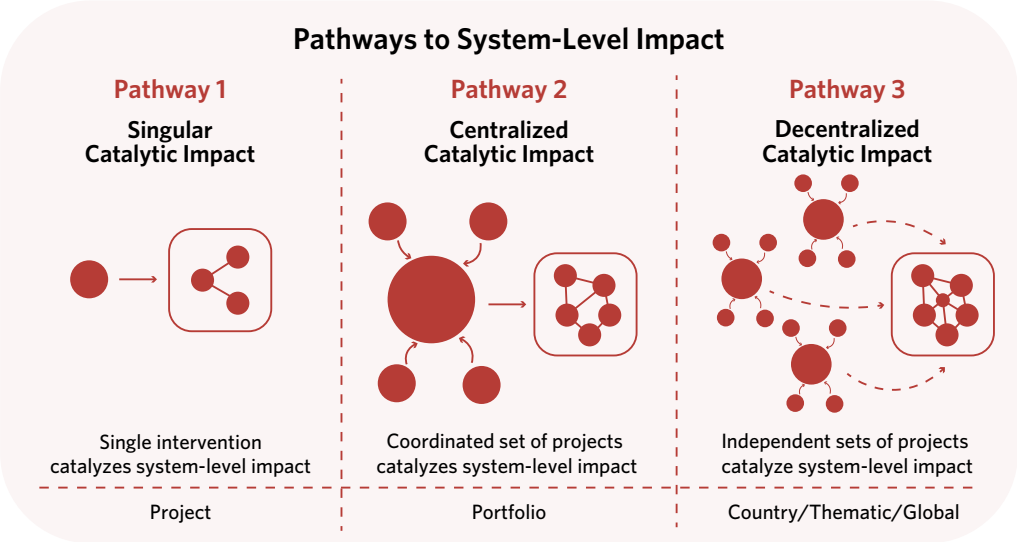
Evaluating the quality of climate finance at the system level requires assessing whether interventions contribute to broader structural change beyond individual projects or markets. System-level change refers to fundamental shifts in political, economic, and social systems, including changes in guiding paradigms, policies and regulations, institutional arrangements, and behaviors and attitudes (CPI, 2025b). Tracking change at this level is essential because climate outcomes are shaped by complex, multi-actor systems, and outcomes depend on enabling policies, the removal of barriers, and reinforcing feedback loops, which cannot be captured by project-level or market-level indicators alone (CPI, 2025b). This chapter spotlights practitioner-relevant indicators to track such system-level change through the following three catalytic pathways:

- **Pathway 1**: Singular catalytic impact—wherein a single, strategic intervention removes a critical bottleneck or unlocks an enabling condition, thereby contributing to a shift in the wider system.
- **Pathway 2**: Centralized catalytic impact—wherein a coordinated portfolio or program of interventions is intentionally designed to collectively target multiple parts of a system and drive a specific system-level change.
- **Pathway 3**: Decentralized catalytic impact—wherein dispersed and independent interventions, often uncoordinated but aligned in intent, cumulatively unlock system-level change over time.

Each pathway offers a different route to understanding and tracking contributions to system-level change. The sections below describe these pathways in detail and propose possible quantitative indicators for practitioners to track progress under each.

20 Note that the summary table does not highlight an indicator for harmonized Pathway 3 tracking, given the myriad of different indicators that can be tracked to assess progress at the country, thematic and global levels respectively (see Section 4.3; Table 9).

Figure 14: Visualizing pathways to system-level change



Pathway 1 involves small but high-leverage interventions that address a key system barrier or create a crucial enabling condition, thereby contributing to broader system-level change (Sustainability Institute, 1999). These interventions are often policy fixes that yield substantial change. As an example, FSD Africa's support for developing South Africa's Green Finance Taxonomy established a standard definition for green investments, removing an information barrier and enabling the financial system to more confidently channel capital toward sustainable projects (South Africa National Treasury, 2022). In tracking such an intervention, it is generally not possible to fully attribute system-level outcomes to the project. **Instead**, **practitioners may use contribution logic to examine how an individual project could trigger transformational change** (see Section 4.1).

Pathway 2 is a programmatic, coordinated approach: a portfolio or program of projects and programs is centrally designed to work in concert toward system-level change. All interventions share a common goal and theory of change, targeting different leverage points in the system (UNDP, 2022). An example is the Climate Investment Funds' Clean Technology Fund (CTF), which deployed a suite of renewable energy projects, policy support, and financing facilities in multiple countries with the unified aim of transforming national energy sectors (CIF, 2025). In such a centralized catalytic approach, success is measured by aggregate transformation signals rather than individual project outputs. For instance, the CTF's impact was seen in countries where its coordinated investments helped renewables achieve a significant share of the energy mix and spurred governments to implement lasting clean energy policies. **Accordingly, tracking Pathway 2 emphasizes portfolio-level indicators that assess how an institution, coalition, or program achieves cumulative results across dimensions of system-level impact** (see Section 4.2).

