Green Climate Fund

# Initial Results Management Framework of the Fund (Progress Report)

**GCF/B.06/04**
9 February 2014

**Meeting of the Board**
19-21 February 2014
Bali, Indonesia
Agenda item 8

## Recommended action of the Board

It is recommended that the Board:

(a) Takes note of the information presented in document GCF/B.06/04 *Initial Results Management Framework of the Fund (Progress Report)*; and

(b) Provides guidance to the Secretariat for the finalization of the Fund's initial result management framework for consideration by the Board at its May 2014 meeting.

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# Initial Results Management Framework of the Fund (Progress Report)

## I. Introduction

1. At its October 2013 meeting, as part of its consideration of the Fund's business model framework, the Board, in its decision B.05/03, requested the Secretariat:

> "*to develop a detailed operational results management framework for the Fund, based on the initial result areas and core performance indicators and key criteria decided upon by the Board , taking into account the methodologies set out for illustrative purposes in Annex II of document GCF/B.05/03, input from technical expert bodies and the reporting capacity of countries."*

2. The Governing Instrument provides specific guidance on several key features of the results, performance indicators, and results management framework of the Fund:

> Paragraph 2: *"The Fund will contribute to the achievement of the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC). In the context of sustainable development, the Fund will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their greenhouse gas emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change."*
>
> Paragraph 3: *"[…] The Fund will be scalable and flexible and will be a continuously learning institution guided by processes for monitoring and evaluation. The Fund will strive to maximize the impact of its funding for adaptation and mitigation, and seek a balance between the two, while promoting environmental, social, economic and development co-benefits and taking a gender-sensitive approach."*
>
> Paragraph 58: *"A results measurement framework with guidelines and appropriate performance indicators will be approved by the Board. Performance against these indicators will be reviewed periodically in order to support the continuous improvement of the Fund's impact, effectiveness and operational performance."*

## II. Overview, purpose and linkages with other documents

3. This document presents the elements required for the Board to provide guidance on the operationalization of the Fund's results management framework. This will include validation of the draft result management and monitoring tools that will enable the Fund to measure progress in promoting a paradigm shift towards low-emission and climate-resilient development pathways. More specifically, the approach presented in this document is intended to help the Fund, and its implementing entities (IEs) and intermediaries, as well as its executing entities (EEs), to provide consistent and accurate information on the performance of activities financed by the Fund. (For the remainder of the document, if reference is made to IEs, this also encompasses intermediaries insofar as they perform the functions of IEs.)

4. The results information, gathered at regular intervals, is analysed and integrated into planning to improve performance. The cycle – plan, implement, measure, analyse, fine-tune plans – adheres to the Board's decision: *"… that the Fund, as a continuously learning institution, will maintain the flexibility to refine its results management framework, result areas and*

*performance indicators based on Fund experience in implementation and monitoring, and as evaluation outcomes become available, and that the lessons learned will feed back into the design, funding criteria and implementation of Fund activities, based on results."* (decision B.05/03, paragraph (h)).

5. This document is closely linked to document GCF/B.06/03 *Additional Result Areas and Indicators for Adaptation Activities*, as it draws on the additional adaptation result areas and integrates them into the logical model. It is also linked to document GCF/B.06/05 *Policies and Procedures for the Initial Allocation of Fund Resources*, and to document GCF/B.06/08 *Initial Proposal Approval Process, Including the Criteria for Programme and Project Funding* given the Board's interest in facilitating a results-based approach to allocation (decision B.05/05, paragraph (g) (ii)).

## III. Approach to results and indicators

6. The Fund will develop and use a logical model (LM) and a performance measurement framework (PMF) for both mitigation and adaptation. These performance measurement tools were developed with close reference to document GCF/B.05/03 and by drawing on initial result areas and performance indicators of the Fund adopted by the Board by decision B.05/03, including Annexes I and II of document GCF/B.05/23. The Climate Investment Funds (CIF) tools for results measurement of its funds (Pilot Programme Climate Resilience (PPCR)[1], Clean Technology Fund (CTF), Scaling Up Renewable Energy Programme (SREP)) and the Global Environment Facility (GEF) focal area results framework were also judiciously consulted.

7. The initial result areas adopted by the Board (decision B.05/03, paragraph (e)) were not phrased as result statements (developmental changes) and were thus fine-tuned when integrated into the PMF. Where possible, initial and indicative sets of indicators were simplified when integrated into the PMF in order to minimize the measurement burden for EEs. These indicators would apply across the Fund activities, public and private.

8. The result tools (LM and PMF) presented in this document are not substitutes for sound project and programme strategy. These tools demonstrate the result steps necessary to achieve and measure the paradigm shift towards low-emission and climate-resilient development pathways. They do not, however, make decisions on how resources are used and employed in Fund interventions.

## IV. Logical models

9. A logical model depicts the causal or logical relationship between inputs, activities, and the results. It demonstrates how inputs and activities are converted to changes in the form of results achieved at various levels (in the case of the Fund, these levels are: project, programme, sectoral/cross-sectoral, and paradigm shift). Table 1 describes each level and the estimated time required to complete or achieve it. Generally speaking, attribution of Fund activities to the results achieved becomes increasingly difficult as one moves from inputs to paradigm-shift level results.

[1] Lessons from the PPCR exist, both good and bad, but they are difficult to extract as they vary not just by country, but with respect to how multilateral development banks (MDBs) managed and reported on their projects/programmes. At some point in the near future, the Fund may want to conduct a comprehensive study of what has been learned in adaptation from the PPCR (and CIF in general for mitigation), GEF and the Adaptation Fund.

