Climate Investment Funds

Meeting of the CTF Trust Fund Committee
Washington, D.C.
November 12, 2010

CLEAN TECHNOLOGY FUND
RESULTS FRAMEWORK

Proposed Decision by CTF Trust Fund Committee

The meeting reviewed document, CTF/TFC.6/6, *CTF Results Framework,* and approves the report and the proposed results framework for the Clean Technology Fund (CTF), subject to the comments made at the meeting.

INTRODUCTION

1.   Results monitoring and periodic evaluation of performance and financial accountability of the multilateral development banks (MDB) is a core activity of the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF) Trust Fund Committees as outlined in the governance frameworks of the CTF and SCF[1]. In its meeting in March 2010, the joint CTF-SCF Trust Fund Committee approved the logic models for Climate Investment Funds (CIF), Clean Technology Fund (CTF), Pilot Program for Climate Resilience (PPCR) and Scaling-Up Renewable Energy in Low Income Countries (SREP). The FIP logic model has been presented in June 2010 to the FIP Sub-Committee and is currently finalized. The CIF harmonized results frameworks formalize the commitment of Trust Fund Committees and its partners to accountability for this program and to achieving results. The results framework for the CTF is presented in this document.

2.   The CTF offers highly concessional financing for large-scale, country-initiated energy production, energy-efficiency in all sectors, including transport, projects that have significant potential for long-term greenhouse gas emission savings. The purpose of the CTF is to finance demonstration, deployment and transfer of low carbon technologies with significant potential for green house gas (GHG) emission reduction. The CTF is aimed to influence low-carbon development strategies, promote market transformation through policy reforms, economies of scale, enhanced competition, and private sector participation. It is expected that CTF operations will increase employment opportunities, promote industrial growth and realize other environmental and social co-benefits. The CTF is designed to stimulate lasting changes in the structure and functions of a given sub-sector, sector or market and to demonstrate how CTF co-financing could be used, possibly in combination with revenues from emissions reductions, to make low carbon GHG emissions investments financially attractive by improving the internal rates of return on such investments.

3.   A key element of the CTF is its investment plan (IP) strategy.[2] When a country expresses interest in CTF financing, the relevant MDB conduct a joint mission with the government, other development partners, private sector, civil society organizations (CSO) and other stakeholders to investigate how the fund may help finance scaled-up low carbon activities. The investment plan focuses on utilizing CTF resources in major sectors of the economy through a joint MDB program. It also provides the basis for the design of individual projects.

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[1] See CIF. 2008. *Governance Framework for the Clean Technology Fund*, paragraphs 17 and 25. See CIF. 2008. *Governance Framework for the Strategic Climate Fund*, paragraphs 20 and 55.
[2] Investment plans (IP) for Colombia, Egypt, Indonesia, Kazakhstan, Mexico, Morocco, Philippines, South Africa, Thailand, Turkey, Ukraine, Vietnam, and a regional program for a Concentrated Solar Power project in the Middle East and Africa have been endorsed. In addition, as of October 2010 MDB Boards have approved in (i) Vietnam a Sustainable Energy Finance Program; (ii) Ukraine a Renewable Energy Direct Lending Facility; (iii) Thailand a Sustainable Energy Finance Program, a Renewable Energy Accelerator Program; (iv) South Africa a Energy Efficiency Program, a Sustainable Energy Acceleration Program; (v) Philippines a Renewable Energy Accelerator Program (REAP); (vi) Mexico Private Sector Wind Development, Energy Efficiency Lighting and Appliances, Urban Transport Transformation Program; and (vii) Egypt a Wind Power Development Project.

4.   The proposed logic model and results framework for the CTF is submitted to the Trust Fund Committees for approval. The document is based on (i) approved policy documents; (ii) formal and informal discussions with the Trust Fund Committee members; (iii) consultations with the MDBs; and (iv) stakeholder consultations at the country and global level.

5.   It is important to recognize the limitations of the proposed results framework. The main objective is to provide the CTF Committee with a strategic monitoring and evaluation tool. The results frameworks provide reassurance to the Committee that countries are progressing as intended.

6.   The results framework communicates in a transparent and coherent approach the expectations of the CTF Trust Fund Committee for projects-funded under the CIF. The results framework does not replace managing for development results (MfDR) at the program, project or country level. Projects and programs still need to develop comprehensive results frameworks to manage projects towards the CIF or national development objectives. However, projects and programs need to demonstrate clearly how operations are linked to the output/outcome and catalytic replication level

7.   The main purpose of the suggested results framework is to establish a basis for future monitoring and evaluation of the impact, outcomes and outputs of CTF-funded activities. In addition, the document is designed to guide pilot countries and MDBs in developing their results frameworks to ensure that PPCR-relevant results and indicators are integrated in the country's own M&E systems at the country level and the MDB's results monitoring approaches at the project/program level.

8.   Section 2 of this report describes briefly the process of establishing the CIF and CTF M&E system. Section 3 introduces the CTF logical model which has been approved by the CTF-SCF Trust Fund Committees in March 2010. Based on the logical model section 4 outlines the CTF results frameworks with result statements and indicators. Section 5 focuses on the performance measurement strategy. The concluding section outlines the next steps in establishing a comprehensive CIF M&E system.

MEASURING RESULTS – A THREE STEPS APPROACH

9.   The process of establishing a comprehensive monitoring and evaluation (M&E) system for the CIF has three steps:

   a. **Agreement on the results** – This is a strategic, high level process with some technical discussions to develop the causal results chain and develop results statements.

