Climate Investment Funds

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GREENHOUSE GAS ANALYSIS AND HARMONIZATION OF METHODOLOGY

I. INTRODUCTION

1. This information document has been compiled by the CIF Administrative Unit based on inputs provided by the MDBs in response to a request by the CTF Trust Fund Committee at its meeting in November 2013. In discussing cost-effectiveness of CTF projects, the CTF Trust Fund Committee agreed, among other things, that "[T]he MDBs will report every two years, beginning in 2014, to the Trust Fund Committee on the current and planned work of each MDB in GHG analysis and the development and application of methodology for estimating GHG emissions reduction and their joint efforts to harmonize GHG estimation methodology among the MDBs."

2. Section II of this document summarizes the joint efforts to harmonize GHG estimation methodologies among the MDBs. Section III presents an overview of the status of each of the MDBs in GHG analysis and the development and application of GHG accounting methodologies.

II. HARMONIZATION OF GHG ESTIMATION METHODOLOGIES

3. The MDBs involved in implementing the Climate Investment Funds (CIF) have been working together through the Working Group of the International Financial Institutions (IFI Working Group) to harmonize project-level greenhouse gas accounting. Twenty-four IFIs have participated in the Working Group, although the level of engagement varies among the IFIs. So far, 11 IFIs have expressed an interest in harmonization, including all CIF MDBs.

4. In November 2012, nine members[1] of the IFI Working Group agreed to a framework for a harmonized approach to GHG accounting, including a set of principles on policy commitment, methodology, and reporting (see Annex I). As stated in the framework document, the purpose was "to establish minimum requirements in undertaking this work, all of which each IFI can optionally exceed with additional considerations and reporting." Since then, the IFI Working Group has been active in discussing the overall potential and specific technical aspects of moving toward a joint IFI methodology for GHG accounting. Sectors identified and agreed as priorities to purse harmonization of project-level methodology are energy and transport. Based on experience, the goal of the Working Group has been evolving toward reducing the variance in GHG reporting by focusing on the development of joint guidance, while providing flexibility linked to data quality.

5. Two joint guidance notes for IFI approaches to GHG accounting in energy sector projects have been under development: one for renewable energy projects and the other for energy efficiency projects. Development of the approach to GHG accounting in renewable energy was launched in 2012, and the guidance (version 1.0) was shared amongst the IFIs in February 2014 and is under review. The Working Group will meet on November 5-7, 2014 to discuss the renewable energy guidance notes as well as other guidance notes and issues.

[1] They are the Agence Française de Développement (AfD), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), the International Finance Corporation (IFC), KFW Development Bank, the Nordic Environment Finance Corporation (NEFCO), and the World Bank (WB).

6. Development of the IFI approach to GHG accounting in energy efficiency has been under way for a few months. A draft joint guidance note has been circulated, but it is still at a preliminary stage, and it has not been endorsed by any IFI.

7. Other guidance notes being considered by the IFI Working Group could include GHG accounting approaches in the transport sector, where some work toward a joint guidance is currently being initiated. Other areas of interest that will also be discussed during the November 2014 meeting include approaches to GHG accounting for projects implemented through financial intermediaries and GHG accounting for non-mitigation projects, although no priority list has been established yet.

III. STATUS OF INDIVIDUAL MDB EFFORTS

African Development Bank

8. AfDB currently reports ex-ante emission reductions of select green projects using Clean Development Mechanism (CDM) methodologies. AfDB is in the process of establishing an in-house GHG accounting and reporting system (to be fully operational in mid-2015) as part of the requirements of the Integrated Safeguard System (ISS) whose operational safeguards apply to the entire portfolio of AfDB's operations. AfDB subscribes to the notion of a harmonized approach with other IFIs to foster good practice and transparency, though taking cognizance of varying IFI mandates and geographic coverage. AfDB's GHG accounting tool will take into consideration Regional Member Countries' (RMCs) specific conditions and development objectives without jeopardizing the credibility of the system.

Asian Development Bank

9. ADB has given high importance to clean energy projects that contribute to GHG emission reductions and address climate change. ADB has been continuously improving its methodologies for estimating GHG emission reductions among its projects. The ADB 2009 Energy Policy laid out the importance of GHG analysis in monitoring and evaluating progress of clean energy technologies and specifying reductions of carbon dioxide emissions as one of the output indicators under the improved energy efficiency and greater use of renewable energy outcome.

10. Starting in 2010, ADB annually publishes[2] the Clean Energy Investments project summaries. The document provides project descriptions including GHG emission reductions per project. In 2012, ADB issued the ADB Results Framework Indicators Definition document. The document provides a list of performance indicators, definitions, and methodology in compiling data. The updated version includes GHG emission reductions as one of the outcome indicators for the energy sector. The progress along these performance indicators is published and reported annually through ADB's Development Effectiveness Review. The document facilitates the reporting of GHG emission reduction targets at the project level.