**Table 1: Logical model levels**

| Logical model levels | Description | Time required |
|---|---|---|
| Inputs | Green Climate Fund funds, leveraged funds, human effort | Start of intervention |
| Supported activities | Direct services provided with Fund investments | 1-7 years |
| Project results | Changes achieved as a result of project outputs | 2-7 years |
| Programme results | Aggregate changes achieved by several projects that constitute a programme | 5-10 years |
| Sectoral and cross-sectoral results | Aggregate changes achieved by a combination of programmes at sectoral or cross-sectoral level | 10-15 years |
| Paradigm-shift results | Changes achieved with all facets of society demanding and integrating low-emission and climate-resilient approaches to development | 15-20 years |

10. The activity and project level results found in the adaption and mitigation LMs are indicative and have been developed to act as guides for EEs. These levels are meant to function as a "menu" for each project to choose from and fine-tune, as required.

## 4.1 Mitigation logical model

11. Annex I presents the mitigation LM. Its purpose is to demonstrate the result steps required to create a shift to low-emission development pathways. This will be achieved through four sectoral/cross-sectoral themes taken from Board documents:

(a) Urban and built environment emission reduction;

(b) Low-carbon power generation;

(c) Reduced greenhouse gases (GHG) emissions from agriculture and forests; and

(d) Mainstreaming low-emission development into governments.

12. The first three sectoral themes are thematic. The fourth sectoral theme is cross-cutting, highlighting the critical contribution of government interventions to ensure sustainability of low-emission development. The three sectoral themes reflect some of the initial result areas adopted by the Board, while the other result areas would be captured as programme results. The sectoral results, like the programme results beneath them, are designed to be broad and inclusive so that any programme and/or project can be positioned within them. The Secretariat would manage the full framework, while IEs and intermediaries would choose one or more result chains to position their particular intervention.

## 4.2 Adaptation logical model

13. Annex II introduces the adaptation LM. In order to accommodate adaptation requirements and priorities that will vary from country to country, the Fund intends to pursue a broad, menu-based approach to adaptation result areas. The adaptation LM comprises inclusive sectors and a cross-cutting theme designed to accommodate the wide-ranging adaptation adjustments anticipated in economic processes, capacity at all levels, human behaviour, institutional arrangements, investment decisions and public policy. These sectors are:

(a) Infrastructure and the built environment;

(b) Enhanced human health and well-being;

(c) Improved ecosystem adaptation;

(d) Enhanced rural and agricultural adaptation; and

(e) Increased climate-risk awareness of governments and societies.

14. Given the all-encompassing scope of adaptation – human, biological, built environment, supply chains, and economic systems – the Fund's resources will likely be intimately mixed with other development funding resources, both internal and external to the country. This will produce a multitude of co-benefits (see Section 6.2) and require discussion and compromise on the way that results are represented and measured (see Chapter VI).

# V. Performance measurement frameworks

15. A PMF includes a set of indicators to measure progress towards results.[2] For each indicator, the PMF will also include guidance on data sources and methods for collecting relevant data, such as baselines, targets, metrics to be used, frequency of data collection, and other relevant information. Such guidance will be developed by the Secretariat once the initial results management framework has been approved by the Board.

16. Interventions that include both adaptation and mitigation aspects are expected to use both the adaptation and the mitigation PMFs to measure progress. This is common practice among multilateral agencies.

## 5.1 Mitigation performance measurement framework

17. Annex III presents the mitigation PMF, the primary reference tool for measuring the Fund's mitigation results. Unlike adaptation, mitigation interventions all share the common underlying goal of reducing GHG emissions from major sources in an as efficient a manner as possible. Given this commonality, the three paradigm-shift-level indicators (listed in Table 2) would be applied to all mitigation interventions. The project proponent would propose other indicators for review and approval at the time of project submission. The indicators that would be applied would depend on the particular programmatic focus of a given intervention.

**Table 2: Mitigation paradigm-shift indicators**

| |
|---|
| Tonnes of GHG emissions produced (intention is to reduce these emissions) |
| Cost per tonne of $CO_2$-equivalent reduced (intention is to reduce costs of mitigation) |
| Volume of direct financing leveraged by the Fund (intention is to maximize the impact of the Fund) |

18. Baselines and targets can only be established once country-based programmes and projects have been selected. For example, an industrial project designed to reduce emissions via technology change would measure the current state of technology emission, estimate the reductions possible from a replacement technology and set a reduction target based on these calculations.[3]

## 5.2 Adaptation performance measurement framework

19. Annex IV outlines the proposed adaptation PMF, the primary reference tool for measuring the Fund's adaptation results. The highest level of achievement for adaptation cannot only be assessed in terms of the value of infrastructure saved, or the number of lives saved, as these are imperfect indicators and their measurement is subject to large elements of

[2] Indicators are neutral and do not imply direction. They are intended to measure both positive and negative performance (increases/decreases, improvements/ deterioration). Result statements indicate direction through terms like "enhanced, increased, or improved."

[3] It is proposed that the level of emission reduction would be measured relative to product output to account for changes in market conditions for the product.

uncertainty, depending on whether extreme or damaging climate related events occur. Achievement should also measure the socio-economic well-being of key country target groups and a country's ability to assess and respond to climate risk on an ongoing basis. For these reasons, the proposed paradigm-shift indicators are as follows:

**Table 3: Adaptation paradigm-shift indicators**

| |
|---|
| Number of countries that routinely screen national and sectoral development plans from a climate risk and adaptation points of view, implement adaptation with a sensitivity to maladaptation, and actively assess and communicate climate risks |
| Level of awareness of men, women, vulnerable groups, government officials, business owners, indigenous groups etc. of the contribution of adaptation measures to their health, livelihoods, and socio-economic well-being |
| Number and quality of actions on adaptation, including the degree of convergence between vulnerabilities identified and actions taken |

20. These three core indicators would be measured by aggregating data from the programme- and project-level indicators and by validating this with systematic country-wide surveys.