   b. **Agreement on the indicators –** This is a more technical process with definitions of indicators articulated, research on data availability, and specification of measurement methodologies.
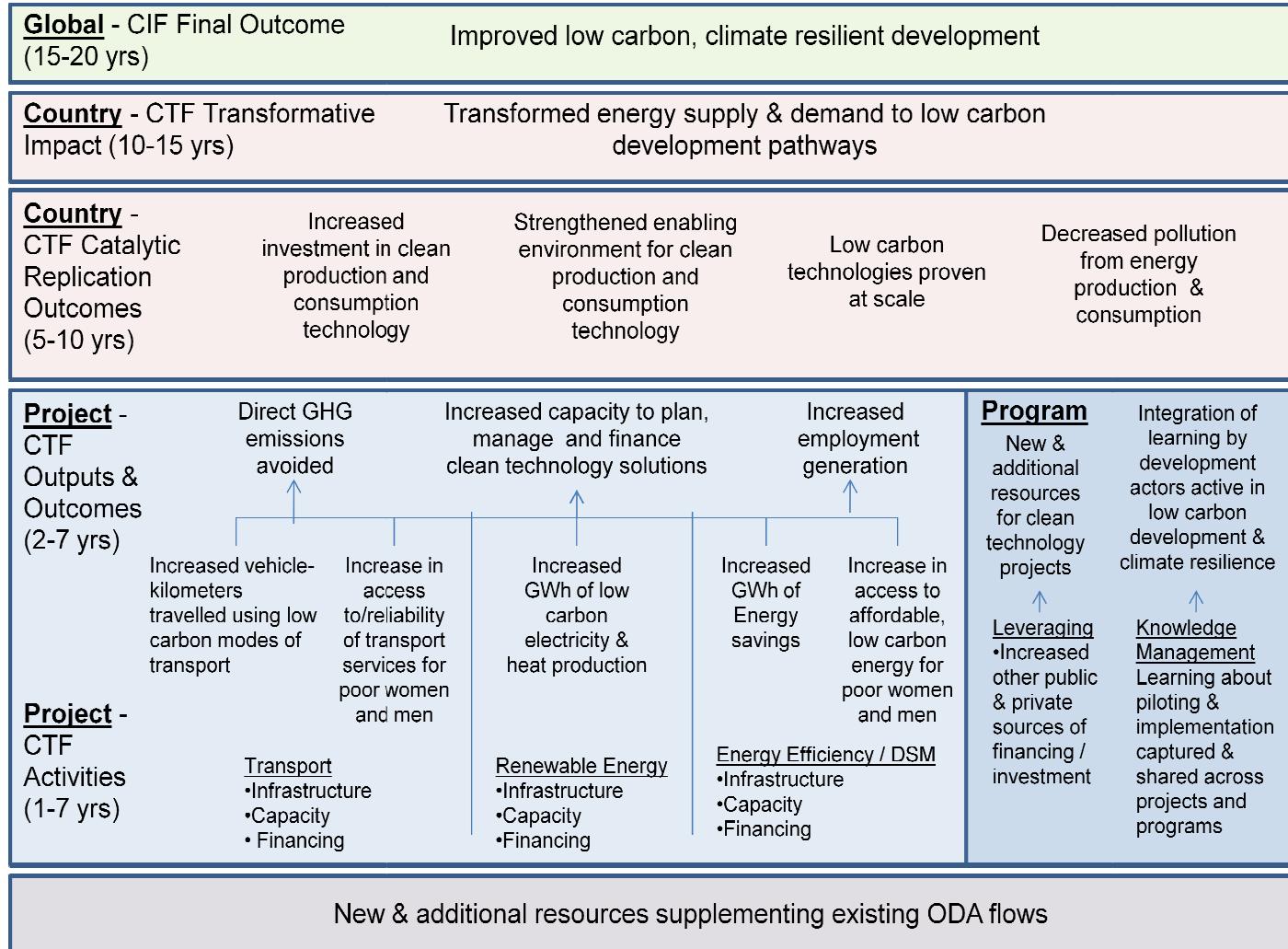
c. **Agreement on a performance measurement strategy** – This is a technical process for the collection of baseline data, a strategic process for setting targets of expected performance, and a technical process determining how data will be collated, aggregated, and reported.

10.   Following harmonization and integration of the results frameworks there is a need to agree on an approach to performance measurement. Performance measurement includes definitions of indicators and identification of the means by which progress on results will be measured. Typically this includes the source of the data, the methodology by which the data will be collected, and the responsibility for data collection.

11.   Associated with these details about performance measurement is performance reporting. This includes how information will be collated or "rolled-up" and then reported. Given the structure of the funds and programs performance reporting will take place at a number of different levels – individual project and program, country, CIF program and Fund (CTF, SREP, PPCR, and FIP), and overall CIF level.

THE CTF LOGIC MODEL

12.   The logic model is a diagram intended to demonstrate the cause and effect "chain" of results from inputs and activities through to outputs, higher level outcomes, and impacts. The logic model is not intended to show how these results will be measured through indicators. One of the strengths of the logic model is the flexibility with which it can be applied to a variety of circumstances and contexts. For the CIFs it is an ideal tool for demonstrating the results chain since the CIFs have the following characteristics:

1. Multiple programs that converge towards a single high level result.
2. Multiple funds that converge towards a high level result.
3. An overall "mechanism", the CIF, which is greater than the sum of its parts, but that also, encapsulates the funds and programs that constitute it.
4. Programs and funds that are implemented by multilateral development banks (MDBs), each with their own results framework structures.

13.   As with all results frameworks these logic models should not be seen as a blueprint for implementation, but rather a framework that can be adjusted as progress is made and lessons are learnt, especially at the project and country levels of the results chain.

14.   To limit the impact of climate change, significant efforts are needed in the developed countries to reduce GHG emissions. However, at the same time it is important to help bending the carbon emission curve in low and middle income countries. For achieving development objectives, particularly the Millennium Development Goals (MDG) access to energy cannot be ignored. Energy is an important element in human development. Energy is needed for cooking, for heating, for transportation, for industrial production, etc. OECD/IEA estimates that 1.4 billion people, more than 20% of the

global population, lack access to electricity.[3] Addressing the energy needs in developing countries under a low carbon development growth path is strongly correlated with improvements in technology, and access to such technologies should be available to all – women and men alike. The overall objective of CTF interventions is to support efforts to promote and enhance a low carbon development growth path. Therefore, the impact of the CTF will need to be judged on the basis of how successful societies are in adopting best available low carbon technologies to reduce greenhouse gas emissions while providing needed energy and transportation services

15.   The CTF logic model has been approved by the CTF-SCF Trust Fund Committees in March 2010. It is suggested to change the logic model slightly with respect to broadening the CTF Replication Outcomes and including a results statement on the CTF's role as a pilot to learn from its operations and apply the lessons learned in climate resilient development within the country, across CTF countries, other non-CTF countries and at the global level. At the CTF Project/Program Outputs & Outcomes level a results statement on the role of CTF in strengthening capacity to plan, manage and finance clean technology solutions within the CTF pilot countries has been added.

