INTERNATIONAL FINANCIAL INSTITUTIONS TECHNICAL WORKING GROUP ON GREENHOUSE GAS ACCOUNTING

IFI TWG - AHG-003

International Financial Institutions Guideline for a Harmonised Approach to Greenhouse Gas Accounting

Version 02.0

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1. Background

1. The international financial institutions (IFIs) recognise that their approaches to greenhouse gas (GHG) accounting should be harmonised as far as possible, accounting for the differing mandates and geographical coverage of each institution. A harmonised approach will improve consistency and comparability across IFIs, increase clarity for other users of the data, set a standard for other IFIs, and facilitate the sharing of experience and lessons learnt.

2. Sector-specific approaches for estimating project emissions, baseline emissions and relative emissions are outlined in other standards available at https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies.

3. This document supplements but does not replace the "International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting" adopted by the IFI Technical Working Group in November 2015[1]. This document is subject to periodic reviews as appropriate.

2. Definitions

4. The following definitions apply for the purpose of this document:

   (a) **Absolute emissions** – Annualised estimations[2] of the GHG emissions from sources within the project assessment boundary from Scope 1 sources, and where relevant Scope 2 sources and Scope 3 sources. Absolute emissions are a subset of the project emissions;

   (b) **Activity level** – Annualised estimation of the volume of goods, services or activities that drive the GHG emissions from sources within the project assessment boundary, e.g., energy provided, kilometres travelled, or tonnes of steel produced;

   (c) **Assessment boundary** – The physical delineation or geographical area that includes the significant sources and sources significantly affected directly or indirectly as a consequence of the investment project. The assessment boundary for estimating relative emissions will always include the project's absolute emissions and can include other sources affected as a consequence of the project (see illustrative examples in the Annex);

   (d) **Baseline emissions** – Annualised estimations of GHG emissions from sources that would occur in a baseline scenario. As with absolute emissions and project emissions, baseline emissions can be estimated using one of the two options, i.e. as an annual average or for a representative year. The option for estimating baseline emissions should be consistent with the option selected for absolute emissions and project emissions estimations;

[1] The Framework document is available from: https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting

[2] As per IFI's accounting practices, emissions including absolute emissions can be estimated at different stages of the investment process, e.g., at signing, disbursement or repayment.

(e) **Baseline scenario** – The scenario that reasonably represents emissions by sources of GHGs that would occur in the absence of the investment project and described further in section 3.3;

(f) **Emission factor** – A coefficient that quantifies the GHG emissions per one unit of activity that drives GHG emissions. This is typically determined as grams (g), kilogrammes (kg) or tonnes (t) of GHG (or CO_2e) per unit of goods, services or activities, such as tCO_2e per tonne of clinker, $kgCO_2e$ per kilowatt-hour (kWh) of electricity, $kgCO_2e$ per kg of liquefied petroleum gas (LPG) used, and tCO_2e per hectare of land used;

(g) **Investment project**[3] – Funding entirely or partially provided by an IFI to an investee directly or through a financial intermediary in support of capital investment in a physical asset or any other type of spending related to a source or sink;

(h) **Other consequential emissions** - Annualised estimations of GHG emissions from sources of GHG emissions outside the value chain[4] of the project, but nonetheless affected by the project and can be included in the assessment boundary when compared to the baseline. Other consequential emissions are a subset of the project emissions (see examples in the Annex);

(i) **Project emissions** - Annualised estimations of GHG emissions from sources included in the assessment boundary that occur in a project scenario. Project emissions are estimated in metric tonnes of CO_2 equivalent (tCO_2e) and calculated using the 100-year time horizon global warming potential (GWP) values provided in the latest Intergovernmental Panel on Climate Change (IPCC) Assessment Report adopted by the UNFCCC[5]. Project emissions can be estimated as an annual average[6] (option 1), or for a representative year (option 2) for an investment project in which the physical asset financed is operating at full capacity,[7] or after the new practice (such as a new agricultural practice) or land-use change (such as reforestation) has been fully implemented. Option 1 is especially suitable for cases when emissions do not occur with the same intensity throughout the economic lifetime of the asset, e.g., emissions that occur during construction or biogenic emissions from hydropower plant reservoirs. In estimating relative emissions,

[3] For the purpose of these guidelines, treasury operations are not considered.

[4] Value chain emissions are emissions from the upstream and downstream activities associated with the investment project.