Pathway 3 entails independent, distributed interventions that eventually align to drive a common systemic change, even without a single coordinating entity (Keohane and Victor, 2011). In this pathway, numerous actors—governments, private firms, innovators, and communities—pursue similar or common goals in parallel, and their cumulative efforts can push a system past a tipping point. The emergence of the carbon removal industry is a clear example of a decentralized catalytic impact. Around the world, separate initiatives such as innovation

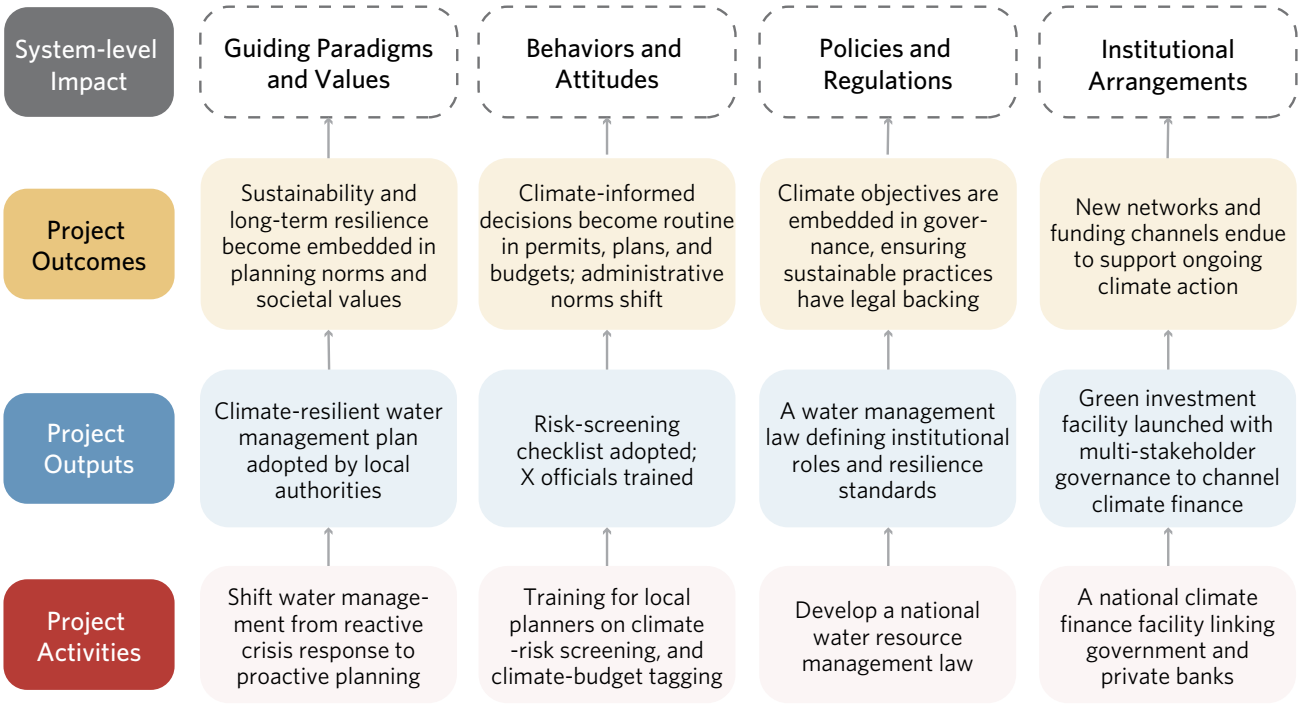
prizes, R&D investments, startup companies, corporate purchasing commitments, and enabling policies are fostering the growth of technologically-advanced carbon dioxide removal (Systems Change Lab, 2024). No single project or program "owns" this outcome; instead, change accelerates when reinforcing feedback loops kick in (for instance, more deployment leads to cost reductions, which in turn drive further deployment) and an industry that barely existed begins to scale exponentially. **The tracking implications for Pathway 3 is to focus on ecosystem-level trends and tipping points. Practitioners would backtrack the aggregate indicators that signal the system is approaching transformation** (see Section 4.3).

4.1 TRACKING PATHWAY 1: PROJECT LEVEL

Attributing broad paradigm shifts to a single intervention is challenging because progress reflects the "combination and sequence of efforts by various stakeholders over a longer timeframe" (CPI, 2025b). **However, projects can still demonstrate intent to contribute to system-level change by explicitly outlining their contribution logic through a robust Theory of Change (ToC)**. In particular, the ToC should describe the project's envisioned contribution to system-level outcomes using a contribution (not attribution) logic. This means focusing on the project's role as one catalyst among many, rather than claiming sole credit for large-scale change. For instance, the GCF now requires each proposal to articulate a clear ToC linking project activities to transformative impact beyond the project itself (see Box 9). By framing interventions in this way, project designers acknowledge that while a single project cannot transform a system in isolation, it can align with and feed into broader, system-level change processes (GCF, 2021a).

A practical tracking approach is to assess the project's intended system-level impacts according to four key dimensions, outlined in CPI's initial Scoping Study: (1) Guiding paradigms and values, (2) Behaviors and attitudes, (3) Policies and regulations, and (4) Institutional arrangements. These dimensions, drawn from systems change literature, encompass the deep shifts needed for a low-emission, climate-resilient economy. The project's ToC should explain how it aims to influence each dimension in a contributory way (see Figure 15).

Figure 15: Visualizing Pathway 1 tracking



Guiding paradigms and values: This refers to the overarching mindsets, goals, or narratives that guide decision-making in the system. A project contributes to paradigm shifts by promoting new values or development paradigms aligned with climate goals. For example, the GCF's project in Sri Lanka's Dry Zone reframed water management from a reactive, crisis-driven approach to a proactive, integrated, climate-resilient one (GCF, 2016). This meant treating freshwater as a resource to be managed continuously (rather than an emergency commodity) and embedding long-term resilience planning into local development agendas (UNDP, 2023). By mainstreaming concepts of sustainability and forward-looking risk management, the project helped shift societal values toward climate resilience, illustrating how even a single intervention can catalyze broader mindset changes in the water sector.