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[3] See OECD/IEA. 2010. *Energy Poverty – How to make modern energy access universal?*

Figure 1: **Logic model – Clean Technology Fund (CTF)**

Global - CIF Final Outcome (15-20 yrs)	Improved low carbon, climate resilient development			
Country - CTF Transformative Impact (10-15 yrs)	Transformed energy supply & demand to low carbon development pathways			
Country - CTF Catalytic Replication Outcomes (5-10 yrs)	Increased investment in clean production and consumption technology	Strengthened enabling environment for clean production and consumption technology	Low carbon technologies proven at scale	Decreased pollution from energy production & consumption

Project - CTF Outputs & Outcomes (2-7 yrs)

Direct GHG emissions avoided   Increased capacity to plan, manage and finance clean technology solutions   Increased employment generation

Program New & additional resources for clean technology projects   Integration of learning by development actors active in low carbon development & climate resilience

Project - CTF Activities (1-7 yrs)

Increased vehicle-kilometers travelled using low carbon modes of transport

Increase in access to/reliability of transport services for poor women and men

Increased GWh of low carbon electricity & heat production

Increased GWh of Energy savings

Increase in access to affordable, low carbon energy for poor women and men

Leveraging
•Increased other public & private sources of financing / investment

Knowledge Management Learning about piloting & implementation captured & shared across projects and programs

Transport
•Infrastructure
•Capacity
• Financing

Renewable Energy
•Infrastructure
•Capacity
•Financing

Energy Efficiency / DSM
•Infrastructure
•Capacity
•Financing

New & additional resources supplementing existing ODA flows

CTF RESULTS FRAMEWORK

16.   It is important to note that the main monitoring and evaluation function in the first couple of years will focus on the project and country level because achieving the outcome or impact results at the program level will require that a substantive part of the overall program is implemented or under implementation as discussed in paragraphs 19 and 20. Nevertheless, efforts will be made to aggregate data across projects, programs and MDBs for Trust Fund Committees reporting.

17.   The results framework summarizes the core elements of the performance measurement system. It combines the results statements with the indicators. The first column represents the results statements as stated in the logic model. The results framework starts with the CTF Transformative Impact, then the CTF Catalytic Replication Outcomes, and concludes with the MDB CTF Project Outputs and Outcomes. The framework does not include activities, products and services because these are managed within a project management approach. Such an approach also emphasizes the commitment to a managing for development results (MfDR) approach with emphasis on impact and outcomes.

18.   The columns three to six represent the indicators for each result. The performance indicators together with the baseline and target column are what the program will use to measure expected results. Agreement in an early stage on the performance indicators, baselines and targets is important for the design of the investment plans because future investment plans will also need to develop results frameworks to demonstrate how operations are linked to the overall objectives of the CTF. Efforts have been made to ensure a mix between qualitative and quantitative indicators. The target and baseline column is still blank and can only be filled in close cooperation with the MDBs and particularly the country teams. As mentioned above some of these indicators have very different time frames. Baselines might only be established in the medium-term (1-2 years) and a true impact reporting is probably not possible for a significant time span (10-15 years). The sixth column raises some issues related to the reliability or validity of the indicators and the difficulties operations might face when addressing these. The last column briefly outlines the means of verification or data source.

Table 1: **Results Framework – Clean Technology Fund (CTF)**

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
CTF Transformative Impact[4]						
Transformed energy supply and demand to low carbon development pathways	The highest result level desired by the CTF is the transformation in the way that energy is produced and consumed (supply and demand), in a way that is both improving social and economic development while being low carbon.	a) Energy Development Index – EDI Score b) Employment generated (number of jobs created – women/men/poor people) in clean technology / transport c) Energy intensity of GDP (MJ / $) d) Change in GHG emissions per unit of energy consumed			These indicators will measure the combination of improved development while being low carbon. The share of population with access to energy and employment generated both measure development – while the low carbon energy and clean technology aspects of the indicator measure the low carbon nature of development. Energy intensity of GDP and change in GHG emissions also measure the low carbon nature of development. The data for these indicators will be analyzed across countries and will be aggregated where appropriate. The Energy Development Index is a measure to better understand the role energy plays in human development. The EDI is calculated in	OECD/ IEA – World Energy Outlook National Statistics Qualitative and quantitative study across CIF pilot countries National Statistics National GHG emissions monitoring

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[4] The transformative impact dimension of the CTF is determined by many factors which are outside of the direct influence of CTF operations in a specific country. Systematic and coherent improvements in this dimension cannot be observed in the short-term and not attributed to a single development actor. Transformation will be the result of the initiative of multiple development partners in a specific country over a longer period of time.

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
		(tCO_2/MJ) e) Percentage change (%) in electricity coverage in rural areas			such a way as to mirror the UNDP's Human Development Index (HDI) and is composed of four indicators: (i) per capita commercial energy consumption; (ii) per capita electricity consumption in the residential sector; (iii) share of modern fuels in total residential sector energy use; (iv) share of population with access to electricity	National Statistics
CTF Catalytic Replication Outcomes						

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
1. Increased investment in clean production and consumption technologies	To achieve transformed energy supply and demand there will need to be substantially more investment in clean production and consumption technologies. This will include private and public sector investment.	a) Percentage change (%) and total figure of low carbon investment of total energy sector investments – government b) Percentage change (%) and total figure of low carbon investment of total energy sector investments – private sector			Investment levels in clean production and consumption technologies will be tracked on a country level. It should be possible to undertake basic aggregation of investment amounts across countries.	New Energy Finance Ltd. / Bloomberg country database

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
2.Strengthened enabling environment for clean production and consumption technology	Transformed energy supply and demand will also require a stronger enabling environment to catalyze replication. This will include an improved policy and regulatory environment and plans (national development / energy sector / transport sector / local urban transport) that emphasize and allocate resources to clean technologies. This will also require reforms to be carried out promoting clean production and consumption technologies and creating a level playing field.	a) Degree to which the policy/ regulatory environment is supportive of clean technology for all b) Degree to which national energy and major city urban transport plans of CTF countries take into account clean technology • mainstreaming low carbon in power sector expansion plan • Number of climate friendly EE/RE/ legislations and secondary regulations passed • Reduction in energy subsidies or degree of tariff rationalization c) Quality of participatory planning process (as assessed by private sector, CSOs, and other stakeholders)			This indicator will require qualitative measurement through an analysis of the policy and regulatory environment. The dimensions of the policy and regulatory environment have already been articulated in the REN 21 reports and to some extent the country investment plans. Specific country contexts may prevent comparability of the policy and regulatory environment across countries. It may not be meaningful to aggregate data across countries but may be possible to count how many CTF countries have improved their policy and regulatory environment or how many countries have nationally legislated RE targets. The extent of improvement may not be possible to aggregate.	Qualitative study across CTF pilot countries Data of the REN21 reports Stakeholder surveys