# VI. Results management and reporting

21. The performance measurement process will require effort from the Secretariat, accredited IEs and intermediaries, and EEs. Upon approval of the initial results management framework by the Board, in consultation with IEs and intermediaries, the Secretariat will develop a performance monitoring plan, clarifying the respective roles and responsibilities. A Monitoring and Evaluation (M&E) Specialist is currently being recruited for the Secretariat and will be tasked to develop and oversee an effective results management process. This is a good start, but given the work load required to adequately measure the Fund results at all levels of intervention, and given the CIF experience, engaging additional M&E staff should be considered.

22. The plan developed by the M&E Specialist will likely indicate that EEs will have primary responsibility for performance reporting of Fund-supported interventions on the ground. Each EE should be expected to:

(a) Prepare a work plan that will include a LM and a PMF. These result tools should link to the Fund's overall LMs and PMFs, using indicative results and indicators, and be approved by IEs/intermediaries. They can then be used by EEs to capture progress and report to IEs on a regular basis;

(b) Report on an annual basis on project results/outcomes, in accordance with the indicators in their PMFs.

23. As part of the IE/intermediary management function, they would ensure that performance information and learning are being incorporated into EE annual work plans. In addition, IEs/intermediaries would aggregate data from their programmes at national and regional levels. These data would then be transferred to the Secretariat for further aggregation across IE programmes.

24. In this way, the Secretariat would be in a position to report on its overall results. This information would provide the Board with an assessment of the performance of its key mitigation and adaptation result areas and invite fine-tuning of the programme. This information could inform the results-based allocation process (see Chapter VII).

## 6.1 Measurement capacity

25. Experience with other low-emission and adaptation programmes has revealed that most countries and EEs do not have the capacity to establish an effective performance monitoring system to track climate change mitigation and adaptation-related indicators (CIF emerging lesson 9)[4]. The Secretariat will therefore consider different options by which support can be provided to the Fund's staff, IEs and intermediaries, EEs, national designated authorities (NDAs) or focal points with regard to performance measurement. These options will be presented to the Board for approval.

26. Generally speaking, IEs have some level of expertise with results-based management procedures and may have experience monitoring similar low-emission programmes. However, despite global efforts to standardize approaches to results, not all IEs are likely to follow the same formats, some may have different language and phrasing of results-related concepts, and others many not bring an appropriate level of rigor to indictor measurement to ensure the collection of reliable data. As the IEs will manage the EEs, it is proposed that the Fund develops a common understanding of the tools, concepts and measurement expectations.

27. It is proposed that the Fund considers a budget allocation for this important performance measurement work. The Climate Investment Funds estimates that budget for performance measurement in the "new and innovative climate change field" should be in the range of 5-10 per cent (CIF emerging lesson 4)[5].

## 6.2 Co-benefits

28. Given that the potential benefits of Fund interventions are expected to provide regional and local benefits as well, it is proposed that interventions funded by the Fund report on at least one co-benefit, as outlined in document GCF/B.04/03. Important co-benefits that are expected to be highlighted in mitigation and adaptation include enhanced economic growth, improved health, enhanced livelihoods, greater and more equitable opportunities for men and women, greater biodiversity, better access to electricity and potable water, and increased food security through more resilient farm systems and more consistent agricultural yields. It would be the responsibility of each project proponent to select what co-benefit or set of co-benefits they would report on. Results and indicators for anticipated co-benefits should be identified in start-up plans.

## 6.3 Knowledge sharing

29. Knowledge sharing would draw from "on-the-ground" success cases and experiences and package them as case studies/promotional materials to be disseminated via the Fund networks or shared in a more consistent and focused way via knowledge hubs or South-South exchanges.

30. In addition, it is proposed that the Secretariat provides annual reports that summarize lessons learned from countries and projects to help guide Board decisions on the evolution of Fund allocations and to help clients design programmes and projects. Country reports would draw on analyses undertaken by NDAs or focal points to help support the country-driven objective of the programme. Initially, it is proposed that the Fund would provide technical

[4] Emerging lessons from operationalizing the CIFs results frameworks https://www.climateinvestmentfunds.org/cif/measuring-results/sharing-experiences
[5] Ibid.

assistance to countries with limited capacity, decreasing this assistance as their capacity improves. Project-specific outcomes would draw on project reports from the IEs, summarized by the Secretariat to provide project and programme design guidance. The reports would be designed to help maximize the impact of the Fund and to guide the countries constrained by multiple objectives. It is estimated that it would require two research assistants and one climate change results expert two months per year to produce these reports. In addition, it is proposed that the Secretariat develops and maintains knowledge sharing through an internet-based platform.

## VII. Results-based allocation

31. A two-tiered allocation system is proposed in document GCF/B.06/05, based on (1) themes and (2) proposed activities, which are mainly projects and programmes. These allocation decisions would be made contingent, as much as possible, on the achievement of results in programmes and projects. As further elaborated in document GCF/B.06/08, in the second tier of the allocation system, the actual approval of activities, the level of expected results of the activity will be one of the key criteria for allocating resources.