Behaviors and attitudes: This dimension captures the practices, norms, and preferences of key stakeholders (e.g., consumers, businesses, communities). Projects can target behavior and attitude changes by demonstrating new practices or incentivizing different choices. One example is the Climate Resilience Financing Facility in Tajikistan (CLIMADAPT), supported by the EBRD (2016). This project worked through local banks to offer "green loans" to households, farmers, and businesses for climate-smart technologies, while also providing training and technical advice on sustainable practices. The availability of tailored credit for drip irrigation, efficient water use, and other adaptive measures encouraged communities to adopt these innovations, effectively cultivating a culture of climate-conscious decision-making. Local financial institutions, in turn, began normalizing climate-friendly lending as a viable business, indicating a shift in their norms and risk perception. Such changes in everyday behavior and stakeholder attitudes, though subtle, are critical for sustained system change. They show people internalizing new ways of doing things (e.g., farmers routinely using climate information or investing in resilience measures), which in turn reinforces larger structural transitions.

Policies and regulations: This dimension involve changes to laws, policies, plans, or standards that govern the system. Even single projects can inform or catalyze policy changes as part of their impact pathways, by working with governments or regulators to pilot policy innovations or to promote policy reform. For example, a mitigation project might support the drafting of a new renewable energy law, or an adaptation project could help develop water management guidelines. In one illustration, the GCF's project in the Maldives supported new regulations to govern water supply, including sub-laws clarifying institutional roles in water distribution. By the project's end, an official regulatory framework for competitive, climate-resilient water delivery was in place (GCF, 2015).

Institutional arrangements: Systemic change often requires new or improved institutional structures and relationships. This dimension examines how a project influences the configuration of organizations, partnerships, and resource flows within the system. Projects can contribute by establishing coordination mechanisms, funding facilities, or multi-stakeholder partnerships that outlast the project. For instance, the innovative Rwanda Green Investment Facility (RGIF) was set up with GCF support to mobilize climate finance through a national platform (GCF, 2025). The RGIF created a new institutional mechanism jointly led by the government's environment fund (FONERWA) and a development bank. It forged partnerships with ministries, local authorities, and private banks to channel grants and loans into climate projects. By formalizing these coordination structures and funding channels, the project effectively strengthened institutional arrangements for climate action, making it easier for disparate actors to work together and for finance to flow into priority areas (such as renewable energy, climate-smart agriculture, etc.).

It is important to note that assessments of a single project's contribution to these four dimensions are *ex-ante* and theory-based. In practice, project teams outline expected systemic influences in the planning stage (e.g., via ToC narratives or qualitative scorecards) before those higher-order changes fully materialize. This means the evidence for system-level impact at project completion is often indirect or anecdotal. While such forward-looking assessments signal intent, their evidence base is, by definition, limited—one cannot definitively prove a causal link between a single project and broader societal shifts (especially in the short term). Over time, *ex-post* evaluations and case studies may validate whether these theorized contributions did occur, but during the project cycle, the system-level impact largely remains a plausible expectation rather than a measured and verified result.

Box 9: Theory of change: tracking project-Level contributions to system change—the GCF

The Green Climate Fund (GCF) was established with an overarching mandate to spur a "paradigm shift" toward low-emission, climate-resilient development pathways. Translating this mandate into practice at the project level, the GCF employs a comprehensive Results Management Framework (RMF)—updated in 2021 as the Integrated Results Management Framework (IRMF)—to guide project design, monitoring, and evaluation. The IRMF establishes a structured results architecture linking each project's outputs and outcomes to GCF's higher-level transformational goals. In essence, every GCF-funded project must align its objectives and indicators with the fund's paradigm-shift agenda. This results-based approach enables the GCF to continuously track whether projects are on track to deliver expected climate results and contribute to low-carbon, climate-resilient pathways (GCF, 2021a).

The GCF requires the development of a Theory of Change (ToC) for each funding proposal. Project proponents must articulate clear impact pathways evidencing how project activities and outputs will lead to broader systemic outcomes aligned with GCF's paradigm-shift goal. By mapping out causal pathways to long-term change, including assumptions and external drivers, the ToC in GCF proposals ensures that each project is deliberately designed as a catalyst for low-emission and/or climate-resilient development.

4.2 TRACKING PATHWAY 2: PORTFOLIO LEVEL

Portfolio-level indicators assess systemic outcomes across a coordinated set of interventions implemented under a common strategy or by an institution. Here, "portfolio" could refer to a program, fund, or collection of projects delivered by an institution or a coalition that shares overarching objectives. The idea is to measure the aggregate results of these combined efforts, providing insight into the effectiveness of strategic choices and enabling institutions to better manage transformational impact. By compiling outcomes across projects, portfolio-level assessments can capture broader patterns. For example, public finance providers could track, over a certain period of an investment program, whether it helped bend the emissions trajectory of a sector, mainstream new technologies, influence policies, or build institutional networks. These indicators do not attribute change to any single project, but rather evaluate the collective influence of the portfolio.

Portfolio-level indicators can also be structured around the same four dimensions of systemic change introduced in the Scoping Study and applied as the basis for a ToC above. Table 9 illustrates example portfolio indicators under the following categories: guiding paradigms and values; behaviors and attitudes; policies and regulations; and institutional arrangements.