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
3. Low carbon technologies proven at scale	Transformed energy supply and demand will also require that clean production and consumption technologies are proven at scale and shown to be viable.	a) Change in cost / unit of production over time; fossil fuels versus renewable energy b) Cost per ton of CO_2 equivalent abated			These indicators measure how the cost efficiency of the clean technology is changing and how it compares to fossil fuels.	National Statistics In-depths study across the CTF pilot countries

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
4.Decreased air pollution from energy production and consumption	One of the development benefits of clean technology is decreased pollution in the form of particulate emissions. Reduced pollution will mean improved respiratory health for those affected by pollution from energy production and consumption.	Prevalence of Acute Respiratory Infections (ARI) (in children under 5 years) (rural/urban)			This indicator will measure the effect on children's health from a decrease in pollution including home consumption and transportation. This is a proxy indicator for the impact of clean technology at scale. Studies have shown that also women and men are subject to respiratory health issues. For instance, UN-DESA's The World's Women 2010 – Trends and Statics states that "women over 30 years who were exposed to solid fuel smoke are on average about three times more likely to develop obstructive pulmonary disease than women who were not exposed. In comparison, the risk for men exposed to solid fuel smoke increases less than twice."[5] It should be possible to undertake basic aggregation of data and compare across countries.	National Statistics. This is reported in the World Development Indicators (WDI) and is an indicator of respiratory illnesses.

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[5] UN. 2010. *The World's Women – Trends and Statistics*, page 147.

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
CTF Project/Program Outputs & Outcomes						
1. Direct GHG emissions avoided	One of the common results across all CTF projects will be the avoidance of GHG emissions as a result of clean production and consumption technologies.	Tons (millions) of CO_2-equivalent mitigated and $ cost per ton: Transport, renewable energy (RE), and energy efficiency (EE) / demand side management (DSM)			CTF projects will use methodologies to estimate and / or directly measure the amount of CO_2-equivalent mitigated and $ cost per ton. IFC has developed and deployed one methodology which could be standardized across projects. CO_2 mitigation will be aggregated across projects.	Project M&E
2. Increased employment generated	A second common result across all CTF projects will be an increase in employment – creation of jobs.[6]	Net number of jobs (women/men/poor people) created in transport, renewable energy, EE / DSM in relation to CTF projects/programs			CTF projects will use methodologies to estimate and / or directly measure the number of jobs created, taking into account for whom the jobs are created for: men, women, and the poor. Jobs created be aggregated across projects	Project M&E

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[6] This indicator applies only with limitations to intermediary projects/programs. For instance, it will be difficult to report employment impact of an intermediary project/program for EE dealing with financial institutions. The M&E framework of intermediary projects/programs might include "employment" indicators but instead of annual reporting might rather revert to mid-term and final evaluations to assess and report the indirect employment impact.

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
3. Increased capacity to plan, manage, and finance clean technology solutions	Capacity building will be an important thrust in all three of the areas targeted through CTF – Transport, RE and EE / DSM, as ongoing institutional and organizational support is required for clean technology to flourish. Important aspects of capacity will include the ability to plan for clean technology inclusion and expansion in the private and public sectors at various levels. Operations and maintenance frameworks in the public and private sector will also be required.	a) Degree to which regulatory arrangements are capable of effectively implementing the CTF country government's clean technology related policies and programs b) Level of private / public sector capacity to build and operate clean production facilities and implement industrial projects including building retrofits and construction c) Level of skills of the domestic financial sectors to assess and supervise RE projects and undertake financial assessment of EE / DSM activities			Required capacities will differ from one country context to another. The CTF Investment Plans include qualitative capacity assessment in both the public and private sectors. This analysis will form the baseline against which capacity improvements will be measured. Data could be aggregated to demonstrate the varying levels of capacity improvement across CTF countries. Since the specific capacities will differ from one context to another a rating scale may be developed to describe the extent of capacity improvement (ex. High – Medium – Low) Aggregation would take the form of "X CTF countries had High levels of capacity improvement, Y CTF countries had medium levels, and Z had low levels". Discussion between MDB CTF implementers would harmonize capacity improvement assessments.	MDB Analysis

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
A.TRANSPORT						
A1.Increased vehicle kilometers travelled using low carbon modes of transportation	Transport projects are expected to provide low carbon transport solutions to poor women and men. It is expected that kilometers travelled will increase in middle income countries in the course of development. The challenge is to increase kilometers traveled using low carbon technologies – primarily Light Rail Transit, Bus Rapid Transit and High Efficiency Buses.	g CO_2/passenger km			Projects will use methodologies to estimate and / or directly measure the grammes of CO_2 per kilometer that each passenger travels. g CO_2/passenger km could be compared across all CTF transport projects but given the country / local context the comparison may not be meaningful.	Transport project M&E

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
A2.Increase in access to affordable, reliable and modern transport services for poor women and men	While decreasing pollution and GHG emissions the CTF transport projects will also have the benefit of improving vital and needed transportation services for beneficiaries, especially poor men and women.	a) Change in share of public transport as percentage of total trips in relation to projects/programs in transport b) Change in accessibility of public transport (geographical, women, men, poor)			Projects will use methodologies to estimate and / or directly measure the increased use of low carbon public transport put in place through the projects. Share of total trips could be compared across all CTF transport projects but given the country / local context the comparison may not be meaningful.	Transport project M&E Transport project M&E
B. RENEWABLE ENERGY						
B1. Increased MWh of low carbon electricity and heat production	CTF projects in renewable energy will produce electricity and heat using low carbon means.	Number of MWh generated by RE projects/programs			Projects will use methodologies to estimate and / or directly measure the MWh of RE produced. MWh of RE produced will be aggregated across all CTF RE projects Given the country / local context the aggregation may mask a production contribution that is significant at a country level but very small at a global CTF / CIF level.	Renewable energy project M&E
C. ENERGY EFFICIENCY/ DEMAND SIDE MANAGEMENT						