32. This Chapter recognizes that the PMF is an important tool for results- or performance-based allocation,[6] but that it cannot by itself provide the basis for allocation decisions. It is proposed that the Fund's resource allocation process should evolve over the course of the first few years of operation, drawing on its results implementation experience and lessons learned.[7] There are three major points in time for the collection of result information that could inform allocation decisions:

(a) Regular performance measurement exercises that are conducted in-house and by the EE using its PMF to generate timely feedback on project progress for reporting and to enhance management decision making;

(b) Impact assessment at the end of a project or programme, where the results achievement over the life of an intervention is assessed; and

(c) Evaluation that normally covers multiple project or programme results. Like regular performance monitoring, evaluation assesses the level of results achievement, but usually in a less biased way while addressing broader contextual matters, such as relevance, coherence, country context, and efficiency of implementation over a longer timeframe.

33. It is proposed that all three forms of measurement be incorporated into ex-post allocation decisions. The first two – performance measurement and impact assessment – would produce result information that could be used as a guide for making subsequent allocations (extensions or new phases) upon completion of a given project. All three forms could be used to do the same for programmes. Subsequent programme phases or extensions could be made contingent on the production of a reasonable amount/level of results, as is done at the Global Fund to Fight AIDS, Tuberculosis and Malaria.

34. Results may be easier to achieve and/or measure for mitigation interventions (e.g. GHG emission reductions). For adaptation, results will likely be more difficult to measure, the evidence may be more notional, and/or it may require longer intervals to measure effectiveness (e.g. the occurrence of extreme weather events to fully test the adaptation intervention, and the

[6] Results-based allocation and performance-based allocation are used synonymously.

[7] It should be noted that allocations based on project results cannot be made at the outset of a new fund or programme, as there is no implementation or results experience to inform allocation decision making. Therefore, implementation needs to occur first.

time for hazards from slow-onset process, such as sea level rise to develop). Indeed, because of the unpredictable nature of climate events, it may take a decade or more to produce reliable measure of increases in resilience. This difference in achieving or being able to shed light on timely adaptation results should be taken into consideration during results-based allocation exercises. In this way, the Fund can strive to maintain its balanced approach between mitigation and adaptation.

## Annex I: Proposed mitigation logic model

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Paradigm-shift result*** | **Shift to low-emission development pathways through climate change mitigation** | | | | | | | | |
| ***Sectoral results (implementing entity)*** | Reduced GHG emissions from cities and the built environment | | | Increased supply of low-emission power generation | | Reduced GHG emissions from sustainable land-use management practices | | Low-emission development mainstreamed into governments (incl. the ability to mobilize private sector investment) | |
| ***Programme results (executing entities)*** | Increased energy efficiency of buildings and appliances | Increased energy efficiency of industrial processes | Increased low-emission transportation | Increased development of low-emission power generation[8] at small, medium and large-scales | Increased access to low-emission energy sources | Agricultural systems enhanced to reduce GHG emissions | Reduced emissions caused by deforestation and forest degradation (incl. REDD+ implementation) | Legal and regulatory environment enhanced to incentivize low-carbon investment | Private sector/ institutional investors increasingly invest in low-emission technology |
| ***Indicative project results (to be selected/ fine-tuned by executing entities)*** | More new and retrofitted construction that adhere to building codes and standards | Increased application of energy efficiency standards by industry | More low-carbon transportation strategies developed and programmes funded | More economically viable clean energy suppliers established | More communities linked to national grids | Increased investment in low-carbon agriculture | Improved management systems of entities responsible for forests | Increased capacity of key ministries (incl. finance) to develop policy, laws and low emission incentive systems | New/enhanced mechanisms to decrease risks for private sector/ institutional investors |
| | More appliances built and installed that adhere to green standards | Increased industry knowledge of emission standards and low-carbon incentives | Increased knowledge of green transportation alternatives | Increased amount of low-carbon energy fed into national grids | More households using affordable low-emission energy | Farmers increasingly aware and able to implement soil management techniques and inputs that reduce GHG emissions | Increased value of eco-system services | Increased demand from civil society for low-carbon alternatives | Enhanced institutional capacity to work with private sector/investors |

[8] Low-emission power generation is expected to focus on renewable energy options.

| ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
|---|---|---|---|---|---|---|---|---|---|
| ***Indicative activities*** | ° update energy efficiency standards for appliances;<br>° invest in green building and retrofits;<br>° enforce building codes | ° update energy efficiency standards;<br>° fiscal incentives;<br>° awareness-raising | ° create low-carbon transport strategies and incentives;<br>° invest in low emission options;<br>° awareness-raising of model shift | ° improve permitting and power purchase agreements;<br>° establish enabling policy environment;<br>° provide investment for grid-based renewable energy | ° promote greater investment in renewables or in rural electrification;<br>° establish renewable mini-grids;<br>° extend grids to communities without access | ° promote improved/ sustainable soil management and organic fertilizers;<br>° promote energy efficient agricultural technology | ° support improved land planning;<br>° raise awareness on benefits of REDD+;<br>° establish payment for ecosystem services projects;<br>° develop baseline/monitoring schemes | ° train staff and provide institutional support;<br>° review and identify enabling environment priorities;<br>° revise and approve legislation/policy;<br>° train/raise awareness of civil society | ° reach out and motivate potential investors;<br>° train staff and provide institutional support;<br>° share and promote successful examples |
| ***Fund programme inputs*** | Grants, concessional loans and guarantees (new and additional financing); leveraged private sector funds | | | | | | | | |

