

# CLIMATE INVESTMENT FUNDS

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Meeting of the CTF Trust Fund Committee  
Washington, DC  
Monday, December 5, 2016

## **Greenhouse Gas Analysis and Harmonization of Methodology**

## **1. Introduction**

1. The CTF Trust Fund Committee agreed in November 2014 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.” The first report on GHG analysis and harmonization of methodology was presented to the Trust Fund Committee in November 2014 as an information document. This document provides an update to the information presented in the previous report. The document has been compiled by the CIF Administrative Unit based on inputs provided by 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 the MDBs in GHG analysis and the development and application of GHG accounting methodologies.

## **2. 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. Close to 30 institutions are members of the Working Group, although the level of engagement varies among the IFIs. The group has lately expanded to cover international organizations such as the UNFCCC, the GCF, and the GEF. All CIF MDBs have expressed an interest in harmonization.
4. In November 2012, nine members<sup>1</sup> 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. 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 pursue 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.

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<sup>1</sup> 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).

5. The Transport sector group has produced a joint approach, and Forestry and Landscapes are discussing how to proceed with harmonization. In addition, the IFI Working Group would like to start working on harmonized approaches for other sectors such as urban development, agriculture, and forestry, as well as conventional energy projects.

## **2.1. Collaboration with UNFCCC and Others<sup>2</sup>**

6. Since 2014, the GCF, GEF and the UNFCCC have joined and have significantly contributed to the work of the group, supporting the urgent aim of the IFI WG of delivering harmonized approaches. International Energy Agency (IEA) also contributed actively during 2015.
7. The MDBs at COP21 (2015) released joint GHG Accounting methodologies for Energy (RE and EE) and Transport sector projects. Since then, a joint database of emissions factors – key data points needed for GHG emissions reduction calculations by both Energy Efficiency and Renewable Energy projects – has been created and is now available to the MDBs. A first update of that database is forthcoming, allowing for better alignment with IEA for 2 degree and 1.5 degree scenarios. For most countries, emissions factors are based on UNFCCC data.
8. In response to a WBG initiative to speed up the development of GHG Accounting Standards, to be used by IFIs, the UNFCCC Secretariat has submitted a concept note. In October, 2016, the Working Group discussed the concept note “UNFCCC and the IFI collaboration on the development of GHG accounting standards.” It was agreed that UNFCCC will share revised concept note to accommodate concerns raised by IFIs on governance, work plan and budget.
9. In addition, the Working Group has discussed update of the common dataset containing baseline emission factors for GHG accounting of renewable energy projects using IEA World Energy Outlook (WEO) data. The IEA WEO team has provided the Technical Working Group access to data on the planned and expected new generation capacity for major countries and regions. It was agreed that EIB will follow up with IEA to explore disaggregation of regional data to accurately capture the country context. It was also agreed that absent any finalization of a new approach that the existing harmonized dataset (Interim) would be released as Version 1.1 or 2.0 on Jan 1 2017.

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<sup>2</sup> Current members of the IFI working group are:

MDBs – ADB AfDB EBRD EIB IDB IFC WB

Other IFIs - NIB, GIB, AFD, KFW, JICA, JBIC, NEFCO, FMO, FINN FUND, DEG, Export credit UK, OPIC, EXIM, OBVIAM.ch, BIO-INVEST, BOAD, Australia cleanenergyfinancecorp, ukef.gsi.gov.uk,

International organizations - the GEF, the UNFCCC CDM secretariat, the GCF, the IEA

10. Finally, a draft methodology for energy access projects has been jointly developed with the World Bank Climate and Carbon Finance Unit (WB-GCCCF), UNFCCC and Netherlands Development Finance Company (FMO). It was agreed that the IFI Working Group will issue a separate harmonized methodology note on energy access.

### 3. Status of Individual MDB Efforts

#### 3.1. African Development Bank

11. AfDB currently reports ex-ante emission reductions of select green projects using Clean Development Mechanism (CDM) methodologies. AfDB is establishing an in-house GHG accounting and reporting system 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.

#### Status of implementation at AfDB

Energy, water and sanitation and as indicated above for the transport and agriculture sectors, existing tools (EX-ACT & HDM-4) are applied for GHG emissions

12. AfDB is currently piloting a project level GHG emission accounting tool. This piloting phase started with the energy sector. The Agriculture sector emissions calculation is based on the FAO EX-ACT carbon accounting system. The emissions from roads projects is calculated based on the Highway Development and Management-4 (HDM-4) tool. The Bank's GHG accounting tool will be fully aligned with common methodologies/approaches adopted by the IFI Working Group.

#### 3.2. Asian Development Bank

13. No new updates since the 2014 harmonization report.

#### 3.3. European Bank for Reconstruction and Development

14. No new updates since the 2014 harmonization report.

### 3.4. Inter-American Development Bank

15. No new updates since the 2014 harmonization report.

### 3.5. International Finance Corporation

16. In FY17, IFC has updated its Definitions and Metrics for Climate-Related Activities (Climate Definitions) to provide institutional guidance on what can be categorized as climate-related activities.<sup>3</sup> The latest version (3.0) reflects principles for tracking mitigation finance agreed to by the MDBs, incorporates the climate smart agriculture typology used by the World Bank and FAO, and provides more granularity on climate financing delivered through financial intermediaries.