[5] The use of GWP values that are different from the recently adopted by the UNFCCC should be transparently documented.

[6] The annual average should ideally be calculated using estimates over the economic life of the asset, capturing changes in emissions as the asset ages. If the GHG emissions are calculated during or after project implementation but before the end of the economic life of the asset, the IFI may average over the years for which the requisite data are available. In the latter case, if the average over the economic life of the asset is expected to be higher than the average so calculated, such an observation should be stated, together with orders-of-magnitude impacts to the extent possible.

[7] It is important not to introduce a downward bias due to the selection of the method for annualising emissions. For example, if emissions are always annualised over the economic life of an asset whenever emissions decline with the age of the asset, but a “representative” year or the first year of operating at full capacity is chosen whenever emissions increase with age, such an approach would introduce a consistent downward bias in the estimation of GHG emissions across the IFI’s portfolio.

categorization of the scope of emissions may be omitted in estimating baseline emissions (see illustrative examples in the Annex);

(j) **Pre-project emissions** - Annualised estimations of GHG emissions that occurred prior to a project's implementation from sources within the project assessment boundary. Pre-project emissions can be estimated as an annual average, or for a representative year;

(k) **Project scenario** – The scenario that reasonably represents absolute emissions and may include other consequential emissions by sources of GHGs that would occur in the presence of the investment project;

(l) **Relative emissions**[8] – Annualised estimations of the GHG emissions calculated as the difference between the project emissions and baseline emissions using the same assessment boundary. Depending on the calculation procedures adopted by an IFI, relative emissions can be calculated by subtracting baseline emissions from project emissions or vice versa;

(m) **Scope of GHG emissions.** The concept of scope in emissions accounting has been developed in the context of estimating absolute emissions. The assessment boundary and sources of emissions are defined from the perspective of the investee. The following three types of sources are defined for the purpose of estimating absolute emissions:

(i) **Scope 1 emissions** – direct GHG emissions from the sources that are affected by the investment project and that are owned or controlled by the investee;

(ii) **Scope 2 emissions** – indirect GHG emissions from energy sources not owned or controlled by the investee but directly utilised by the investment project. This includes emissions associated with electricity, heating or cooling purchased for the investee activities;

(iii) **Scope 3 emissions** – other indirect GHG emissions from sources that are upstream or downstream of a value chain and not owned or controlled by the investee. Scope 3 emissions may include the following categories:

a. **Goods and services**. Emissions due to production of goods and services used by the investee's activities;

b. **Feedstock and energy.** Upstream emissions from feedstock or energy used by the investee's activities and not included in scope 1 or scope 2. Examples include upstream emissions associated with fuel extraction, production, and transportation;

c. **Transportation and distribution**. Emissions indirectly caused by the investee's activities through the use of mobile assets for road, rail, water or air transport that are not owned or operated by the investee;

[8] Depending on the terminology adopted by an IFI, relative emissions can also be referred to as "net emissions". For investment projects that reduce emissions including those categorised as climate change mitigation, relative emissions can be referred to as "emissions reductions" or "avoided emissions".

d. **Waste**. Emissions due to disposal and treatment of waste generated by the investee's activities, including end-of-life treatment of products produced by investee activities;

e. **Service or product use**. Emissions due to the use of service or further processing of products produced by the investee's activities;

The three types of **scope** are further illustrated in Figure 1.