## Annex II: Proposed adaptation logical model

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***Paradigm shift*** | **Shift to more climate-resilient development** | | | | | | | | |
| ***Sectoral results (implementing entities)*** | Infrastructure and the built environment more resilient to climate change threats | | Enhanced human health and well-being | Improved ecosystem adaptation | | Enhanced agricultural and rural adaptation | | Climate change adaptation mainstreamed into governments and societies | |
| ***Programme results (executing entities)*** | Increased climate-proofing of power, water and sanitation, communication, transportation systems | Residential, commercial, and government building stock more resilient to climate vulnerabilities | More people (and especially the most vulnerable m/f) able to survive heat, disease and weather exacerbated by climate change | Coastal, deltaic, marine, terrestrial and riverine regions better protected from wave action, sea-level rise, and floods | Increased ecosystem, especially forest adaptation to climate change | Improved storage, use and management of water resources | Agricultural systems and livelihoods enhanced to reduce vulnerability to climate change | Improved climate data, information management, and early warning systems | |
| ***Indicative project results (to be selected/ fine-tuned by executing entities)*** | Increased number of Fund/ private sector/ government partnerships to develop and maintain climate proof infrastructure | Improved adaptation sensitivity of urban planning and selection of urban/town sites | Strengthened awareness and adaptive capacity of health systems and vulnerable groups | Increased development and use of cooling facilities, green roofs, vegetative cover, flood refuges, etc. | Increased institutional capacity to identify threats, plan, budget, implement, and monitor coastal/flood adaption interventions | More measures put in place to reduce damage to ecosystems, especially forests, by wildfires, insect infestations, and loss of biodiversity | Increased supply and sustainable use of clean water | Increased use of climate resilient technologies, farm practices, and coping mechanisms | Improved policy, capacity and coordination among key agencies and ministries for integration of climate risk management and adaptation |
| | Improved enabling environment for climate resilient infrastructure (policy, laws, incentives, etc.) | Improved regulatory environment and climate resilient building codes | Increased coverage of vector borne and infectious disease prevention programmes | Increased incentives and transfer of technology and know-how to, for example, reduce urban heat island effects and flooding impacts | Improved policy and coordination between government and civil society | Improved policy/ regulations and collaboration between governments, regions, civil society, and indigenous populations to implement management strategies | Enhanced management of potable and grey water systems | Increased awareness of climate resilient technologies, farm practices, and coping mechanisms | Increased awareness of climate change threats and self-help responses among vulnerable groups |

| | | | |
|---|---|---|---|
| ***Indicative activities (to be further defined by executing entities)*** | ° develop decision-making, planning, monitoring capacity;<br>° share experiences/policy development workshops;<br>° reach out and build relations with the private sector;<br>° promote and provide incentives for green technologies;<br>° improve public health initiatives | ° develop ability to capture and use climate data;<br>° establish/improve water conservation and treatment systems, water storage and community reservoirs;<br>° develop water reuse and rainwater systems<br>° establish risk spreading mechanisms, such as insurance, micro-insurance, risk facilities, etc. | °promote improved/sustainable soil management and organic fertilizers;<br>° promote climate-resilient technologies, approaches and practices;<br>° apply efficient irrigation<br>° develop strategies and approaches to adaptation that address both slow and rapid onset events |
| ***Fund programme inputs*** | Grants, concessional loans and guarantees (new and additional financing); leveraged private sector funds | | |