Table 9: Example indicators for portfolio-level outcomes

Dimension	Indicators	Unit	Data source
Guiding paradigms and values	Percentage of portfolio aligned with 1.5°C pathways[21]	%	Institution's sustainability report; climate strategy report
	Percentage of institution/portfolio scoring high on transformation[22]	%	Climate finance results report (see UK Government, 2023c)
Behaviors and attitudes	Number of projects that include education, awareness-raising, training or other behavior-change interventions	#	Project appraisal document; Result management framework
	Number of beneficiaries reached through educational programs, public awareness campaigns or consumer nudges across projects	#	

21 Climate-alignment results vary across different providers of assessment, but it usually refers to the share of the portfolio that is consistent with a global emissions pathway limiting warming to 1.5°C, and that does not undermine climate resilience or lock in high-carbon assets (OECD, 2024; EIB, 2023).

22 If the institution does not have the capacity to conduct transformational scoring, this can be replaced with a qualitative evaluation focused on progress toward a paradigm shift, considering factors such as systemic change, scale, and sustainability (Adaptation Fund, 2025).

Dimension	Indicators	Unit	Data source
Policies and regulations	Number of new or improved climate policies, laws, strategies	#	Project appraisal document
	Number and volume of policy-based lending programs delivered by institution/portfolio	#/USD	Project appraisal document
Institutional arrangements	Proportion of institutional finance delivered through joint structures (co-financing, country platforms, etc.)	%	Project appraisal document
	Number of new legislation/taxonomy/policy report demonstrating participation in initiatives on harmonizing climate finance metrics, taxonomies, or due diligence processes	#/qualitative evidence	
	Number of formal multi-stakeholder platforms established or supported (e.g., Climate and Development Partnerships, national investment platforms)	#	Project appraisal document

Guiding paradigms and values: At the portfolio scale, this dimension is often tracked through the strategic alignment of the portfolio with transformative goals. Indicators might include the *percentage of portfolio investment aligned with a 1.5°C pathway or with countries' long-term strategies*; the *share of projects rated with high "transformational potential" scores*; or the *proportion of funding devoted to paradigm-shift approaches* (rather than incremental improvements). These metrics gauge whether an institution's resources are being channeled toward activities that fundamentally realign development trajectories with low-carbon, climate-resilient values.

Behaviors and attitudes: For a portfolio, this dimension focuses on whether the portfolios contribute to long-term changes in how societies, investors and institutions act. It focuses on changing social norms to mainstream low-emission and climate-resilient choices. *Education and awareness campaigns* have therefore been recognized as a key indicator for this dimension. Public finance providers have also developed methods to assess results under this dimension. For example, the GCF's learning paper introduces variables that track whether a funding proposal identifies a lack of knowledge or behavior as a barrier and whether it includes awareness-raising or training activities (GCF IEU, 2020).

Policies and regulations: At portfolio level, this dimension aggregates the influence of interventions on the policy and regulatory environment. A common indicator is *the number of policies, laws, or strategic plans supported or enacted due to projects in the portfolio.* The limitation, of course, is that not all policies are equal. Simply creating the legal or regulatory infrastructure does not guarantee subsequent implementation or impact. Moreover, one robust policy reform could outweigh ten more minor ones. Thus, while "number of policies" is a useful starting point, portfolio assessments often supplement it with qualitative context, detailing major legislative achievements or flagging where enforcement remains weak. Another challenge is attribution: policies are typically developed by governments with many inputs; a portfolio can contribute technical assistance or advocacy, but claiming direct credit can be unfounded. Despite these caveats, tracking policy-level outcomes in aggregate helps an institution see its systemic impact.

Institutional arrangements: This dimension, at the portfolio level, examines how the institution's collective efforts affect collaboration, financing, and institutional capacities within the broader system. Key indicators include the *proportion of an institution's finance that is delivered through joint financing structures* and the *number of partnerships or platforms created* (e.g. multi-stakeholder forums, joint initiatives, new coalitions facilitated by the portfolio). Another indicator could be the *portfolio's engagement in collective efforts*: participation in country platforms or joint programs, contributions to harmonized standards, and sharing of best practices across institutions. The

challenge here is one of attribution and significance: simply participating in cross-institutional knowledge sharing does not, therefore, equate to delivering system-level outcomes. Similarly, counting partnerships does not reflect their effectiveness in practice. Nonetheless, these indicators capture an important aspect of transformation: building the networks and institutional infrastructure that allow climate solutions to flourish.

4.3 TRACKING PATHWAY 3: ECOSYSTEM LEVEL

The ecosystem level of tracking looks at broad, society-wide indicators to assess systemic shifts at scales beyond any single institution or portfolio. The purpose is to capture the cumulative effect of decentralized actions. Essentially, the question is: Are we seeing the transformational changes in the real world that all public climate finance efforts ultimately aim for? These indicators backtrack overarching outcomes across country, thematic, and global levels, providing a top-down view of progress. Importantly, ecosystem indicators do not isolate the contribution of one actor; rather, they measure the state of the system itself, which is shaped by many interventions and forces combined. Ecosystem-level tracking can be structured into three levels of analysis (see Table 10), each offering a different vantage point on systemic change: (1) Country level; (2) Thematic level; and (3) Global level.