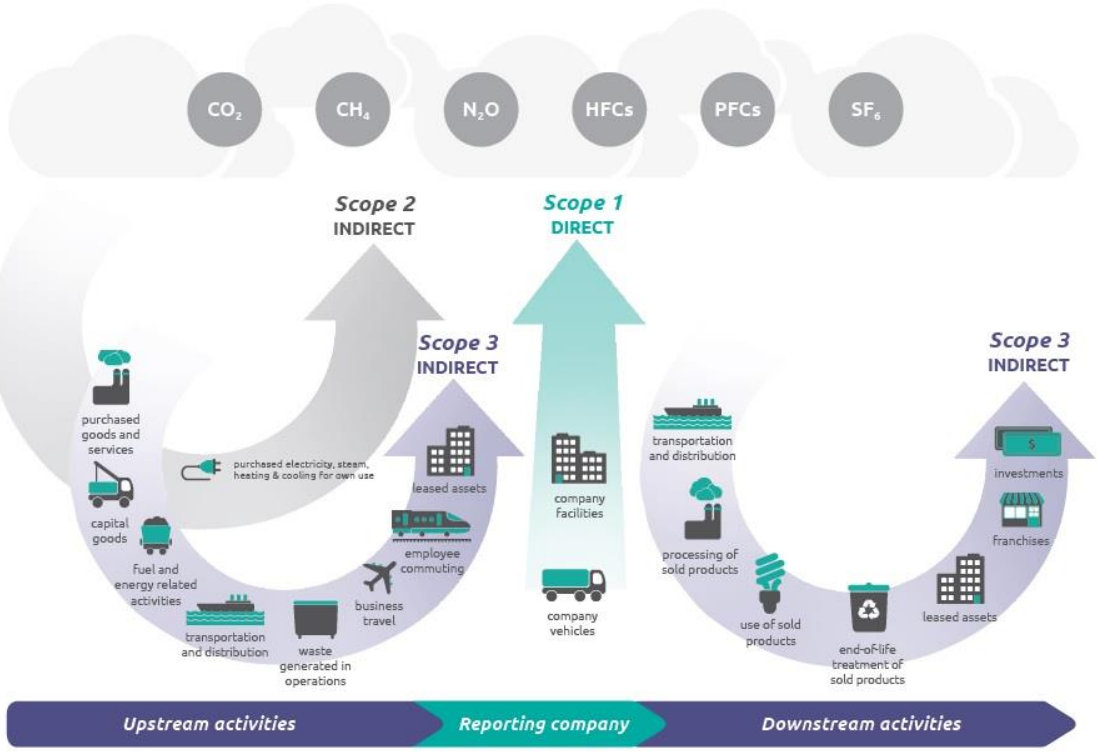

Figure 1. Overview of GHG scope 1–3. For the purpose of these guidelines 'Reporting Company' is referred to as 'investee'. (Source: Scope 3 calculation guidance. http://ghgprotocol.org/scope-3-technical-calculation-guidance)

(n) **Source** - For the purpose of this document the term "source" is used to include both GHG emissions sources and GHG removals from sinks, defined as:[9]

(i) **GHG emissions source:** a separately identifiable part of an asset—stationary unit or a mobile unit (e.g., a vehicle)—or a process[10] from which relevant GHGs are emitted as a result of combustion, process, or fugitive emissions[11];

[9] As sources can include sinks, GHG emissions can be either positive or negative.

[10] A process is broadly defined to include activities such as prescribed forest burning and naturally occurring phenomena such as land degradation, forest fires, and bleaching of a coral reef.

[11] Fugitive emissions are intentional or unintentional release of GHGs such as through joints, gaskets or during extraction or processing of fossil fuels.

(ii) **GHG emissions sink:** a separately identifiable biological or man-made system that removes GHGs from the atmosphere (sink), e.g., part of a forest that absorbs CO_2 from the atmosphere and stores it in plant tissue.

3. GHG accounting

5. When undertaking GHG appraisal of investment projects, unless otherwise specified in the IFI Technical Working Group's sector-specific approaches or internal procedures, an IFI applies the provisions of this section.

6. When undertaking GHG appraisal of investment projects that are co-financed by members of the IFI TWG, the following should be documented to enhance consistency of the GHG emissions estimations:

   (a) Information about methodological choices and assumptions, including a brief description of the assessment boundary;

   (b) Absolute emissions disaggregated by scope;

   (c) Relative emissions, calculated as the difference between the project emissions and baseline emissions;

   (d) Other metrics, where relevant, allowing for comparison of GHG-related performance of similar projects. For example, this may include emissions intensity per outcome, pre-project emissions, or any other grouping[12].

7. GHG appraisal of investment projects can be performed applying the requirements of, inter alia, the GHG Protocol, the Clean Development Mechanism methodologies, Verra (Verified Carbon Standard), Gold Standard, the EU Emissions Trading Scheme, ISO 14064 (Part 1 and 2), or other recognised standards[13].

3.1. Accounting principles

8. **Relevance**. Accounting approaches serve the needs of the users both internal and external to the IFI.

9. **Completeness**. The GHG emissions are estimated for all relevant investment projects, categories of sources, and gases within the chosen assessment boundary. Specific exclusions are documented and justified.

10. **Consistency**. The emissions are accounted using consistent methodologies to allow comparison of emissions over time or across similar categories of sources of GHGs.

11. **Transparency**. All relevant assumptions, methodological choices, references to the accounting methodologies and data sources are documented.