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
C1. Increased GWh of energy savings	CTF EE / DSM projects will save energy through a variety of means and in a number of priority sectors, as detailed blow.	Number of MWh saved by EE / DSM projects/programs			Projects will use methodologies to estimate and / or directly measure the number of MWh saved. The number of MWh saved will be aggregated across all CTF EE / DSM projects. Given the country / local context the aggregation may mask a connection contribution that is significant at a country level but very small at a global CTF / CIF level.	Energy efficiency project M&E
(i)power sector		Change in carbon intensity of energy production (tCO_2 equivalent / MWh) in relation to EE / DSM projects/programs			Projects will use methodologies to estimate and / or directly measure the change in carbon intensity of energy production. Change in carbon intensity of energy production could be compared across all CTF EE / DSM projects but given the country / local context the comparison may not be meaningful.	Energy efficiency project M&E

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
(ii)building/ construction sector		Change in energy consumption in building sector (KWh/Sq. ft) (disaggregated by old/new, private/public buildings)			Projects will use methodologies to estimate and / or directly measure the change in tCO_2 / unit of output and the total embedded energy of project. Change in tCO_2 / unit of output could be compared across all CTF EE / DSM projects but given the country / local context the comparison may not be meaningful.	Energy efficiency project M&E
(iii)industrial sector		Change in tCO_2 / unit of output in relation to EE / DSM projects/programs			See above.	Energy efficiency project M&E
(iv)agricultural sector		kJ expended in agricultural production / ha cultivated in relation to EE / DSM projects			Projects will use methodologies to estimate and / or directly measure the kJ expended in agricultural production / ha cultivated. kJ expended in agricultural production / ha cultivated could be compared across all CTF EE / DSM projects but given the country / local context the comparison may not be meaningful.	Energy efficiency project M&E

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
C2.Increase in access to affordable, low carbon energy for poor women and men	The low carbon RE that is produced by the CTF RE projects will improve the access to energy for poor men and women.	a) Number of new connections for domestic/commercial consumers in rural and urban areas due to projects/programs (disaggregated by poverty / women/men) b) Cost ($) / GWh of RE for project/program beneficiaries compared to fossil fuels/conventional energy			Projects will use methodologies to estimate and / or directly measure the number of new connections and cost of RE, compared to fossil fuels / conventional. The number of new connections will be aggregated across all CTF RE projects. Given the country / local context the aggregation may mask a connection contribution that is significant at a country level but very small at a global CTF / CIF level. Costs for RE could be compared across CTF projects but given the country / local context the comparison may not be meaningful.	Energy efficiency project M&E

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
D. LEVERAGING – NEW AND ADDITIONAL RESOURCES FOR CLEAN TECHNOLOGY PROJECTS	The CTF will involve the leveraging of new and additional resources clean production and consumption technologies. This will occur in the context of projects where multiple sources of funding will be leveraged by CTF for particular investments.	Leverage factor of CTF funding (by level of concessionality); $ financing from other sources (contributions broken down by MDBs, governments, multilaterals and bilaterals, CSOs, private sector)			Measurement of leveraged resources will be routinely undertaken and aggregated across projects and countries.	Project M&E

Results	Explanation of the result statement	Indicators	Baseline	Target	Details on Measurement and Aggregation	Means of Verification
E. Integration of learning by range of development actors involved in low carbon development and climate resilience	Through knowledge management programmatic CIF processes non-CTF countries will be introduced to the learning from CTF projects, providing them with an opportunity to integrate and replicate the learning and knowledge into their own climate resilience development processes and projects.	Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created			The CIF knowledge management function along with the MDBs will measure the extent to which non-CTF countries integrate CTF learning. It should be possible to undertake basic aggregation across countries.	Project M&E Qualitative assessment by the CIF AU – annually

PERFORMANCE MEASUREMENT STRATEGY

19.   The performance measurement strategy outlines how the data for all the indicators should be collected, collated, analyzed and reported. There is a need to be consistent across the results frameworks in terms of the timeframes in which different levels of results can be expected, the levels of contribution and attribution, how measureable change will be, and potential measurement strategies for data collection.

20.   Table 2 takes each level of results from the logic models for the funds and programs and indicates the timeframe for result achievement. In addition the table provides a sense of the attribution and contribution to results. In terms of measurement that table also shows the likely performance measurement strategy and the purpose / use of the performance information that is gathered about each level. It is worth noting that the majority of data collection conducted regarding results attributable to the CIF will be done in the context of MDBs programs and projects. Most data on impacts, relevant for future strategic planning, will be collected after the CIF has ended.

21.   Projects and programs will have other project specific impact, outcome and output indicators but depending on the objective of the project, there is a requirement to report against the proposed indicators to ensure that there is a strong link between operations at the country level and the higher order CIF objectives.

22.   The results frameworks also do not include operational data such as resource inputs, activities, disbursements, contract awards, etc. Such operational data is collated through the portfolio or pipeline management system and reported on a regular basis to the CIF Administrative Unit through the MDBs.

23.   A performance measurement strategy is a plan for the collection of the data necessary to measure progress on results. For each indicator it is necessary to indicate through what method the information will be collected, by whom and how often.

Table 2: **Timeframe and attribution**

Result Levels	Time Dimension	Contribution of CIF to Results	Measurement and Attribution	Measurement Strategy	Purpose / Use of Performance Information
CIF Final Outcome	+ 15 – 20 years	CIF makes a small contribution along with many other factors.	Indicators are measureable but not able to attribute change to CIF	• National statistics • Global data collection	• Long-term strategic planning
Transformative Impacts	+ 10-15 years	CIF makes a small contribution along with many other factors.	Indicators are measureable, it may be possible to attribute some change to CIF	• National statistics • Global data collection • Post-CIF evaluation	• Medium-term strategic planning
Catalytic Replication Outcomes	+ 5-10 years	CIF has some influence along with many other factors	Indicators are measureable, it should be possible to link some change to CIF	• National statistics • Global data collection • Post-CIF evaluation • MDB evaluation	• Learning • Future program design • Medium-term strategic planning
MDB Project Outcomes and Outputs	+ 2-7* years	CIF interventions directly influence outcomes through the delivery of outputs	Indicators are measureable and change is attributable to CIF	• MDB project monitoring • MDB evaluation • Special CIF evaluation	• Project Management • Fund / Program Management • Learning • Future program design
Activities	+ 1-7* years	Undertaken by CIF projects	Measurement and attribution are routine	• MDB Project monitoring	• Project Management • Fund / Program Management • Learning • Future program design
Inputs	Start of intervention	Provided to CIF	Measurement and attribution are routine	• CIF Admin. Data	• Fund / Program Management

