



**CARBON FUND**  
**METHODOLOGICAL FRAMEWORK**

**FOREST  
CARBON  
PARTNERSHIP  
FACILITY**

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**FCPF Carbon Fund draft Methodological Framework  
Draft September 5, 2013**

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## 1. GENERAL APPROACH

The Forest Carbon Partnership Facility (FCPF) is designed “to assist developing countries in their efforts on reducing emissions from deforestation and/or forest degradation”, conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks (“REDD+”) “by building their capacity and developing a methodological and policy framework that provides incentives for the implementation of REDD+ programs” (Charter of the FCPF, page 1).

Specifically the FCPF has the following objectives (per the Charter, page 11):

- a) “To assist Eligible REDD Countries in their efforts to achieve Emission Reductions from deforestation and/or forest degradation by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD;
- b) To pilot a performance-based payment system for Emission Reductions generated from REDD activities, with a view to ensuring equitable benefit sharing and promoting future large scale positive incentives for REDD
- c) Within the approach to REDD, to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity; and
- d) To disseminate broadly the knowledge gained in the development of the Facility and implementation of Readiness Preparation Proposals and Emission Reductions Programs.”

In order to achieve these objectives, the Facility comprises the following two funds:

- a) A Readiness Fund; and
- b) A Carbon Fund.

The Carbon Fund is designed to pilot the implementation of REDD+ programs, via use of positive incentives for potential non-market use or creation of an asset that can be taken to a market. Carbon Fund Participants seek both to achieve net emission reductions across its portfolio, and to pilot REDD+ across a diverse set of countries, including countries that have historically experienced low deforestation rates. Carbon Fund Participants will take this into account when selecting ER Programs for ERPA signature.

The FCPF envisions the need for a Methodological Framework (MF) that would provide guidance to the development of these pilots, as noted in the Charter. The Methodological Framework is complimenting other documents and processes that together contribute to the development and selection of REDD+ Programs. This relationship is illustrated in Annex 4.

As a first step in the development of the Methodological Framework, the Participants Committee (PC) of the FCPF adopted a set of *Guiding Principles on the key methodological framework for the Carbon Fund*<sup>1</sup>. The PC requested the FCPF’s Facility Management Team and the Carbon Fund to further develop the Methodological Framework by building on the elements and rationales contained in these Guiding Principles while taking into account the needs of REDD Country Participants as well as Carbon Fund Participants.

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<sup>1</sup> Resolution PC/12/2012/3

<http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Documents/PDF/July2012/Resolution%203%20Meth%20Fmwk%20and%20Pricing.pdf> and

<http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Documents/PDF/July2012/FMT%20Note%202012-8%20Working%20Group%20Recommendations%2006-11-2012%20English.pdf>

In its principles (referred to as “elements”, with accompanying rationales), the PC indicated that “the Methodological Framework for the Carbon Fund (CF) is not expected to consist of detailed calculation methods or protocols. Rather the Framework should provide the overarching guidance and act as a standard that is designed to achieve a consistent approach to carbon accounting and programmatic characteristics”. As a result, Carbon Fund Participants decided to use a set of criteria and indicators (C&I) to elaborate requirements for ER Programs to be piloted in the Carbon Fund. This decision was made in consideration of trade-offs among a number of factors: simplicity of methods, flexibility to pilot approaches and encourage innovation, consistency of ERs, and predictability of assessment of ER Programs.

ER Programs are expected to demonstrate conformity with the Carbon Fund’s Methodological Framework and the criteria and indicators listed in this document. This Framework may be refined over time, as pilots are implemented and lessons are learned, or as new guidance on REDD+ is provided by the UNFCCC. However, while the Carbon Fund encourages ER Programs to consider meeting such refinements on a voluntary basis, it will not require ER Programs, once an ERPA is signed, to meet new or revised criteria and indicators that may be subsequently approved by the CF.

Additional operational information for ER programs, including information on World Bank due diligence and operational polices, and non-binding good practice guidance, may be produced in separate documents to complement the MF and shared to assist ER Programs in meeting the Framework’s requirements. Good practice guidance may take the form of links to existing guidance, methods, and examples of practices by REDD+ countries, with some guidelines or decision support tools added where needed.

*Structure of this document:*

Each section begins with the relevant elements from the FCPF Participants Committee Guiding Principles document of June 2012, which offered PC guidance to the Carbon Fund’s work developing the MF. The section then provides a context and rationale for the criteria and indicators that are included.

Some linkages across sections are indicated, since some topics overlap and ER Programs are likely to build on country REDD+ readiness activities and be embedded in dynamic sustainable development contexts.

Unless specified otherwise, the criteria and indicators apply both as entry requirements at the time the ER Program Document is submitted and throughout the implementation of the ER Program. Some requirements, however, should be met at the time of ER Program submission or ERPA signing or other points during the implementation of the ER Program (e.g. during periodic verifications), and their timing is noted.

*Note for public sharing: Additional discussion on risk management approaches is ongoing. Carbon Fund Participants and Working Group members have explored different options for mitigating and addressing risks and uncertainties, including the use of buffers, insurance, and national guarantees. A study is underway to assess these options. Additional guidance on mitigating and addressing risks and uncertainties may be included in the next version of the Methodological Framework. The decisions made on the approach to address risks and uncertainties will have implications for different sections of this document, including those addressing uncertainty, displacement, reversals, and accounting; a reference back to this note has been included in the relevant sections.*

## 2. LEVEL OF AMBITION

### 2.1 Scale and Ambition

**“Programmatic Element 2: Scale and Ambition** -- The ER Program is ambitious, in that it demonstrates at a large scale the potential of the full implementation of the variety of interventions of the national REDD+ strategy, covering a significant portion of the territory.”