[2] Annual publications are available at http://www.adb.org/publications/search/338?page=1&ref=sectors%2Fenergy.

11. Under the IFI Working Group on GHG Accounting, ADB is contributing to the development of sector specific common guidance for the harmonized estimation of GHG emissions and emission reductions from the development of projects financed by IFIs.

12. ADB also developed draft guidelines (i.e., Guidelines for Estimating Climate Change Mitigation Investment and GHGs Emissions Reductions of ADB Projects) which will help quantify ADB's climate change mitigation projects/investments and assist ADB's operations department and other stakeholders in estimating GHG emission reductions at the project level. The guidelines incorporate the contents of the joint IFI harmonized renewable energy methodology. The guidelines have 30 specific methodologies covering multiple sectors, subsectors, and technologies.

Sector/Subsector	Methodologies
Commercial and residential (buildings)	Energy Efficient Chillers
	Energy Efficiency in Buildings
Public services	District Heating
	Water Pumping Efficiency Improvements
Industry	Energy Efficiency for Industrial Facilities
	Boiler Rehabilitation or Replacement
	Fuel Switching in Heat Generation
	Waste Energy Recovery
Transmission and distribution systems	Reducing SF_6 Emissions in Electrical Grids
	Installation of Energy Efficient Transformers in Grids
	Leak Reduction from Natural Gas Distribution Grid
	Leak Detection and Repair in Gas Production, Processing, Transmission, Storage and Distribution Systems
Power plants	Fuel Switching in Existing Power Plants
	Conversion from Single Cycle to Combined Cycle Power Generation
	New Natural Gas Fired Power Plant
	Fossil Fuel Fired Power Plants Using Less GHG Intensive Technology
Renewable energy	Grid-Connected Renewable Energy
	Electricity Generation from Biomass Residues
	Geothermal Energy for Space Heating in Buildings
Transport	Bus Rapid Transit (BRT) Projects
	Mass Rapid Transit Projects
	High Speed Passenger Rail Systems
	Modal Shift in Cargo Transportation
Agriculture (livestock)	Animal Manure Management
Waste and	Landfill Gas Recovery

wastewater	Waste Incineration
	Wastewater Treatment
	Waste Composting
Non-energy GHG reductions	Ventilation Air Methane Capture and Destruction
	Coal Bed Methane (CBM) and/or Coal Mine Methane (CMM) Capture and Destruction

European Bank for Reconstruction and Development

13. The EBRD first published an assessment of the impact of its investments on greenhouse gas emissions in 2003. The purpose was to enable climate change impacts to be seen in the wider context of the transition impacts of EBRD projects and to answer the simple question "What impact is the Bank having, through its investments, on the build-up of greenhouse gases in the atmosphere?"

14. The EBRD GHG Assessment Methodology developed for this purpose provides a framework for the integration of GHG assessment into project due diligence and for the annual reporting of the forecast impact of the new direct investment projects added to the portfolio.

15. In the 10 years since the first publication, the EBRD Environment and Social Policy has undergone two revisions (2008 and 2013). EBRD's focus on promoting energy efficiency and climate change remediation through its project finance has grown substantially via the Sustainable Energy Initiative (SEI). SEI was launched in 2006 with the aim of scaling up sustainable energy investments, improving the business environment for sustainable investments and removing key barriers to market development.

16. The development of common principles for GHG accounting and continuation of work towards more harmonized sector-specific approaches have necessitated an updating of the EBRD's approach to GHG assessment and reporting. This revision will comply with the harmonized principles for GHG assessment and reporting agreed by the IFIs.

Inter-American Development Bank

17. IDB has continued to apply methodologies and tools aligned with the Accounting Framework agreed among major IFIs and reported the main results in its annual sustainability reports. Highlights of the latest Sustainability Report in terms of GHG emissions footprint of IDB's operations approved in 2013 are the following:

- 52 projects screened
- 35 projects underwent detailed assessment
- 3 projects reported overall emissions savings (renewable energy projects)
- All 35 projects reported gross emissions (construction of greenfield and expansion)

18. IDB has revised its methodology to account for GHG emissions savings of renewable energy projects to align it with the accounting framework agreed for renewable energy projects

by most MDBs at the end of 2013. Numbers reported in the 2013 Sustainability Report are derived from this revised methodology.