#### Status of implementation at IFC

Through the in-house Carbon Emissions Estimator Tool (CEET) IFC conducts Gross GHG accounting for all real sectors projects. In FY17, specific methodological approaches used by CEET are being reviewed in response to introduction of carbon shadow price for investment appraisal.

GHG emissions reductions' approaches and practices are being reviewed to ensure harmonization with the WB, other MDBs and IFIs, and in response to the updated IFC climate definitions. Collectively, the MDBs have completed

17. The WB and IFC continue their work on harmonizing GHG accounting practices. Both IFC and the WB participate in the external IFI Working Group on GHG Accounting and run an internal WBG GHG Consultative Group. These groups serve as platforms to promote an open and transparent exchange of experience and lessons and facilitate harmonization of practices. These groups further aim at developing a harmonized approach to project-level GHG accounting that is undertaken at the project appraisal stage. In FY17, IFC and the WB are planning to test the new set of harmonized GHG Accounting tools on select project cases in the energy, transport, agriculture, forestry, water, and solid waste sectors. These GHG Accounting harmonization activities are linked to the operationalization across the WBG of the Common Principles for Tracking Mitigation Finance agreed by MDBs and members of the IDFC.

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<sup>3</sup> See [www.ifc.org/ghgaccounting](http://www.ifc.org/ghgaccounting).

### 3.6. World Bank

#### Status of implementation at WB

The Energy and Transport methodologies are being implemented by MDBs including the World Bank. Implementation is also being undertaken by other IFIs, resulting in a broader transformative effect.

## 4. Comparison of MDB Efforts

18. The table that follows compares MDB harmonization guidelines and efforts across a series of questions:

- For what sectors has the MDB developed GHG accounting methodology?
- What types of tools has the MDB developed to assist with GHG accounting? (e.g. excel tools, guidance notes, include links)
- What specific practices does the MDB use that are worthy of mention?
- Does the MDB estimate gross or net emissions? In what cases?
- What baseline definition does the MDB use?
- What is the timeframe of analysis that the MDB uses?
- Is there a threshold for emissions reporting?
- How does the MDB define project boundaries?

19. This information is compiled from official documents and MDB submissions. The CIF Admin Unit welcomes additions and corrections.

	<b>OVERALL IFI GUIDELINES</b>	<b>ADB</b>	<b>AFDB</b>	<b>EBRD</b>	<b>IDB</b>	<b>IFC</b>	<b>WB</b>
FOR WHAT SECTORS HAS THE MDB DEVELOPED GHG ACCOUNTING METHODOLOGY?	Energy and Transport	Commercial and residential buildings; Public services; Transmission and distribution systems; Power plants; Renewable energy; Transport; Agriculture (livestock); Waste and wastewater; Non-energy GHG reductions	Energy, water and sanitation and as indicated above for the transport and agriculture sectors, existing tools (EX-ACT & HDM-4) are applied for GHG emissions measurement.		See below	IFC uses globally approved methodologies, including Harmonized MDB methodologies and CDM methodologies. Sectors: IFC Gross GHG emissions accounting cover all real sectors (including Renewable Energy, Energy Efficiency, Transport, Waste, Forestry, etc.). GHG reduction accounting practices are in the process of being harmonized across MDBs/IFIs	Energy, Forests, Agriculture, Urban, Water
WHAT TYPES OF TOOLS HAS THE MDB DEVELOPED TO ASSIST WITH GHG ACCOUNTING? (E.G. EXCEL TOOLS, GUIDANCE NOTES, INCLUDE LINKS)	Database of baseline emission factors	Guidelines for Estimating Climate Change Mitigation Investment and GHGs Emissions Reductions of ADB Projects	Excel tool with links to existing tools (EX-ACT and HDM-4) in house GHG accounting and reporting system currently being piloted	<p><b><u>EBRD Methodology for Assessment of Greenhouse Gas Emissions</u></b></p> <p>GN 0 Initial GHG Screening</p> <p>GN 1 Assessment Scope</p> <p>GN 2 Direct emission sources from various industrial sectors</p> <p>GN 3 Direct GHG Emissions: Data Requirements and Recommended</p>	<p><b><u>Agriculture: Bioenergy</u></b></p> <p><b><u>Energy Sector: Fossil Fuel Power Plant</u></b></p> <p><b><u>Energy Sector: Transmission line development</u></b></p> <p><b><u>Greenhouse Gas Assessment Emissions Methodology</u></b></p> <p><b><u>Industrial sector: Cement</u></b></p> <p><b><u>Industrial Sector: Steel (Energy</u></b></p>	<p><b><u>IFC Carbon Emissions Estimator Tool (CEET) (.xlsx)</u></b></p> <p><b><u>CEET Quick Start Guide</u></b></p> <p><b><u>Tools to Estimate Greenhouse Gas Emission Reductions in the Waste Sector</u></b></p> <p><b><u>Forest Industry Carbon Assessment Tool (FICAT)</u></b></p> <p><b><u>Climate Assessment for FI Investment (CAFI)</u></b></p>	<p>Greenhouse Gas Accounting and the World Bank: Frequently Asked Questions</p> <p>GHG Accounting: Implementation Plan</p> <p><b><u>Status of GHG Accounting Methodologies Estimated Cost of Undertaking GHG Accounting</u></b></p> <p>Greenhouse Gas Analysis at the World Bank (2012) World Bank GHG Accounting</p>