12. **Conservativeness**. Where data are unavailable, any uncertainty is to be addressed following the principle of conservativeness where it is preferable to over-estimate project emissions and under-estimate baseline emissions.

[12] Refer to Annex 1 for examples of project-level GHG Accounting.

[13] As applicability of external standards may differ, additional requirements may need to be met to comply with the accounting requirements agreed by the IFI TWG.

13. **Materiality**. The principle of materiality can indicate whether to include or omit certain data or information based on whether its inclusion is needed to represent adequately the sources of emissions included in the assessment boundary or to inform decision making process.

3.2. Data sources

14. A tiered approach should be applied to achieve the appropriate level of data completeness and to address data gaps when information on activity levels and emission factors is not readily available. Tiers below are ranked based on the level of complexity and data requirements. Tier 3 is more comprehensive in terms of completeness and accuracy, whereas Tier 1 and Tier 2 are less so:

    (a) **Tier 1 – Country-specific activity data and default emission factors**. Sectoral emission factors from sector guidance or country emission factors from credible sources, e.g., GHG national inventories;

    (b) **Tier 2 – Organisation-level GHG data.** This can include publicly disclosed GHG data, e.g., audited data under ISO 14064, data reported to the Carbon Disclosure Project (CDP), and sustainability reports of the investee;

    (c) **Tier 3 – Project-level activity data and emission factors**. This can include historical records of electricity consumption, fuel use, and fugitive emissions; estimates from the feasibility study; and specific factors, e.g., net calorific value.

3.3. Baseline

15. The baseline setting is aimed at identifying the most feasible and realistic alternative scenario to an investment project. In many cases it is an alternative that can provide the same product or service within the same timeframe.

16. If the process of identifying the baseline results in more than one feasible alternative, the most conservative one in terms of relative emissions should be selected. In projects involving land use, a conservative approach might involve examining land use for the last few years prior to the start of the proposed project and not simply the current use.[14]

17. In some limited cases, if it can be demonstrated that, due to the specific needs and circumstances of the region or the country, the service level inclusive of that needed to meet latent/unmet demand for an essential product or service was not met prior to an investment project but can justify meeting such latent/unmet demand—which would increase future GHG emissions above those corresponding to the current level of met demand—the baseline may include a scenario with trend-adjusted emissions, i.e., a higher

[14] For example, if a firm engages in clearcutting and subsequently proposes climate-smart agriculture or tree plantation that offsets the GHG emissions from clearcutting, the baseline should be the state of land before clearcutting.

level of baseline emissions than a scenario where latent/unmet demand is not being met.[15,16]

18. The following three general approaches or any combination of them can be applied:

(a) **The GHG emissions that represent a forward-looking baseline (technology or practices other than that financed by an IFI, etc.)**. It is assumed that the baseline alternative is to invest in a different technology or to apply different practices (e.g., sustainable forest management), or the existing assets would be upgraded or used differently to reduce GHG intensity (tCO_2e/unit of product or service) over time;

(b) **The GHG emissions that represent the average performance in the market/system (in the absence of the investment, the outcome or service is provided by the market/system)**. It is assumed that the corresponding demand for products or services would be met by other providers in the market utilising available technologies, commonly adopted practices, or their equivalent.[17]

(c) **Existing actual or pre-project emissions (without-project scenario**, **continuation of the current situation)**. The assumption embedded in this approach is that in the absence of the investment project, the service would be provided by the existing assets included in the assessment boundary at the historical level of GHG intensity (tCO_2e/unit of product or service) or the current practice (e.g., in the treatment of land or vegetation) would continue. This approach applies to, for example, energy efficiency investment projects in existing facilities or to investment projects in existing land use activities. A limitation of this approach in the case of projects involving physical assets is that historical GHG intensity neither reflects future changes nor accounts for economy-wide changes (due, for example, to compliance with new regulations or technology development) that could reduce the GHG intensity in the remaining lifetime of the asset.

[15] A detailed guideline on how to estimate baseline emissions taking into account latent/unmet demand to cover specific cases would be one of the next steps in developing GHG accounting standards and guidelines.

[16] Not all IFIs have adopted this methodology, which includes the emissions due to meeting unmet demand in the baseline scenario.

[17] Depending on the nature of forward-looking technologies and the timeframe in question, (b) may not be any less conservative than (a).

Annex. Project Level GHG Accounting Examples

The following tables are provided to illustrate the project level accounting format.