# Annex III: Proposed mitigation performance measurement framework

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Paradigm-shift level** | | | | | | | |
| **Shift to low-emission development pathways through climate change mitigation** | Tons of carbon dioxide equivalent (tCO2eq) emitted by countries receiving mitigation funding | Assumed business as usual emissions trajectory measured in tCO2eq emitted by countries at the outset of funding allocations | Baseline less what the Secretariat and IEs agree to be an achievable reduction during the lifetime of the investment | EE/IE results reports and possibly International Energy Agency (IEA), and other statistics | Every two years | Secretariat measurement team | Statistical sources will likely provide country-level data that account for the full amount of tCO2eq reduction/increase (e.g. including through other funding for mitigation). The Fund would co-ordinate data with the UNFCCC and cross-check and adjust estimates to ensure accurate attribution. |
| | Cost per tonne of CO2eq decreased for all Fund-funded mitigation projects | The cost of the project and the emissions reduced both annually and over the projected life of the asset will be calculated | The target is to reduce the expected cost of mitigation by recognizing cost savings and GHG reduction potential | EE/IE results reports and energy balances will be used to determine the emissions from the marginal technology displaced | Every two years | Secretariat measurement team | This measurement will demonstrate increasing efficiency in GHG reduction and help to lessen the country concern that mitigation is an implicit "tax" on economic growth. |
| | Amount of co-financing generated, including other sources of debt and equity | N/A | Leverage other funds by a ratio of at least 5:1. | EE/IE results reports | Every two years | Secretariat measurement team | The funds needed for mitigation will exceed the availability of funds. Measurements will help to indicate ways in which the Fund's funding could maximize their impact. |
| **Reduced GHG emissions from cities and the built environment** | tCO2eq/capita produced by targeted sectors in cities (industry, transportation, building and power sectors) | tCO2eq/capita | tCO2eq/capita | Unlikely that all cities to be funded are tracking city level-emissions. This may require rolling-up country level statistics in key emitting sectors of each city (data to be collected under programme outcomes below) | Annually | IEs | Per capita measurement allows comparison across cities of different sizes. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased supply of low-emission power generation** | Percentage of national power grid energy produced by low-emission technologies<br>Volume of installed capacity of low-emission electricity (in MW) (including mini-grids)<br>Emission intensity per MWh generated | Baseline calculates the existing level of low-emission energy in the grid or low-emission installed capacity | Increase in installed capacity or increase in percentage of low-emission power on national grid | Possibly the Renewable Energy and Energy Efficiency Partnership but make sure that definitions of renewable energy match | Annually | IEs | Measuring the additional installed capacity through Fund investment would be straight-forward but that would not account for growth in electricity usage nor the percentage in the grid that is low-emission generated. |
| **Reduced GHG emissions from sustainable land-use management practices** | Aggregation of indicator data by programme/ country from programme outcomes<br>Per cent of crop/ grazing land area managed to increase soil carbon storage<br>Per cent of degraded/peaty soils restored<br>Rate of deforestation<br>Number of hectares under sustainable forestry management | | | Roll-up of indicator information | Annually | IEs | Field sampling is too ambitious for many developed countries. Many use modelling frameworks that estimate carbon stock change in biomass and soil carbon resulting from land use and management. It is assumed that these kinds of models cannot be developed in the near term for many countries. |
| **Low emission development mainstreamed into governments (incl. ability to mobilize private sector investment)** | Number of policy, laws, incentives, sector strategies at all levels of government targeted by the Fund that include adequate attention to low-emission development | | | Analysis of the low-carbon enabling environment and rating of key pieces of legislation, policy, etc. | Annually | IEs | These indicators will identify the strengths and weaknesses in the low-carbon enabling environment. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| | Number of maladaptive (high GHG-emitting projects) approved by government and implemented by industry | | | National/regional/ municipal development plans and strategies Ministry records | Annually | IEs | This indicator identifies the maladaptive projects sponsored by government/industry during the life of the investment. Ideally government would demonstrate a reduction in number and in GHG intensity of these projects over time. |
| **Programme result level** | | | | | | | |
| **Increased energy efficiency of buildings and appliances** | Level of energy intensity of building sector Level of energy efficiency of appliances (in KWh) | | | Records of appliance manufacturers and independent verification | Annually | IEs, EEs | |
| **Increased energy efficiency of industrial processes** | Energy (in MWh) required to operate industrial equipment Number and capacity of industrial heat and power recovery systems | | | Records of industries targeted by investments and independent verification | Annually | IEs, EEs | |
| **Increased low-emission transportation** | Percentage of low emission vehicles on the road | | | Records of ministry of transport or licensing bureau | Annually | IEs, EEs | Assumes that a portion of investments will target vehicle fleets and possible car manufacturers. |
| | Modal share (by transportation type) | | | Transportation household survey with sex-disaggregated data. | Annually | IEs, EEs | Survey would determine the predominant types of transportation used (pedestrian, bicycle, bus, rickshaw, collective taxi, rail, car, etc.) by women and men in the household. Repeated over time to determine any movement to low-emission modes. |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased development of low-emission power generation at small, medium and large scales** | Number of low-emission power facilities established with the Fund's co-financing<br>Emission intensity per MWh generated<br>Number of power facilities that switch fuels | | | Records of power companies targeted by the Fund's funding and independent verification | Annually | IEs, EEs | |
| **Increased access to low-emission energy sources** | Number of new households connected to electrical grids<br>Number of new households connected to low-emission mini-grids disaggregated by sex | | | Records of power companies and project records | Annually | IEs, EEs | It would be very difficult to measure access to low-emission power for new households because once power is transferred to the national grid it is indistinguishable from high-emission power. Localized power derived from low-emission sources would be easier to track. |
| **Agricultural systems enhanced to reduce GHG emissions** | Per cent of crop/grazing land area managed to increase soil carbon storage<br>Per cent of degraded/peaty soils restored.<br>$CH_4$ emissions from livestock and manure | | | Project records and interviews with male and female farmers to collect data that will allow for emission estimates to be calculated | Annually | IEs, EEs | Hard to measure due to the proliferation of small farms in developing countries. |
| **Reduced emissions caused by deforestation and forest degradation (incl. REDD+ implement-ation)** | Rate of deforestation<br>Number of hectares under sustainable forestry management | | | Records of forest management agencies | Annually | IEs, EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| | CO2e emissions from forests | | | Remote sensing | Annually | IEs, EEs | Where available |
| **Legal and regulatory environment enhanced to incentivize low-carbon investment** | Number and quality of laws, regulations, incentives approved by national governments | | | Review an assessment of pertinent government documentation | Annually | IEs, EEs | |
| **Private sector/ institutional investors increasingly invest in low-emission technology** | Amount (US$) of commercial debt/private equity leveraged<br>Amount (US$) of private investor funds leveraged<br>Amount (US$) of industry monies leveraged | | | Results reports | Annually | IEs, EEs | |
| **Indicative project result level** | | | | | | | |
| **More new and retrofitted construction that adhere to building codes and standards** | Degree to which new residential, commercial buildings and retrofits adhere to energy efficiency guidelines in building codes<br>Number and quality of enforcement mechanisms | | | | | EEs | The information at this level should be fine-tuned and completed by EEs that are aware of local conditions, data sources, and capacity gaps. For appliances built data it is assumed that there would be access to manufacturer information. |
| **More appliances built and installed that adhere to green standards** | Per cent of new appliances (built locally or imported) that adhere to green standards, by appliance type and manufacturer/ importer | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased application of energy efficiency standards by industry** | Number of companies that have low-carbon policies and operational strategies | | | | | EEs | |
| **Increased industry knowledge of emission standards and low-carbon incentives** | Number of inquiries/proposals received from industry/company representatives | | | | | EEs | |
| **More low-carbon transportation strategies developed and programmes funded** | Number of strategies developed<br>Number of programmes aligned with strategy that are success | | | | | EEs | |
| **Increased knowledge of green transportation alternatives** | Number of government, private sector, and civil society organizations advocating for green transportation | | | | | EEs | |
| **More economically viable clean energy suppliers established** | Number of existing energy providers that retool their production process or add low-carbon generation capacity<br>Number of new low-carbon energy suppliers | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased amount of low-carbon energy fed into national grids** | Number and generation capacity of new low-carbon facilities | | | | | EEs | |
| **More communities linked to national grids** | Number of communities connected to national grids | | | | | EEs | |
| **More households using affordable low-emission energy** | Number of households connected to renewable mini-grids with sex disaggregated data. Price differential between low-carbon energy and traditional energy source | | | | | EEs | |
| **Increased investment in low-carbon agriculture** | Amount (US$) and type of low-carbon agricultural investment | | | | | EEs | |
| **Farmers increasingly aware and able to implement soil management techniques and inputs that reduce GHG emissions** | Number of farmers (m/f) who understand key concepts and number (m/f) who have changed their farming practices in response | | | | | EEs | |
| **Improved management systems of entities responsible for forests** | Number of forest service action plans and demonstration projects | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased value of ecosystem services** | Number of payment for ecosystem services by type and annual payment made for each | | | | | EEs | |
| **Increased capacity of key ministries to develop policy, laws and low emission incentive systems** | Number and quality of draft policy, laws, and incentive systems | | | | | EEs | |
| **Increased demand from civil society for low-carbon alternatives** | Number of civil society groups that routinely lobby and campaign government to take leadership in low-carbon growth disaggregated by sex. | | | | | EEs | |
| **New/enhanced mechanisms to decrease risks for private sector/ institutional investors** | Number of public finance mechanisms and effectiveness in reducing barriers and risks | | | | | EEs | |
| **Enhanced institutional capacity to work with private sector/ investors** | Private sector perceptions of government efforts to secure private sector investment | | | | | EEs | |