*MDB project lengths are typically 5-8 years

24.   Table 3 summarizes the performance measurement strategy for the CTF. As indicated, results at the transformative and catalytic replication level occur at the country level, above the project level. Data for the proposed indicators can only be collected when a significant part of the country's Investment Plan has been implemented. Mid-term and final evaluations provide the opportunities to assess the impact of the CTF program with in-depth data analysis. However, it is already now useful for the countries to establish baselines and targets to the extent possible in order to allow for progress reporting. Such a process will also help the countries to identify data gaps or capacity deficits which they might like to address before a full mid-term evaluation of the CTF program is envisaged. Investing in developing capacity and refining national M&E systems is fully justified considering the CTF amounts invested in a country and the additional resources leveraged, particularly considering that moving towards a low carbon development growth path is a long-term exercise which requires long-term commitment and engagement.

25.   Reporting against the CTF Transformative Impact and CTF Catalytic and Replication Outcomes is the responsibility of the respective CTF country. Ideally, the CTF results statements help countries to shape their own results monitoring and evaluation system and indicators are integrated within the national results frameworks. For instance, the monitoring and evaluation framework of a CTF country might include the following 12 indicators:

- Energy Development Index (EDI) Score
- Employment generated (number of jobs created – women/men/poor people) in clean technology/transport
- Energy intensity of GDP (MJ/$)
- Change in GHG emissions per unit of energy consumed (tCO_2/MJ)
- Percentage (%) change in electricity coverage in rural areas
- Percentage (%) change and total figure of low carbon investment of total energy sector investments (government/private sector)
- Degree to which policy/regulatory environment is supportive of clean technology for all
- Degree to which national energy and major city urban transport plan of country take into account climate and local environmental issues
- Quality of participatory planning process (as assessed by private sector, CSOs, and other stakeholders)
- Change in cost/unit of production over time; fossil fuels versus renewable energy
- Cost per ton of CO_2-equivalent abated
- Prevalence of Acute Respiratory Infections (in children under 5 years) (rural/urban)

26.   Reporting against CTF Project Outputs and Outcome indicators is mainly the responsibility of the MDBs. In designing CTF-funded projects, these key performance indicators provide a mandatory set of indicators against which reporting is required. However, not all projects will have to report against all the indicators. For instance, the monitoring and evaluation framework of a transport sector project will have to include the following seven indicators:

- Tons (millions) of CO2-equivalent mitigated and $ cost per ton
- Net number of jobs (women/men/poor people) created in the transport sector
- gCO2/passenger km

- Change in share of public transport as percentage of total trips
- Change in accessibility of public transport (geographical, women, men, poor)
- Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created
- Leverage factor of CTF funding (by level of concessionality); $ financing from other sources (contributions broken down by MDBs, governments, multilaterals and bilaterals, CSOs, private sector)

27.   An energy efficiency project in the building and construction industry will have to include the following six indicators in its project monitoring and evaluation framework :

- Tons (millions) of CO_2-equivalent mitigated and $ cost per ton
- Net number of jobs (women/men/poor people) created in the building and construction industry
- Number of MWh saved
- Change in energy consumption in building sector (KWh/Sq. ft) (disaggregated by old/new, private/public buildings)
- Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created
- Leverage factor of CTF funding (by level of concessionality); $ financing from other sources (contributions broken down by MDBs, governments, multilaterals and bilaterals, CSOs, private sector)

28.   If any of these projects/programs have also capacity development components, the results frameworks should also include indicators to measure capacity development (as provided in table 1). The project/program monitoring and evaluation system can include many other indicators, as many as the respective MDB may wish to pursue, but the CTF proposed thematic or sector indicators are mandatory.[7]
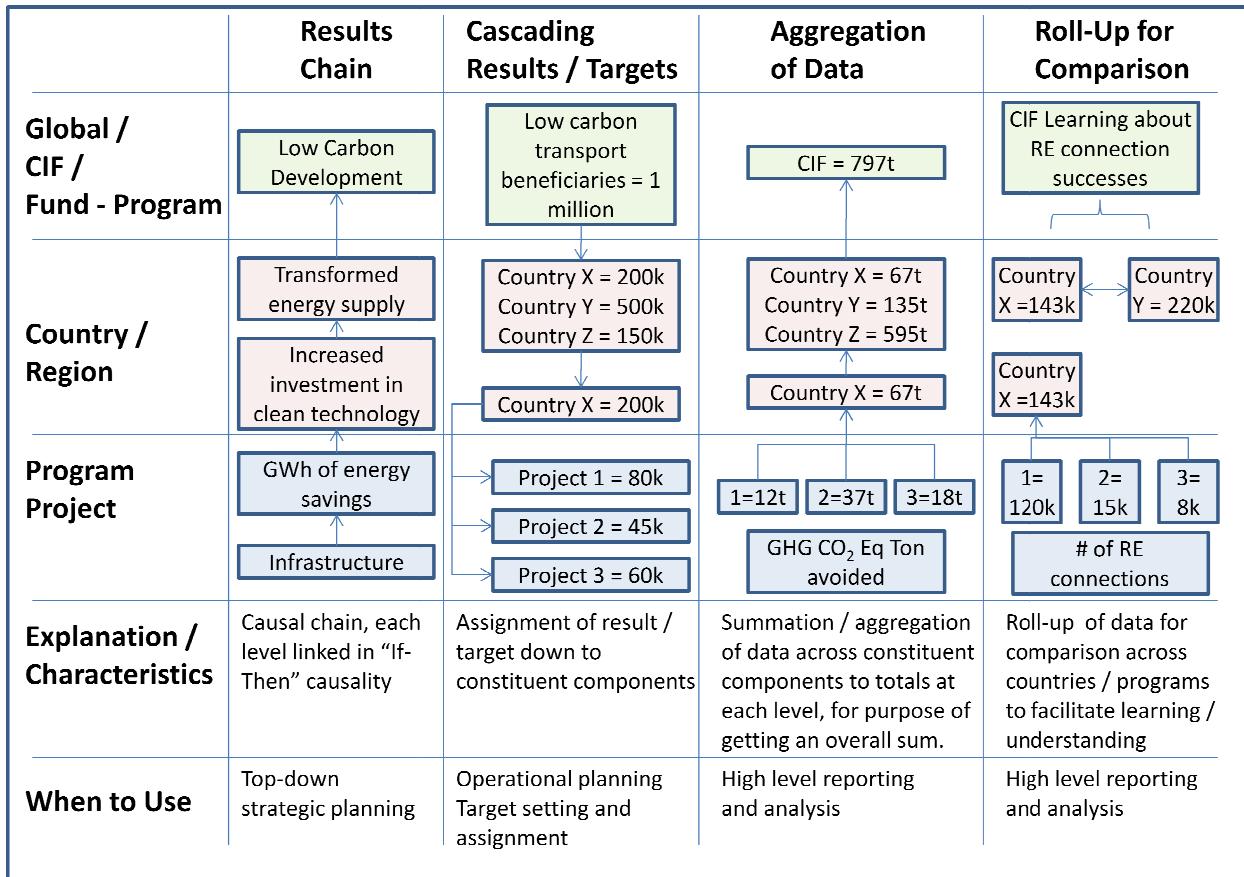
29.   The MDBs will include these indicators within their own reporting systems and provide updated project implementation and results reports to the CIF AU on an annual basis. The CIF AU will consolidate the reports of the MDBs and provide feedback to the Trust Fund Committees within the CIF Annual Report and occasionally in thematic results reports. Such an approach will ensure that the Trust Fund Committees receive an annual update on the status of the implementation and achievement of results by projects at the CIF programmatic level.