Table 10: Example indicators for ecosystem-level outcomes

Level		Indicator	Unit	Data source
Country level		Number of countries with Long-term Strategies	#	UNFCCC submissions from Parties to the COP
		Number of countries with Nationally Determined Contributions (NDC)	#	
		Number of countries with climate vulnerability and risk assessment	#	
		Number of detailed sectoral plans to meet NDC	#	
		Number of countries with National Adaptation Plan	#	
		Number of countries with resilience monitoring, evaluation and learning systems	#	
Thematic level	**Energy example**	Percentage of renewable energy in the global energy mix	%	SDG progress report (IBRD, 2025) CPI, 2025a
		Amount of international public financial flows to developing countries in support of clean energy	USD	
	Transport example	Share of zero-emission vehicles in the transport mix	%	IEA, 2025
		Amount of international public financial flows to developing countries in support of public transport infrastructure	USD	CPI, 2025a
Global level		Percentage of global population at high risk from climate shocks	%	Joint MDBs, 2024
		Global GHG emissions	$GtCO_2e$/year	IPCC, 2023, UNFCCC, 2025g, Joint MDBs, 2024
		Global GHG atmospheric concentration	ppm	

Country-level and global-level indicators are adapted from the Joint MDB Common Approach (Joint MDBs, 2024).

Country-level indicators track systemic progress at the national scale. They are often aligned with countries' own climate and development targets, offering an ecosystem view of how each country is advancing toward a low-emission, climate-resilient economy. Key examples include progress on NDCs and national adaptation goals. For mitigation, an indicator could be the *trend in a country's GHG emissions trajectory* relative to its NDC target or a 1.5°C-consistent.

For adaptation, countries might have indicators such as the *percentage of territory or population covered by climate resilience measures*, or the *extent to which climate risks are integrated into development planning.* Other country-level metrics can include the *existence and quality of climate policies/frameworks* —for instance, whether a country has adopted a comprehensive climate change law, a net-zero target, or a national adaptation plan, and is implementing them. Ecosystem backtracking can also examine outcomes such as the *share of renewable energy in the national energy mix*, *deforestation rates*, or *climate-related disaster losses as a proportion of GDP*. Many of these indicators are part of broader global monitoring efforts (e.g., UNFCCC Global Stocktake; SDG indicators). They provide a holistic picture of whether climate finance –domestic and international—is translating into real-economy changes country by country.

Thematic (or sectoral) indicators zoom in on specific systems or sectors across regions to gauge whether they are undergoing the intended transformation. This recognizes that systemic change often manifests in specific domains—e.g., decarbonization in the energy sector or shifting transport systems to zero-emission modes. Rather than averaging at the country level, this approach considers sector-specific indicators at the global or regional level. Examples of thematic ecosystem indicators include the *global share of electricity generated from renewable sources* and the *percentage of new car sales worldwide that are electric vehicles (EVs)*. These statistics, often tracked by custodian international agencies (e.g., the International Energy Agency for energy sector diagnostics), reveal whether entire industries or thematic areas are transforming. Importantly, thematic shifts often depend on multiple country contexts and global market forces (e.g., technology costs), so attributing changes to climate finance alone is complex. However, these indicators serve as vital benchmarks of transformation.

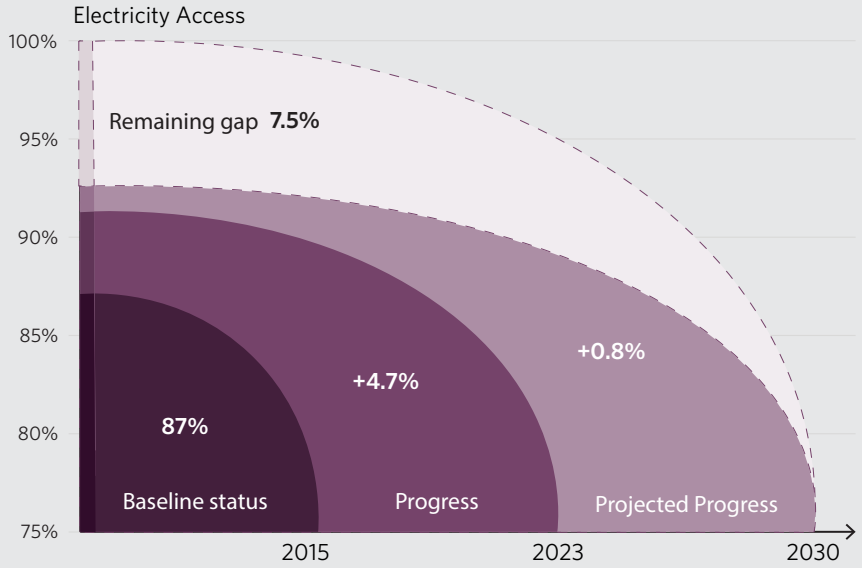
Global indicators capture the ultimate outcomes for the planet and humanity. The most prominent example is total global GHG emissions (measured tCO_2e per year). This indicator reflects the net result of all efforts (or lack thereof) to mitigate climate change worldwide. On the adaptation side, one could look at the global percentage of the population highly vulnerable to climate impacts (Joint MDB, 2024), or indices like the Global Climate Risk Index, which summarize how exposed and unprepared the world population is to climate shocks. These ecosystem metrics are influenced by numerous factors beyond public climate finance, including national policies, private-sector shifts, economic trends, and technological breakthroughs. Nonetheless, they provide the context and validation for climate action.