# Annex IV: Proposed adaptation performance measurement framework

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Shift to more climate resilient development** | Level of awareness of men, women, vulnerable groups, government officials, business owners, indigenous groups etc. of the contribution of adaptation measures to their health, livelihoods, and socio-economic well-being (carried out by systematic surveys across countries) | | | Household questionnaire surveys and key informant interviews in regions targeted by investment and disaggregated by sex | Every five years | Secretariat measurement team | |
| | Number of countries that routinely screen national and sectoral development plans from a climate risk and adaptation point of view; implement adaptation with a sensitivity to maladaptation, and actively assess and communicate climate risks. | | | Based on country performance against sectoral level indicators and possibly global databases | Every five years | Secretariat measurement team | |
| | Number and quality of actions on adaptation, including the degree of convergence between vulnerabilities identified and actions taken. | | | Aggregated from project/ programme data | Every five years | Secretariat measurement team | |
| **Sectoral result level** | | | | | | | |
| **Infrastructure and the built environment more resilient to climate change threats** | Value of infrastructure protected from rapid-onset events and slow-onset processes (e.g. sea level rise, storms, floods, higher temperatures) | | | Replacement cost of infrastructure estimated to have been saved from weather events (weather intensity factored in) | Every two years | IEs | Must insure that artificially inflated property values not included in these calculations. |
| | Number of instances where infrastructure has been relocated or built in less vulnerable locations | | | Programme reports and records | Every two years | IEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Enhanced human health and well-being** | Perceptions of beneficiaries (m/f) of their state of health and the level of climate-related risk to which they are vulnerable | | | Household questionnaire surveys in regions targeted by Fund investment; risk perception scorecard disaggregated by sex | Every two years | IEs | This measure can be cross-checked with people (m/f) affected and (m/f) mortality rates rolled up from programme outcome indicators. |
| **Improved ecosystem adaptation** | Number and area of habitat restored or protected by the activities funded by the Fund | | | Programme reports and records | Every two years | IEs | These (process) indicators measure the interventions made but not the ability of ecosystems to withstand weather events. |
| | Number of food secure households | | | Household survey of men and women | Every two years | IEs | |
| | Area of agricultural land made more resilient to climate change | | | Aggregate from program/project performance data | Every two years | IEs | |
| | Mix of livelihood strategies/coping mechanisms | | | Aggregate from program/project performance data | Every two years | IEs | |
| **Climate change adaptation mainstreamed into governments and societies** | Perception of men, women, vulnerable populations, and emergency responses agencies of the timeliness, content, and reach of early warning systems | | | Household survey and survey of managers of emergency response agencies with data disaggregated by sex | Every two years | IEs | |
| | Quality of regulatory/enabling environment put in place by government plans including quality of non-climate change laws and policies to enable civil society and private sector adaptive interventions | | | Quality scorecard with standards | Every two years | IEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Programme result level** | | | | | | | |
| **Increased climate-proofing of power, water and sanitation, communication, transportation systems** | Kilometres of road made more resilient (heat and flood resistant)<br>Kilometres of storm drains and sewers made more resistant to flood surges<br>Number and purpose of reservoirs made more resilient to climate change | | | Project reports and records | Annually | EEs | |
| **Residential, commercial, and government building stock more resilient to climate vulnerability** | Number of buildings made more resilient to climate change<br>Degree of resilience of buildings to heat, humidity, wind velocity and floods | | | Project reports and independent verification by building inspectors | Annually | EEs | This assumes a qualified country-level building inspection capacity. |
| **More vulnerable people (and especially the most vulnerable m/f) able to survive heat, disease and weather events** | Mortality and morbidity rates during weather/disease/heat events, by age and sex | | | Hospitals and health centre records (International Emergency Aid Agency records) | After each extreme weather event | EEs | Disability-adjusted life years (DALYs) can be used, but this may be harder to track in some countries. |
| **Coastal, deltaic, marine, terrestrial and riverine regions better protected from wave action, sea-level rise, and floods** | Number, coverage (in kms), and effectiveness of soft buffers (beach nourishment and living shores, etc.) and physical barrier coastal defence systems | | | Project reports and measurement of shore erosion after weather events a given intervention was designed to defend against | Annually and after weather events | EEs | |
| | Number and adequacy of flood emergency response strategies | | | Perceptions of populations (m/f) at risk (including vulnerable groups) of test runs of emergency response systems | Annually | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased ecosystem, especially forest adaptation to climate change** | Area damaged by wild fires<br>Area damaged by insect infestation<br>Continuing healthy populations of selected keystone or indicator species in habitats most vulnerable to climate impacts | | | Records from forest management agencies | Annually | EEs | |
| **Improved storage, use and management of water resources** | Quality of government and community water management systems<br>Change in storage capacity vs. the estimated need of the population served under projected climate conditions<br>Evidence of effective community water savings initiatives | | | Observations and interviews with served population by project staff<br>Project documentation | Annually | EEs | |