19. IDB is actively participating in the IFI Working Group on GHG emissions accounting.

International Finance Corporation

20. IFC started GHG accounting work in FY10 and has been developing and refining GHG methodologies since FY11 that have been applied to its climate-related projects. The definitions (what counts as climate-related) and methodologies (how to quantify GHG emission reductions) are available in public domain.[3]

21. The IFC climate metrics team has developed a package of tools and services for IFC staff to use in projects that are categorized as climate projects that include definitions, guidance notes, and tools by industry type – direct investments and investments through financial intermediaries in renewable energy and energy efficiency, waste sector, green buildings, and forestry among others. The definitions and guidance notes help staff identify and quantify climate impacts of projects and the tools help calculate and report on climate impacts. In general, "the principle of conservativeness" is followed in calculations to address uncertainty and is detailed in calculations when applicable.

22. Currently, in IFC there are three categories for climate projects: mitigation, adaptation, and special climate. Special climate projects are activities that contribute to mitigation but for which an IFC-approved GHG reduction calculation methodology has not been developed or for which insufficient information or data constraints prohibit the calculation of credible GHG reductions. In some cases, as IFC develops GHG reduction methodologies for some of these sectors, they move from the special climate category to the mitigation category. Details on the special climate category and on definitions for mitigation and adaptation can be found in the "Climate Definitions and Guidance Note" link at the website listed above.[4]

23. For reporting and results monitoring, investment projects teams enter the ex-ante projected GHG impacts in IFC's project management system for investments (called iDesk) and the ex-post verification is to be tracked through project supervision using IFC's Development Outcome Tracking System (DOTS) over a five year period (or seven years in the case of large infrastructure projects with long construction periods). Advisory projects use the same approach, using the project management system for advisory services called Advisory Services Operational Portal (ASOP). All IFC climate finance tracking is reported by fiscal year, from July 1 to June 30. At the end of each fiscal year, these figures are audited by a third party auditor.

The World Bank

24. The World Bank has continued to expand its application of GHG accounting. In 2012, the World Bank's Board endorsed a World Bank Group Environment Strategy (2012-22), which states that the World Bank will start undertaking GHG analysis of investment projects financed

[3] See www.ifc.org/ghgaccounting.
[4] See www.ifc.org/ghgaccounting.

by IDA/IBRD. A phased roll-out commenced with the energy and forestry sectors implementing GHG accounting in July 2013, the agriculture sector starting in July 2014, while the transport, water, and urban sectors are aiming to begin implementation before the end of World Bank FY15. In parallel the World Bank started publicly reporting the GHG emissions reductions with support of special climate finance instruments in its corporate scorecard, with the first numbers published in April 2013.

25. In addition, the World Bank has developed guidance notes and tools for undertaking GHG emissions accounting. The table below provides an overview of project types and status of guidance development for the energy, transport, and urban sector as of June 2014.

Energy	**Forest**	**Transport**
Existing: - Thermal generation - Hydro power (excluding pump storage) - Transmission and distribution - Renewable energy **Under development (delivery in Q1 FY15):** - Thermal plant rehabilitation projects - EE in industries - EE in buildings - District heating **To be developed in FY15:** - Pump storage - Household energy	**Existing:** - Afforestation - Reforestation - Sustainable Forest Management **Under development (delivery in Q1 FY15):** - Forest fire prevention **To be developed in FY15:** - Landscape interventions, addressing drivers of deforestation (REDD) - Capacity building, governance etc.	**Under development:** - Road investment improving traffic flows - Change of vehicle technologies - Fuel substitution - Modal shift in long distance passenger transport - Modal shift in long distance freight transport - Modal shift in urban passenger transport
Agriculture	**Urban**	**Water**
Existing: - Non-forest land use change - Annual and perennial crops - Exploitation of organic soils - Livestock	**Existing:** - Landfill gas capture; - Solid waste (e.g. composting) **To be developed:** - Multi-methodology approach - Solid waste – full value chain - Urban planning and land use	**Existing:** - Wastewater treatment **To be developed:** - Other wastewater projects

- Irrigated rice - Fertilizer industry - Fisheries and aquaculture		

26. Finally, the World Bank agrees with the IFI Harmonization Framework for project-level GHG emissions accounting, which recognizes the differing mandates and geographical coverage of each institution, and is actively working on the harmonization agenda as part of the IFI Working Group.

Annex I

International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting

November 2012

The International Financial Institutions[1] (IFIs) have been working together to agree a harmonised approach to project-level greenhouse gas (GHG) accounting. The rationale for this work is to harmonize GHG accounting during project appraisal. The purpose is to establish minimum requirements in undertaking this work, all of which each IFI can optionally exceed with additional considerations and reporting.