Box 10: Tracking SDG 7—An ecosystem-level lens on energy system transformation

Tracking SDG 7: The Energy Progress Report 2025 offers a model for monitoring system-level change in the energy sector (at the thematic level). This annual report provides a global dashboard of progress toward SDG 7. It compiles time-series indicators to assess whether the world is transitioning toward key 2030 targets, using consistent data from national and international sources. The report covers four pillars: energy access, renewable energy, energy efficiency, and international cooperation.

Pillar 1: Universal Energy Access: The share of the population with access to electricity (and clean cooking). As of 2023, electrification has reached approximately 92% of the global population, up from previous years. However, 666 million people still lack electricity, and the current pace is insufficient to achieve 100% access by 2030. Access to clean cooking fuels is improving more slowly, with over 2 billion people still reliant on polluting cooking methods, reflecting setbacks from the pandemic and other challenges.

Figure 16: Visualizing progress toward electricity access



Source: Tracking SDG 7 report

Pillar 2: Renewable Energy Share: The percentage of renewables in total final energy consumption and the installed renewable energy capacity. The latest data show that renewables accounted for 17.9% of global final energy in 2022, indicating only modest growth in their share toward the SDG7 target. Per capita renewable electricity capacity hit a record 478 watts in 2023, yet this level remains insufficient for a sustainable energy transition, especially in developing countries.

Pillar 3: Energy Efficiency: Progress in reducing global energy intensity (energy use per unit of GDP). Improvements in energy efficiency continue, but the pace remains too slow to meet the goal of doubling the rate of improvement by 2030. Efficiency gains have been incremental when a steeper decline in energy intensity is needed to align with climate objectives.

Pillar 4: International Cooperation: International public financial flows to developing countries for clean energy (indicator 7.a.1). The report measures donor commitments drawn from a combined subset of the OECD-DAC CRS and IRENA's Renewable Energy Public Finance Database. The latest data shows flows reached USD 21.6 billion, a third consecutive annual increase and a 29% year-on-year increase, but it remains geographically concentrated and debt-heavy. Tracking SDG 7 provides a blueprint for ecosystem-level climate finance, where success is measured not just by dollars spent but by observable shifts in the real-economy and energy infrastructure over time.

5. CONCLUSIONS AND REFLECTIONS

Building on CPI's recently developed conceptual framework for understanding climate finance quality, this paper has mapped a menu of relevant and practical indicators that could be used to track and assess that quality across three levels:

- **At the project level**, this entails core results indicators for mitigation and adaptation, respectively, complemented with a choice of context-relevant sector-specific indicators already available from existing MEL practices (see supplementary Excel download file). In addition, CPI proposes tracking project-level co-benefits by tagging (or quantifying) the contributions of mitigation and adaptation finance to the SDGs as well as tracking key cross-cutting considerations.
- **At the market level**, a more frontier topic for results measurement and monitoring, indicators can be structured according to the different stages of market evolution (market creation and development; market replicability and scalability), complemented by a cross-cutting assessment of market inclusiveness.
- **At the system level,** three pathways for contributing to system change can be derived. In turn, these can be used to outline different tracking approaches to elaborate on contributions to system-level change at the project, portfolio, and ecosystem levels.

This section concludes with reflections from this exercise, with a view to informing subsequent data collection, analysis and deriving learnings from existing public climate interventions.

There is a need to broaden climate finance results measurement capacities so that public actors can (i) report on both outputs and outcomes; and (ii) provide relevant data for understanding their contributions to market- and system-level change. Public climate finance providers operate with different levels of internal technical capacity and resources, and face challenges in moving beyond output indicators to measure changing outcomes associated with their interventions (OECD, 2020). Constraints on resources, capacity and time curtail many public finance institutions from robust and extensive results measurement and monitoring. Given this, our analysis distinguished, within project-level results tracking, between level 1 output indicators (that require less technical capacity to calculate), and level 2 outcome indicators (that are more complex to measure yet help derive stronger insights on the extent and nature of observed change). Moving forward, public actors could jointly decide which indicators are worthwhile and feasible to track at each level, and begin building measurement capacities accordingly. Moving beyond the tracking dilemmas faced at the project level alone, there is currently a substantial gap in assessing contributions to market- and system-level change. Ultimately, understanding public climate finance providers' contributions to these broader levels will depend on additional data collection and data sharing to help build the picture of how they are contributing to (i) market creation and development, market replicability and scalability, and market inclusiveness; and (ii) the three different pathways for understanding system-level change.

From the multitude of practical indicators highlighted in this paper, nine in particular emerge that may serve as an initial focal point for efforts to establish a common approach to assessing the quality of climate finance across multiple public actors. These key indicators

stand out as broadly operational (though not without complexity), potentially insightful and, in some cases, aggregable, for public climate finance providers to start reporting on.

- **At the project level,** this entails (i) emissions mitigated (measured in tonnes of CO_2 equivalent), (ii) beneficiaries reached (measured in the number of people), (iii) SDGs targeted (measured by goals 1-17), (iv) co-financing secured (measured in monetary units), and (v) technical assistance provided (measured in terms of the number of recipient individuals/organizations).
- **At the market level,** this entails (vi) the volume of private finance catalyzed (measured in monetary units)[23] and (vii) the number of jobs directly supported (measured in full- and part-time jobs).
- **At the system level,** this entails tracking whether (viii) project-level theories of change address system-level change (using contribution logic in the form of narrative evidence) and (ix) calculating the percentage of an institution's portfolio that contributes to system-level change.