| **Agricultural systems and livelihoods enhanced to reduce vulnerability to climate change** | Perception of the durability and reliability by crop type by harvest in Fund-targeted zones (ability to provide a consistent yield volume over time) | | | Post-harvest focus group meetings with farmers (m/f) and farmer record books | Every two years | IEs | |
| | Mix of livelihood strategies | | | Survey of farmers (m/f) | Annually | EEs | |
| **Improved climate data, information management, and early warning systems** | Evidence that climate data can be collected, analysed and applied to decision-making in climate sensitive sectors at critical times | | | Programmes to establish standardized scorecards to measure climate information generation, analysis and communication (ranked as unsatisfactory, satisfactory, highly satisfactory) | Annually | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Indicative project result level** | | | | | | | |
| **Increased number of Fund/private sector/ government partnerships to develop climate proof infrastructure** | Amount of private sector funding leveraged for funded interventions<br>Change in government budget allocations to measures/agencies that enhance resilience to climate change | | | | | EEs | The information at this level should be fine-tuned and completed by EEs that are aware of local conditions, data sources, and capacity gaps. |
| **Improved enabling environment for climate resilient infrastructure (policy, laws, incentives, etc.)** | Number and quality of newly introduced policy/ legislation/incentives | | | | | EEs | |
| **Improved sensitivity to adaptation of urban planning and selection of urban/rural sites** | Per cent of (m/f) urban planners who integrate climate resilience considerations into their plans<br>Number of zoning plans implemented that take into account the risk of climate change | | | | | EEs | |
| **Improved regulatory environment and climate resilient building codes** | Degree of integration of climate resilience into urban planning codes/laws/guidelines | | | | | EEs | |
| **Strengthened awareness and adaptive capacity of health systems and vulnerable groups** | Number and coverage of public health responses (surveillance, integrated vector management, outbreak control) | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased coverage of vector borne and infectious disease prevention programmes** | Reach and effectiveness of prevention programmes, by diseases most likely exacerbated by climate change | | | | | EEs | |
| **Increased development and use of cooling facilities, green roofs, vegetative cover, flood refuges, etc.** | Number of cooling facilities constructed and buildings improved | | | | | EEs | |
| **Increased incentives and transfer of technology, knowhow to reduce urban heat island and flooding effects** | Response rate to green incentives<br>Perception of the availability of green technology and knowhow among key government bodies, private sector, and home owners | | | | | EEs | |
| **Increased institutional capacity to identify threats, plan, budget, implement and monitor coastal/flood adaption interventions** | Degree of independence and level of capacity demonstrated by key institutions through the funding cycle | | | | | EEs | |
| **Improved policy and coordination between government and civil society for coastal/ flood adaptive interventions** | Number and quality of collaborative planning and adaptive co-management initiatives | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Improved institution capacity able to integrate forest resilience into all appropriate legal frameworks, policy, and enforcement mechanisms** | Number and quality of policies, laws, and enforcement mechanisms that support forest resilience | | | | | EEs | |
| **Improved policy/ regulations and collaboration between governments, regions, civil society, and aboriginal populations to implement management strategies** | Number and quality of policy/regulations<br>Quality of collaborative planning and actions (joint-ventures, co-implementation, beneficiary monitoring, etc.) | | | | | EEs | |
| **Increased supply and sustainable use of clean water** | Number and volume of potable water (incl. rainwater) systems installed<br>Evidence of conservation measures adopted by water users | | | | | EEs | |
| **Enhanced management of potable and grey water systems** | Number of water re-use systems installed and volume of water saved ($m^3$)<br>Number and quality of grey water management bodies | | | | | EEs | |

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|
| **Expected results** | **Indicators** | **Baseline data** | **Targets** | **Data sources and collection methods** | **Frequency** | **Respon-sibility** | **Assumptions/Notes** |
| **Increased use of climate-resilient technologies, farm practices, and coping mechanisms** | Number of hectares planted with resilient varieties (heat/salinity tolerant, drought resistant crops)<br>Number of hectares planted with a wider variety of crops<br>Number of hectares benefitting from improved soil and water management<br>Number and quality of water use associations and farm-to-farm networks<br>Numbers of farmers (m/f) who diversify their livelihoods | | | | | EEs | |
| **Increased awareness of climate-resilient technologies, farm practices, and coping mechanisms** | Number of farmers (m/f) aware of climate change threats and the need for changes to their farm systems and livelihoods | | | | | EEs | |
| **Improved policy, capacity and coordination among key agencies and ministries for integration of climate risk management and adaptation** | Degree of independence and quality demonstrated by government and/or private sector agencies in collecting, analysing and communicating climate-related information<br>Percentage of key ministries that use climate related information for planning and implementing government interventions | | | | | EEs | |
| **Increased awareness of climate change threats and self-help responses among vulnerable groups** | Number of people (m/f) aware of protocols and able to respond to climate events<br>Per cent of people (m/f) responding appropriately to warnings/climate information<br>Per cent of people (m/f) satisfied with the warning system/climate information communication | | | | | EEs | |

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