Example 1 Renewable Energy

<table>
<tr><td colspan="2">Project: A loan to finance the construction and operation of a grid-connected Geothermal Power Plant generating 270 GWh of electricity a year in country C</td></tr>
<tr><td colspan="2">GHG accounting standard applied:
IFI TWG's GHG Accounting Methodology for Grid Connected Renewable Energy Projects (for the application of the default grid emission factor)
Institution approved GHG accounting methodology/guidance, to estimate baseline and project emissions associated with operation of Geothermal projects</td></tr>
<tr><td colspan="2">Sources included in the Relative emissions assessment:</td></tr>
<tr><td><u>Project Scenario</u>
Absolute emissions:
Scope 1: direct GHG emissions associated with fugitive emissions due to non-condensable gases and/or working fluid associated with electricity generation
Scope 2: None
Scope 3: Not applicable
Other consequential emissions:
Emissions from power plants that are affected by the project (represented by a Combined Margin Emission Factor, α tCO_2/MWh) [18]</td><td><u>Baseline Scenario</u>
Baseline emissions:
Emissions from power plants that are affected by the project (represented by a Combined Margin Emission Factor, α tCO_2/MWh) (see footnote 17)</td></tr>
</table>

[18] Emissions associated with power plants in baseline and project scenario is categorized as other consequential emissions affected by the project and is integrated into the calculation of the combined margin emission factor of the gird:

- The grid emission factor represents a multi-project baseline (benchmark emission intensity, tCO_2/MWh) which already takes into account the potential GHG impact on grid power plants (existing and future) due to renewable energy/energy efficiency project intervention. It is constructed using a Combined Margin (CM) for the grid that is comprised of an Operating Margin (OM) and a Build Margin (BM). The OM represents the cohort of existing power plants whose operation will be most affected (reduced) by the project. The BM represents the cohort of the prospective/future power plants whose construction and operation could be affected (avoided/deferred) by the renewable energy /energy efficiency project. Hence the grid emission factor when multiplied by the amount of electricity generation from the RE project or by the amount of energy saved due to the energy efficiency improvement project represents avoided emissions that would otherwise be generated wholly or partly from the grid power plants (OM and BM).

<table>
<tr><td colspan="4">Project emissions</td></tr>
<tr><td colspan="3">Absolute Emissions, tCO_2e</td><td>Other consequential emissions, tCO_2e</td></tr>
<tr><td>Scope 1</td><td>Scope 2</td><td>Scope 3</td><td></td></tr>
<tr><td>4,900 tCO_2e/year</td><td>None</td><td>NA</td><td>Emissions from power plants that operate at a reduced load as a result of the project (the total output of the affected power plants is not necessarily known).</td></tr>
<tr><td colspan="4">Project emissions, tCO_2e: Absolute emissions + Other consequential emissions

Fugitive emissions of CO_2 and methane (4,900 tCO_2e/year) from the project + total electricity output from the grid-connected power plants that operate at a reduced load as a result of the project (unknown total output “A” GWh/year) x the Combined Margin Emission Factor for country C (220 tCO_2/GWh).</td></tr>
<tr><td colspan="4">Baseline Emissions, tCO_2e:

Total electricity output from the grid-connected power plants that operate at an increased load as a result of the project (unknown total output “B” GWh/year) x the Combined Margin Emission Factor for country C, 220 tCO_2/GWh).</td></tr>
<tr><td colspan="4">Relative Emissions, tCO_2e:

The Relative emissions are based on the <u>difference</u> between the project emissions and the baseline emissions, i.e. the absolute emissions generated by the project and the “other consequential emissions” from the emissions from output “A” (project scenario) minus the emissions from output “B” (baseline scenario), where output “A” minus output “B” equals the electricity output of the project.