The IFIs recognise that approaches to GHG accounting should be harmonised as far as possible, recognising the differing mandates and geographical coverage of each institution. A harmonised approach will improve consistency and comparability across IFIs, provide increased reliability for other users of the data, set a good-practice standard for other International Financial Institutions, and facilitate the sharing of experience and lesson-learnt.

This note sets out the agreed principles for GHG accounting.

Policy Commitment

- Each of the IFIs is committed to accounting for the GHG emissions of direct investment projects that they finance.
- Each of the IFIs will state this commitment publicly in relevant policies and strategy documents.

Screening

- IFIs shall screen each proposed direct investment project for likely significant GHG emissions.
- IFIs may establish *de minimis* criteria for GHG screening. IFIs will undertake GHG accounting for all direct investments consistent with the screening criteria.
- Where a sector or investment class is excluded from GHG accounting, this will be stated in the IFI's relevant policy and procedures.

[1] The IFIs included in this initiative are the Agence Française de Développement (AfD), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), the International Finance Corporation (IFC), KFW Development Bank, the Nordic Environment Finance Corporation (NEFCO), and the World Bank (WB).

Methodology

- IFIs shall undertake the GHG accounting of a project based on established methodologies for **ex-ante** GHG accounting including the greenhouse gas emission calculation approaches as per, inter alia, the GHG Protocol, the Clean Development Mechanism methodology, Verified Carbon Standard, Gold Standard and the EU Emissions Trading Scheme, ISO 14064 (Part 1 and 2), or other international standards.
- Definitions, assumptions and methodologies shall be recorded and made available to decision makers within the IFI and to external stakeholders as appropriate.
- The results of the GHG accounting shall be expressed in tonnes of CO2-equivalent, using the global warming potential of greenhouse gases as defined by the UNFCCC.

GHG Emissions Accounting

During project appraisal, GHG emissions of a project will be accounted for at appraisal as follows:

- Each IFI will estimate the ***gross (or absolute) GHG emissions*** that a project is expected to produce on an annual basis for a representative year once it is complete and at normal operating capacity.
- The project boundary for GHG accounting should include all activities, facilities or infrastructure that the IFI is financing.
- Gross emissions from construction may be included in the assessment of annual emissions using reasonable assumptions about the project lifetime.
- GHG accounting will include Scope 1 and Scope 2 emissions (as defined in the GHG Accounting Protocol).[2] Each IFI may choose to include Scope 3 emissions attributable to a project, but this should be clearly stated in relevant policies, procedures, and results.
- Gross emissions are to be estimated for existing and greenfield projects.

In order to capture the development and mitigation contribution of projects, ***net (or "relative") GHG emissions*** against a ***baseline*** will be assessed as follows:

- Each IFI will estimate the net GHG emissions contribution that a project is expected to achieve on an annual basis for a representative year once it is complete and at normal operating capacity.
- The IFI will calculate net emissions as compared to a baseline scenario. This reference scenario may be either a "without project" scenario or an "alternative scenario" that reflects the most likely alternative means of achieving the same project outcomes or level of service.
- As net GHG emissions may be a subcomponent of a larger project, the boundary of the net GHG accounting can be limited to the single activity, facility, or infrastructure resulting in net GHG emissions.

[2] ww.ghgprotocol.org

- Any net GHG accounting should include all Scope 1, Scope 2, and, as with gross emissions, Scope 3 where applicable. Leakage in Scope 3 emissions should be included in sectors where this is identified as an issue

Reporting

- At a minimum, each IFI shall report annually on the aggregate net GHG emissions for screened-in mitigation projects, estimated to arise from the previous year's approved or signed investments.[3] [4]
- In addition, IFIs may choose to undertake additional reporting on baselines, gross emissions, portfolio-wide net emissions, lifetime GHG emissions, etc
- IFIs may choose to further disaggregate GHG data by sector, country or project.

Further Cooperation

- This document will be subject to periodic review as appropriate.
- The IFIs are committed to further cooperation and shared learning in the area of GHG accounting, and will continue to work together on important issues in the future: including consideration of different approaches for GHG accounting of other types of projects.
- The IFIs will work to establish a mechanism for data sharing and peer review of their GHG accounting.
- Where IFIs are co-financing a project, they will work together to agree as far as possible on a common estimate of the GHG emissions.
- Taking account of regulatory and voluntary practice, the IFIs will contribute to the development of robust accounting standards and monitoring, verifying and reporting (MRV) procedures.

[3] GHG emissions will be reported only for the year of approval/contract signature, and not again in subsequent years.

[4] Multilateral Development Banks (MDBs) will report on mitigation activities in accordance with the typology of the Joint MDB Report on Mitigation Finance.