30.   Figure 2 outlines the process of data aggregation and analysis. The main data collection units are the program/project and the country level. Data will be aggregated across projects when feasible, and presented at the country level. In a subsequent step, data at the country level can be either aggregated at the CTF level or compared across countries, depending on the overall CTF objective. Figure 2 shows examples of the process of consolidating data of beneficiaries of

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[7] The proposed indicators are mandatory but it is not expected that all projects/programs will report against all the proposed indicators. Project or program M&E results frameworks will only reflect the project/program-specific, relevant indicators. A capacity development project in the national energy agency will most likely not include indicators related to GHG emission reduction or change of the energy consumption in the building sector.

low carbon transport interventions; GHG emissions avoided; and lessons learned from promoting renewable energy connections.

Figure 2: Data Management

	Results Chain	Cascading Results / Targets	Aggregation of Data	Roll-Up for Comparison
Global / CIF / Fund - Program	Low Carbon Development	Low carbon transport beneficiaries = 1 million	CIF = 797t	CIF Learning about RE connection successes
Country / Region	Transformed energy supply / Increased investment in clean technology	Country X = 200k / Country Y = 500k / Country Z = 150k — Country X = 200k	Country X = 67t / Country Y = 135t / Country Z = 595t — Country X = 67t	Country X =143k ↔ Country Y = 220k / Country X =143k
Program Project	GWh of energy savings / Infrastructure	Project 1 = 80k / Project 2 = 45k / Project 3 = 60k	1=12t 2=37t 3=18t / GHG CO$_2$ Eq Ton avoided	1= 120k 2= 15k 3= 8k / # of RE connections
Explanation / Characteristics	Causal chain, each level linked in "If-Then" causality	Assignment of result / target down to constituent components	Summation / aggregation of data across constituent components to totals at each level, for purpose of getting an overall sum.	Roll-up of data for comparison across countries / programs to facilitate learning / understanding
When to Use	Top-down strategic planning	Operational planning Target setting and assignment	High level reporting and analysis	High level reporting and analysis

31.	Baselines and targets will need to be developed for each result statement and indicator, where appropriate. This can either be done during the development of investment plans or as a separate exercise in a stakeholder consultation process, if an investment plan has already been approved. It is suggested that the MDBs work closely within the next 12-24 months (field testing phase) with the governments to assess carefully the capacity and capability of the countries' own reporting system and to assess how the CIF and MDBs reporting system can be integrated into the country systems as agreed in the Paris Declaration.[8]

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[8] See Paris Declaration at http://www.oecd.org/document/18/0,3343,en_2649_3236398_35401554_1_1_1_1,00.html.