In this case, since the total output of the affected grid-connected power plants in the project scenario (output A) and the baseline scenario (output B) are not known, the relative emissions calculation uses the fact that the project output (270 GWh) is equal to the difference in output A and output B of the affected grid power plants:

Relative emissions = Project emissions – [project output x Combined Margin Emission Factor, (the emissions factor for electricity from power plants affected by the project)] = 4900 – (270 x 220) = -54,500</td></tr>
<tr><td colspan="4">Critical parameter(s) applied: Combined Margin Emission Factor α tCO_2/MWh of country C as per “Harmonized Grid Emission factor data set”</td></tr>
</table>

Example 2. Power Transmission and Distribution

<table>
<tr><td colspan="4">Project: A loan to finance the extension of a Transmission and Distribution (TD) System to local distribution substations for Rural Electrification

Example: 100 MWh is the annual demand at the point of consumption (distribution substation). If annual TD loss is 10%, 100/(1-10%) = 111.11 MWh needs to be supplied by generators to meet 100 MWh load at distribution point.</td></tr>
<tr><td colspan="4">GHG accounting standard applied:

• IFI TWG's GHG Accounting Methodology for Grid Connected Renewable Energy Projects (for the application of default grid emission factor)

• Institution approved GHG accounting methodology/guidance, to estimate baseline and project emissions associated with operation of TD and energy access project, as IFI TWG methodology currently lacks such provisions</td></tr>
<tr><td colspan="4">Sources included in the Relative emissions assessment:</td></tr>
<tr><td colspan="3"><u>Project Scenario</u>

Absolute emissions:

• Scope 1: direct GHG emissions associated with land clearances and fugitive emissions due to operation of SF6 switchgear

• Scope 2: Emissions associated with TD losses associated with the project

• Scope 3: Not applicable

Other consequential emissions:

• Emissions from grid-connected power plants that increase output as a result the project (represented by Combined Margin Emission Factor (CM), tCO_2/MWh)</td><td><u>Baseline Scenario</u>

Baseline emissions:

Emissions from a diesel based mini-grid system that would continue to operate without the project (represented by Emission Factor of mini-grid)</td></tr>
<tr><td colspan="4">Project emissions</td></tr>
<tr><td colspan="3">Absolute Emissions, tCO_2e</td><td>Other consequential emissions, tCO_2e</td></tr>
<tr><td>Scope 1</td><td>Scope 2</td><td>Scope 3</td><td></td></tr>
<tr><td>S1</td><td>11.11 MWh x CM (tCO_2/MWh)</td><td>N/A</td><td>100 MWh x CM (tCO_2/MWh)</td></tr>
<tr><td colspan="4">Project emissions, tCO_2e: Absolute emissions + Other consequential emissions =

Scope 1 + Scope 2 (TD losses as a result of the project x the emissions factor of grid-connected power plants) + Other consequential emissions (increased load of grid connected power plants for electricity supplied to Rural customers)

= S1+ 11.11 MWh x CM (tCO_2/MWh) + 100 MWh x CM (tCO_2/MWh)</td></tr>
</table>

Baseline Emissions, tCO_2e: Total electricity supplied to Rural customers (100 MWh) x Mini-grid Emission Factor
Relative Emissions, tCO_2e: Project Emissions (direct emissions, emissions from TD losses and electricity supplied to rural customers from grid-connected power plants) – Baseline Emissions (emissions from local diesel power sources) =S1 + [(11.11 MWh + 100 MWh) x CM] – [100 MWh x Mini-grid EF]
Emission factors applied: Combined Margin Emission Factor and Mini-grid emission factor data from IFI TWG "Default Grid Emission factor data set"[19] and "Mini-grid emission factor" based on the project study

[19] IFI TWG Harmonized Grid Emission factor data set is available at https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies.

Example 3. Logistics

<table>
<tr><td colspan="4">Project: A loan to finance the acquisition of a fleet of roll-on/roll-off vessels to provide domestic sea transportation services</td></tr>
<tr><td colspan="4">GHG accounting standard applied: "Methodology for ex-ante GHG assessment of logistics investment projects"</td></tr>
<tr><td colspan="4">Sources included in the Relative emissions assessment:</td></tr>
<tr><td colspan="3"><u>Project Scenario</u>

Absolute emissions:
• Scope 1: direct GHG emissions associated with the fuel consumption by roll-on/roll-off vessels
• Scope 2: not applicable
• Scope 3: not applicable

Other consequential emissions:
• Emissions associated with the fuel consumption by trucks that are transported by roll-on/roll-off vessels</td><td><u>Baseline Scenario</u>

Baseline emissions:

Emissions associated with the fuel consumption by trucks that would not be transported by roll-on/roll-off vessels in the baseline scenario</td></tr>
<tr><td colspan="4">Project emissions</td></tr>
<tr><td colspan="3">Absolute Emissions, tCO_2e</td><td>Other consequential emissions, tCO_2e</td></tr>
<tr><td>Scope 1</td><td>Scope 2</td><td>Scope 3</td><td></td></tr>
<tr><td>17,600</td><td>n/a</td><td>n/a</td><td>2,000</td></tr>
<tr><td colspan="4">Project emissions, tCO_2e: Absolute + Other consequential emissions = 19,600