Together, these nine indicators offer a starting point for operationalizing the tracking of climate finance quality across the three levels identified in CPI's initial Scoping Study (CPI, 2025b).

Nonetheless, if a consensus can be reached on which indicators are feasible and worthwhile to track across public actors, there is also a need for harmonized measurement approaches across institutions to enable comparisons and, possibly, aggregation.[24] For all the indicators spotlighted in this paper, various decisions have to be made regarding the underlying methodology (for example, whether indirect or only direct beneficiaries/jobs are counted; or whether measurement is done *ex-ante*, based on estimates, rather than *ex-post,* based on realized results). To enable fair comparisons between institutions—or, where the indicator allows, aggregation across institutions—there is a need for consistency in measurement approaches. This standardization necessitates setting potentially subjective thresholds (e.g., the time horizon over which to measure the number of jobs created).

There is a need to establish a working group of public climate finance providers (and recipients) who are willing and able to foster consensus with a view towards public reporting. The Climate Finance Advisory Service has called for such a group to decide upon: (i) which indicators should form the basis of climate finance quality tracking; and (ii) how those indicators will be measured in practice (CFAS, 2024). This could emulate processes that have already led to the standardization of key indicators, for example, the *IFI Framework for a Harmonized Approach to GHG Accounting*, the *MDB Task Force on Mobilization* (which has facilitated joint reporting on private finance mobilized across multiple development finance institutions) and the *Joint MDB Common Approach to Measuring Climate Results.*

Converging upon harmonized indicators to assess the quality of public climate finance is essential to understand collective progress and strengthen opportunities for coordinated action. This paper situates itself within broader calls for more harmonized approaches to measuring and monitoring climate results across different public climate finance providers (CPI, AfDB & FiCS, 2025; G20 SFWG, 2025). Indeed, in a variety of high-level forums – including the G20 Sustainable Finance Working Group and the Coalition of Finance Ministers for Climate Action – there has been growing calls for complementary and coordinated approaches to climate results measurement

23 And/or the percentage of projects deemed to be catalytic.
24 Noting that attempts at aggregation should be caveated or nuanced with information on market-/geographic-/sector-specific differences.

and reporting, in order to enable comparisons across actors and build out a picture of collective progress, or in fact where collective action is falling short. More specifically, in the context of UNFCCC processes, harmonized quantitative indicators are essential for monitoring and managing global progress with regard to the New Collective Quantified Goal (NCQG) on Climate Finance, the global goal on adaptation (GGA), and the Global Stocktake (GST).

A key reflection derived from this exercise is the need to complement a set of quantitative indicators with qualitative evidence. While the central proposition is to assess the quality of climate finance using a set of quantitative indicators, these indicators cannot tell the whole story of what is working (and for whom), what is not, and what may be scaled or replicated. Indeed, while quantitative indicators have the benefit of (partially) mitigating the subjectivity associated with judgements on quality, they often fall short of capturing the *how* and the *why* behind observed changes. Across all levels of action (project, market, and system) and all types of indicators (outputs or outcomes), quantitative indicators require context to facilitate meaningful and insightful interpretation. Supplementing these with sector- and geography-specific qualitative information will help public capital allocators to (i) interpret the nature and magnitude of change their interventions are contributing to; and (ii) inform future project or program design and appraisal, based on the learnings from the combined evidence base.

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7. ANNEXES

Annex 1: Number of beneficiaries measurement approaches across public adaptation finance providers

Institution	Approach overview
Adaptation Fund (AF, 2014; AF, 2019; AF, 2025)	Number of beneficiaries: Beneficiary-based proxy indicator for increasing adaptive capacity Focus on the number of people receiving direct or indirect support from projects Classification of beneficiaries by targeting (targeted/not) and intensity (low/medium/high) Reports disaggregated totals (direct/indirect by gender and youth) at three project stages (approval/first year/completion).
UK Government, ICF (UK ICF, 2023a; UK Government, 2024a)	Number of beneficiaries: Reach-based beneficiary count for adaptation programs. Reporting the total number of people supported: direct and indirect beneficiaries. Direct beneficiaries disaggregated by sex, age, disability, and geography. Results are reported annually by programming year. Includes results from leveraged finance as of Feb 2023 revision. Resilience: Outcome-based indicator tracking the number of people with improved climate resilience. Reports the total number of people with enhanced resilience due to ICF adaptation programs. Disaggregated by sex, age, disability, and geography. Aligned with international standards; includes results from leveraged finance (as of 2024). Results are reported annually by programming year.
GCF (GCF, 2021a)	Number of beneficiaries: Direct and indirect beneficiaries of adaptation projects tracked across key result areas: vulnerable communities, health/food/water security, infrastructure, and ecosystems. Reported as the number of individuals reached. Disaggregated by sex and result area. Supplementary indicators included on climate-resilient livelihoods, food and water security, early warning coverage, resilient housing, and reduced disaster losses.
CIF (CIF, 2022)	Adaptation indicators: Strengthened the climate resilience of people (#) Strengthened climate resilience of land (ha) Strengthened physical assets (USD)
(IKI, 2024)	Number of beneficiaries: The number of people directly and indirectly supported by the project to better adapt to climate change. Disaggregated by gender
GEF (GEF, 2018; GEF, 2024; GEF, 2022)	Number of beneficiaries: Direct and indirect beneficiaries Disaggregated by sex, MSP/FSP, IP/DO