Table 3: **Performance Measurement Strategy – Clean Technology Fund (CTF)**

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
CTF Transformative Impact						
Transformed energy supply and demand to low carbon development pathways	a) Energy Development Index – EDI Score	OECD/IEA – Annual World Energy Outlook	Government	X	X	X
	b) Employment generated (number of jobs created – women/men/poor people) in clean technology / transport	Qualitative study across the CTF pilot countries	Government		X	X
	c) Energy intensity of GDP (MJ / $)	National Statistics	Government		X	X
	d) Change in GHG emissions per unit of energy consumed (tCO_2/MJ)	National GHG emissions monitoring	Government		X	X
	e) Percentage change (%) in electricity coverage in rural areas	National Statistics	Government		X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
CTF Catalytic Replication Outcomes						
1. Increased investment in clean production and consumption technologies	Percentage change (%) of low carbon investment of total sector investments – government	New Energy Finance Ltd. / Bloomberg country database	Government/ Central Bank	X	X	X
	Percentage change (%) of low carbon investment of total sector investments – private sector	New Energy Finance Ltd. / Bloomberg country database	Government/ Central Bank	X	X	X
2. Strengthened enabling environment for clean production and	a) Degree to which the policy/ regulatory environment is supportive of clean technology for all	Qualitative study across CTF pilot countries	Government/MDBs		X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
consumption technology	b) Degree to which national energy and major city urban transport plans of CTF countries take into account clean technology and are prepared in consultation with a wide range of stakeholders (including women/men)	Reviews of key planning documents	MDBs	X	X	X
	c) Quality of participatory planning process (as assessed by private sector, CSOs, and other stakeholders)	Stakeholder surveys	Government/MDBs		X	X
3. Low carbon technologies proven at scale	a) Change in cost / unit of production over time; fossil fuels versus renewable energy	National Statistics	Government		X	X
	b) Cost per ton of CO_2 equivalent abated	In-depths study across CTF pilot countries	Governments/ MDBs/CIF AU		X	X
4.Decreased pollution from energy production and consumption and transport	Prevalence of Acute Respiratory Infections (ARI) (in children under 5 years)	World Development Indicators (WDI)	Government		X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
CTF Project Outputs & Outcomes (Indicative)						
1. Direct GHG emissions avoided	Tons (millions) of CO_2-equivalent mitigated and $ cost per ton: Transport, renewable energy (RE), and energy efficiency (EE) / demand side management (DSM)	Project M&E	MDBs	X	X	X
2. Increased employment generated	Net number of jobs (women/men/poor people) created in transport, renewable energy, EE / DSM in relation to CTF projects/programs	Qualitative assessments/ study	MDBs	X	X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
3. Increased capacity to plan, manage, and finance clean technology solutions	a) Degree to which regulatory arrangements are capable of effectively implementing the CTF country government's clean technology related policies and programs	Project M&E Baseline established in Investment Plan	MDBs		X	X
	b) Level of private / public sector capacity to build and operate clean production facilities and implement industrial projects including building retrofits and construction	Project M&E Baseline established in Investment Plan	MDBs		X	X
	c) Level of skills of the domestic financial sectors to assess and supervise RE projects and undertake financial assessment of EE / DSM activities	Project M&E Baseline established in Investment Plan	MDBs		X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
A.TRANSPORT						
A1.Increased vehicle kilometers travelled using low carbon modes of transportation	g CO_2/passenger km	Project M&E Baseline established during project/ program design	MDBs		X	X
A2.Increase in access to affordable, reliable and modern transport services for poor women and men	a) Change in share of public transport as percentage of total trips in relation to projects/programs in transport	Project/ Program M&E Baseline established during project/ program design	MDBs	X	X	X
	b) Change in accessibility of public transport (geographical, women/men, poor)	Project/ Program M&E	MDBs	X	X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
B. Renewable Energy						
B1. Increased GWh of low carbon electricity and heat production	Number of MWh generated by RE projects/programs	Project/ Program M&E	MDBs	X	X	X
C. Energy Efficiency/ Demand Side Management						
C1. Increased GWh of energy savings	Number of MWh saved by EE / DSM projects/programs	Project / Program M&E	MDBs	X	X	X
(i)power sector	Change in carbon intensity of energy production (tCO_2 equivalent / MWh) in relation to EE / DSM projects/programs	Project M&E Baseline study	MDBs	X	X	X
(ii)building/ construction sector	Change in energy consumption in building sector (KWh/Sq. ft.) (disaggregated by old/new, private/public buildings)	Project M&E	MDBs	X	X	X

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
(iii)industrial sector	Change in tCO_2 / unit of output in relation to EE / DSM projects/programs	Project M&E	MDBs	X	X	X
(iv)agricultural sector	kJ expended in agricultural production / ha cultivated in relation to EE / DSM projects/programs	Project M&E	MDBs	X	X	X
C2.Increase in access to affordable, low carbon energy for poor women and men	a) Number of new connections for domestic/commercial consumers in rural and urban areas due to projects/programs (disaggregated by poverty / women/men)	In-depths study	MDBs		X	X
	b) Cost ($) / GWh of RE for project/program beneficiaries compared to fossil fuels/conventional energy	In-depths study	MDBs			

Results	Indicators	Data Source/ Collection Method	Responsibility for collection	Timing/Frequency		
				Ongoing	Mid-term Evaluation	Final Evaluation
D. Leveraging – New and additional resources for clean technology projects	Leverage factor of CTF funding (by level of concessionality); $ financing from other sources (contributions broken down by MDBs, governments, multilaterals and bilaterals, CSOs, private sector)	Project M&E	MDBs	X	X	X
E. Integration of learning by range of development actors involved in low carbon development and climate resilience	a) Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created	Qualitative assessment	MDBs	X	X	X

CONCLUSION

32.   The proposed CTF results framework is being submitted to the Trust Fund Committee for approval with the understanding that the results framework needs to be flexible to allow for adjustments based on actual CTF program implementation experience. The current framework is a model and based on broad assumptions. These assumptions need to be tested, verified and reviewed. As a result of this process some indicators might change over time. An important first step in this process is for the MDBs to start to work with the CTF framework, because only on this basis will it be possible to refine the indicators.

33.   This approach calls for an iterative process. Selecting new indicators may lead to some re-articulation of the results statements. Indicators may then need to be revised as the process of developing the performance measurement strategy may lead to alternate indicators being proposed or some indicators being de-selected. Hence, the following process is proposed:

a) **Field Testing**. The CTF results framework provides a good basis to start the monitoring process and to field test the validity and cost effectiveness of some of the indicators. MDBs will need clear guidance on how to link programs and projects to the CTF framework. The CIF Administrative Unit will develop guidelines, in close cooperation with the MDB Committee, and the respective results specialists. After experimenting with cascading down indicators, it should be possible to assess whether the assumptions implied in the logic models are coherent with the reality at the field level. This process will require operations to have been initiated at all levels. It is expected, therefore, that early lessons will not be available before 2011.

b) **Monitoring and Evaluation**. The monitoring and evaluation strategy needs to take into account the long-term nature of many of the CTF results. For example, many MDB projects and projects of other development partners are 5 to 8 years in length. This is the amount of time that will be required to produce the fund and program outputs and outcomes. The process of catalyzing changes and spurring replication may take an additional 1 to 5 years. This has implications for the relative emphasis of monitoring versus evaluation. Monitoring is more likely to provide valuable performance information on an ongoing basis at the MDB project output and outcome levels. The catalytic replication level and transformational levels will probably be better served through ex-post evaluation. The resources for, and management of, these evaluations needs to be considered early on in the process to ensure that they are planned and take place.

c) **Setting up a results monitoring system takes time and requires resources**. It will take at least 2-3 years for the CIFs to establish a system which can provide reliable data for consistent monitoring at the Trust Fund Committee level. This is not unusual, and probably quite an ambitious target, considering the early stages of some of the programs and projects. However, the earlier the process is started, the more time is available for testing and improving the proposed CTF framework.

34.   The MDB Committee agreed to seek the Trust Fund Committee's approval at this stage with a view to moving forward, recognizing that the frameworks will continue to evolve and will need to be kept under review by the CTF Trust Fund Committee.