Scope 1: One roll-on/roll-off vessel (16,000tonne) x 50 weeks x 2,200 km x 50% load x 20 gCO_2/tkm

Other consequential emissions: 200trucks (40tonne) x 50 weeks x 100 km x 50% load x 100 gCO_2/tkm</td></tr>
<tr><td colspan="4">Baseline Emissions, tCO_2e: 80,000

200 trucks (40 tonne) x 50 weeks x 4,000 km x 50% load x 100 gCO_2/tkm</td></tr>
<tr><td colspan="4">Relative Emissions, tCO_2e: 19,600 – 80,000 = -60,400</td></tr>
<tr><td colspan="4">Emission factors applied:

1. Emission factor truck: 100 gCO_2/tkm

2. Emission factor roll-on/roll-off vessel: 20 gCO_2/tkm</td></tr>
</table>

Example 4. Roads

<table>
<tr><td colspan="2">Project: A loan to finance the expansion of a highway between Cities A and B

Example: There are two roads between City A and City B. The project consists of adding a new lane to Road 1. Currently, Road 1 is used by vehicles emitting 11 $ktCO_2$/year. Vehicles using the Road 2 are emitting 8 $ktCO_2$/year. Pre-project emissions, therefore, are estimated as 19 $ktCO_2$/year. Traffic is growing on both roads but without new investment, Road 1 will soon reach capacity and suffer congestion. The expected traffic growth between the cities is 20%.</td></tr>
<tr><td colspan="2">GHG accounting standard applied:

• Institution approved GHG accounting methodology/guidance</td></tr>
<tr><td colspan="2">Sources included in the Relative emissions assessment:</td></tr>
<tr><td><u>Project Scenario</u>

Absolute emissions:

• Scenario 1: Not applicable

• Scenario 2: Not applicable

• Scenario 3: Road 1 will accommodate all of the expected traffic growth between the cities and in addition it will attract some traffic from Road 2. Emissions from vehicles using the road are 15 $ktCO_2$ per year.

Other consequential:

• Road 2 will experience a reduction of traffic. Emissions from vehicles using the road are 7 $ktCO_2$ per year.

Note: The total traffic accommodated is the same in the Project and Baseline scenarios (for simplification, this example assumes improved driving conditions with the project do not induce traffic growth, although in practice there will be new traffic generation due to a decrease in transport costs in terms of time and money and other factors).</td><td><u>Baseline Scenario</u>

Baseline emissions:

• Road 1: The traffic will increase and exceed the free-flow capacity of the road. The congestion will raise the average vehicle emissions factor. Emissions from vehicles using the road are 16 $ktCO_2$ per year.

• Road 2: The traffic will increase but will not exceed the free-flow capacity of the road. Emissions from vehicles using the road are 9 $ktCO_2$ per year.</td></tr>
<tr><td colspan="2">Pre-project emissions, tCO_2e =

Pre-project emissions from vehicles using Road 1 + pre-project emissions from vehicles using Road 2 = 11,000 + 8,000 = 19,000</td></tr>
</table>

Project emissions			
Absolute Emissions, tCO_2e			Other consequential emissions, tCO_2e
Scope 1	Scope 2	Scope 3	
N/A	N/A	15,000	7,000

Project emissions, tCO_2e: Absolute + Other emissions =

Absolute emissions (emissions from vehicles using Road 1) + Other consequential emissions (emissions from vehicles using Road 2)

= 15,000 + 7,000 = 22,000

Baseline Emissions, tCO_2e: Emissions from all traffic (Road 1 + Road 2) between City A and City B

= 16,000 + 9,000 = 25,000

Relative Emissions, tCO_2e: Project Scenario (Absolute emissions from vehicles using Road 1 + Other emissions from vehicles using Road 2) – Baseline (emissions from vehicles using both roads)

= 22,000 – 25,000 = -3,000

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Document information

Version	*Date*	*Description*
02.0	1 June 2021	Status changed from interim to final after clarifying that the document supplements but does not a replace the "International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting" adopted by the IFI Technical Working Group in November 2015.
01.0	1 March 2021	Initial adoption on an interim basis till finalization at a future date.