Annex 2: Market-level assessment approaches

Institution	Approach overview
CIF (CIF, 2023)	Evaluation of market development through competitiveness and industrial development. CIF's market development indicators include: 1) increased SMEs in the market 2) improved integration/connectivity of systems 3) supply chain development 4) maturation of market structures 5) increased technology adoption 6) expanded access to capital 7) reduced operating costs 8) increased affordability of low-carbon technologies 9) increased/diversified product offerings 10) reduced trade imbalance 11) more projects/products meeting international standards 12) improved legal/regulatory framework, capacity, governance
GCF (GCF, 2022; GCF, 2021a)	Core Indicator 7: "Degree to which GCF projects/programs contribute to market development/ transformation at the sectoral, local or national level"
Market Development Facility (MDF, 2015)	This system defines a four-stage pathway for systemic changes, namely 'initial', intermediate', advanced', and 'mature'. The following systemic parameters are evaluated at each stage: 1) autonomy: extent to which market actors independently adopt, enhance, and normalize business models promoted by MDF, beyond initial partnership commitments 2) sustainability: the extent to which the promoted business model is accepted by the market generates economic returns and attracts reinvestment, indicating its overall sustainability 3) resilience: extent to which the market system supports the continued adoption, adaptation, and competitiveness of the business model (e.g., improved supporting services, public-private cooperation, enabling policies, learning systems, and the emergence of change drivers) 4) inclusiveness: the extent to which the business model is adopted by market players and delivers both widespread and meaningful benefits to the target group 5) scale: extent to which the business model reaches a larger proportion of the target group 6) women's economic empowerment: extent to which the business model benefits women (e.g. improved services access, opportunities, and decision-making power)
EBRD (EBRD, 2024c)	The assessment of transition qualities (ATQ) is a market sustainability assessment approach based on a combination of indicators and assessments according to six sustainable-market qualities, divided into weighted components that are measured with weighted indicators (not presented here), as follows: 1) competitive: market structures, capacity to generate value added 2) well-governed: national-level governance, corporate-level governance 3) green: mitigation, adaptation, other environmental areas, cross-cutting 4) inclusive: human capital development, access to finance and services, policies and norms 5) resilient: energy sector resilience, financial stability 6) integrated: external integration, international integration
CaLP (CaLP and HSP,)	Minimum Standard for Market Analysis (MISMA), in supporting market-based programming, aims to leverage the market as a platform for program delivery, enhance the market's ability to meet the population's needs, improve the broader market environment to boost system efficiency and accessibility, and strengthen market-related services and infrastructure. This framework is developed for disaster contexts and economic recovery.

Institution	Approach overview
CaLP (CaLP, 2018)	Multi-Sector Market Assessment (MSMA) is a structured framework designed to guide humanitarian practitioners in assessing market functionality to inform the design and implementation of appropriate interventions. It emphasizes the importance of understanding market dynamics across multiple sectors to ensure that interventions are effective and sustainable. The key components of the MSMA approach are: 1) Definition of the analytical and geographic scope: proposing a framework for market analysis based on the I dentification of the needs and gap, the definition of market assessment objectives, the selection of critical markets and places, the definition of the scope and depth of the assessment, the development of key analytical questions, and the selection of appropriate and relevant market assessment tool or guidance. 2) Market analysis team composition: assembling a competent and knowledgeable team for data collection and analysis. 3) Data collection: using robust data collection methods and trustworthy sources of information. 4) Analysis: conducting rapid or in-depth market analysis to inform program design and achieve objectives through data triangulation, iterative analysis, and participative response analysis. 5) Market monitoring: carry out market monitoring to track findings and support.
ICRC (ICRC, 2014a; ICRC, 2014b) ICRC, 2014))	The Rapid Assessment for Markets (RAM) is designed to give humanitarian practitioners a quick understanding of key markets in the immediate aftermath of sudden shocks such as natural disasters or conflicts. It assesses the capacity of markets to provide essential commodities, informs decisions on response mechanisms (including cash-based interventions or in-kind assistance) and identifies potential market-support interventions. The RAM is intended to provide rapid, preliminary insights rather than comprehensive market analysis, and is particularly suited to practitioners with limited market expertise. The RAM process follows five main steps: 1) Defining the Scope of the Assessment – Gather secondary data, understand the shock-affected area, and select key commodities and marketplaces to assess. 2) Collecting Market Information – Visit marketplaces and gather information from traders and key informants using structured interviews and focus groups. 3) Analyzing Market Information – Use decision tools to determine market capacity, potential for cash-based interventions, and possible market-support actions. 4) Reporting the Findings – Compile a RAM Profile Report to guide response decisions and support discussions on intervention strategies. 5) Monitoring Market Evolution – Track market changes over time to inform adjustments to relief interventions as needed.
BEAM Exchange (2015)	The three-step framework for measuring and attributing change in market systems integrates both top-down and bottom-up approaches. The first step involves a bottom-up monitoring exercise at the intervention level to track and assess whether and how specific interventions have produced changes in the market system, including improvements in its performance and inclusiveness. The second step involves the application of a top-down market system analysis to evaluate key changes in impact- and outcome-level indicators and to identify the drivers behind these changes. The final step involves a comparison and triangulation of the findings from the bottom-up and top-down analyses to examine the logical relationships between program interventions and development results.

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