	OVERALL IFI GUIDELINES	ADB	AFDB	EBRD	IDB	IFC	WB
				<p>Methods of Calculation</p> <p>GN 4 Estimation of indirect emissions from imported electricity and heat</p> <p>GN 5 Generation of electricity from renewable resources</p> <p>GN 6 Global Warming Potentials for calculation of total GHG (CO2 equivalent) emissions</p>	<p><b><u>Efficiency investment)</u></b></p> <p><b><u>Transport: BRT rationalizing traffic</u></b></p> <p><b><u>Transportation Sector: Canal</u></b></p> <p><b><u>Transportation Sector: Road Construction</u></b></p> <p><b><u>Urban Development Housing</u></b></p> <p><b><u>Waste and Sanitation</u></b></p> <p><b><u>Water and Sanitation - River</u></b></p>	<p><u>Climate Definitions and Guidance Note</u></p> <p><u>GHG Reduction Accounting Guidance</u></p>	<p>Guidance Note (version 1)</p> <p><b><u>World Bank GHG Emissions Reporting Template</u></b></p>
WHAT SPECIFIC PRACTICES DOES THE MDB USE THAT ARE WORTHY OF MENTION?						Third party auditing	WB plans to use third-party auditing in the future.
DOES THE MDB ESTIMATE GROSS OR NET EMISSIONS? IN WHAT CASES?	Each IFI will estimate the gross GHG emissions that a project is expected to produce for a representative year once it is complete and at full capacity. 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 full capacity.		The project emissions excel sheet includes both gross and net emissions		IDB reports separate numbers for a positive (+) gross and a negative (-) net. Positive (+) gross GHG emissions are significant scope 1 and scope 2 and, if calculable, scope 3. Negative (-) net GHG reductions of the financed project are quantified relative to a baseline.	IFI estimates ex-ante gross emissions for all projects and ex-ante GHG emissions reductions for projects classified as direct mitigation.	Ex ante – both

	OVERALL IFI GUIDELINES	ADB	AFDB	EBRD	IDB	IFC	WB
WHAT BASELINE DEFINITION DOES THE MDB USE?	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.		Counterfactual – what would the situation be if the project had not happened.	The Baseline or Reference Scenario emissions are the hypothetical emissions that would prevail in the absence of the project. A representative pre-project emission, usually zero where the project is a green-field development or the facility annual emissions pre-investment where the project comprises upgrading or refurbishment.	IDB uses a static baseline	Counterfactual – what would the situation be if the project did not happen.	Counterfactual – what would the situation be if the project had not happened.
WHAT IS THE TIMEFRAME OF ANALYSIS THAT THE MDB USES?			Economic life of project			Depends on the type of the analysis. Typically, analysis is conducted on the annual basis (over a representative year) and over the life of a financing instrument.	Economic life of project
IS THERE A THRESHOLD FOR EMISSIONS REPORTING?			None for the current piloting phase – project categorization to be determined at a later stage.	Although in most years all direct investment projects with emissions, or emissions savings, exceeding 20 kt CO2e per annum have been assessed, the focus has been on large projects, i.e. those		Yes, 25,000 tons/year for gross emissions	25000 tons for net emissions

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				emitting > 100 kt per annum, mainly in the energy and industrial sectors			
HOW DOES THE MDB DEFINE PROJECT BOUNDARIES?	<p>The project boundary for GHG accounting should include all activities, facilities or infrastructure that the IFI is financing.</p> <p>Gross emissions from construction may be included in the assessment of annual emissions using reasonable assumptions about the project lifetime.</p> <p>GHG accounting will include Scope 1 and Scope 2 emissions (as defined in the GHG Accounting Protocol). 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.</p> <p>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.</p> <p>Any net GHG accounting should include all Scope 1,</p>		AfDB tool considers all scopes depending on nature of project.	The project boundary is generally defined as the geographical boundary of the facility but may need to include associated facilities where these exist solely to serve the project.	Geographic boundary, though the project boundary may need to include associated facilities where these exist solely to serve the project.	IFC follows the GHG protocol commonly accepted by all MDBs. Specifically, Scope 1 and 2 emissions are always reported, and Scope 3 emissions are reported in certain cases. Reporting of Scope 3 emissions depends on whether these emissions are material in the project context – which is, for example, the case in the transport sector projects and less so in the energy sector projects.	GHG protocol. Scope 1 and 2 emissions are reported by all MDBs, and Scope 3 by most. Reporting of Scope 3 emissions depends on whether these emissions are material in the project context – e.g. yes in the transport sector, less so in the energy sector.

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	Scope 2, and Scope 3 where applicable. Leakage in Scope 3 emissions must be included in sectors where this may be an issue.						