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

#### **Context and Rationale for the C & I:**

To date most REDD+ transactions have relied on a project-based approach. The ambition of the Carbon Fund is to test large-scale approaches that require a mix of policies and investments, integration with national development strategies, use of innovative financial structures, and involvement of multi-stakeholder approaches. Large scale accounting is more likely to capture the wide range of REDD+ drivers, provide ER Programs with incentives to establish comprehensive REDD+ strategies, and generally enhance the environmental integrity of the system.

**Criterion 1: The proposed ER Program is ambitious, demonstrating the potential of the full implementation of the variety of interventions of the national REDD+ strategy, and is implemented at a jurisdictional scale or programmatic scale.**

**Indicator 1.1:** The [ER Program Measures](#) aim to address a significant portion of forest-related emissions and removals;

**Indicator 1.2:** The ER Program is ambitious, uses new or enhanced [ER Program Measures](#) to reduce emissions or enhance removals, is undertaken at a jurisdictional scale and/or takes a programmatic approach (i.e., involves multiple land areas, landowners or managers within one or several jurisdictions), and reflects a variety of interventions from the national REDD+ strategy in a coordinated manner.

**Criterion 2:** The [Accounting Area](#) matches a government-designated area that is of significant scale.

**Indicator 2.1:** The [Accounting Area](#) is of significant scale and aligns with one or more jurisdictions; or a national-government-designated area (e.g., ecoregion) or areas.

### 3. CARBON ACCOUNTING

#### 3.1 Scope and methods

##### **Overarching Accounting and Programmatic Element: Consistency with UNFCCC principles**

The Emission Reduction Program (ER Program) strives to be consistent with evolving UNFCCC decisions on REDD+, particularly guidance and principles in place at the time of ERPA signature, as relevant and feasible.

Relevant principles include those on transparency, consistency, completeness, and accuracy. Relevant guidance includes decisions on, for example, safeguards and reference levels.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

##### **Context and Rationale for the C & I:**

ER programs should be allowed flexibility in the choice of [Sources](#) and [Sinks](#) they will account for. However, ER Programs must account for emissions from deforestation; and emissions from forest degradation must be accounted for where significant and where acceptable data are available.

Excluding certain pools (for example, soil carbon) is usually conservative for activities related to avoided deforestation and degradation. However in some cases, such as reforestation activities involving heavy ground disturbance from land clearing and planting, or forest management on drained peatland, soil carbon emissions may be significant and should be accounted for to maintain environmental integrity.

**Criterion 3: The ER Program can choose which Sources and Sinks associated with any of the REDD+ Activities will be accounted for, measured, and reported, and included in the ER Program Reference Level. At a minimum, ER Programs must account for emissions from deforestation. Emissions from forest degradation also should be accounted for where acceptable data are available and such emissions are significant.**

**Indicator 3.1:** The ER Program identifies which Sources and Sinks associated with any of the REDD+ Activities will be accounted for in the ER Program.

**Indicator 3.2:** The ER Program accounts for emissions from deforestation.

**Indicator 3.3:** Emissions from forest degradation are accounted for where acceptable data are available and such emissions are more than 10% of total forest-related emissions in the [Accounting Area](#), during the Reference Period and during the Term of the ERPA. These emissions are estimated using the best available data (including proxy activities or data).

**Criterion 4: The ER Program should account for, measure, and report, and include in the ER Program Reference Level, significant Carbon Pools and greenhouse gases, except where their exclusion would underestimate total emission reductions.**

**Indicator 4.1:** The ER Program accounts for all Carbon Pools and greenhouse gases that are significant within the Accounting Area, both for Reference Level setting and measurement, monitoring and reporting (MMR).

**Indicator 4.2:** Carbon Pools and greenhouse gases may be excluded if:

- i) Emissions associated with excluded Carbon Pools and greenhouse gases are collectively estimated to amount to less than 10% of total forest-related emissions in the Accounting Area during the Reference Period; or
- ii) The ER Program can demonstrate that excluding such Carbon Pools and greenhouse gases would underestimate total emission reductions.

**Criterion 5: The ER Program uses the most recent Intergovernmental Panel on Climate Change guidance and guidelines, as adopted or encouraged by the Conference of the Parties as a basis for estimating forest-related greenhouse gas emissions by Sources and Removals by sinks<sup>2</sup>.**

**Indicator 5.1:** The ER Program identifies the IPCC methods used to estimate emissions and removals for Reference Level setting and measurement, monitoring and reporting (MMR).

**Criterion 6: Key data and methods relating to the construction of the Reference Level and measurement, monitoring and reporting (e.g., data, methods and assumptions) are documented and made publicly available online. Information that is sufficiently detailed to enable the reconstruction of the Reference Level and the reported emissions and removals should be made available to Independent Reviewers.**

**Indicator 6.1:** The following methodological steps are made publicly available:

- forest definition
- definition of classes of forests, (e.g., degraded forest; natural forest; plantation), if applicable
- choice of Activity Data, and (pre-)processing methods
- choice of Emission Factors and description of their development
- estimation of emissions and removals, including accounting approach
- disaggregation of emissions by Sources and removal by Sinks

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<sup>2</sup> e.g., UNFCCC 4/CP.15

- estimation of **accuracy**, precision, and/or confidence level, as applicable
- discussion of key uncertainties
- rationale for adjusting emissions, if applicable
- methods and assumptions associated with adjusting emissions, if applicable

**Indicator 6.2:** For the following spatial information, maps and/or synthesized data are displayed publicly, and reasonable efforts are made to explain how these were derived from the underlying spatial and other data, and to make key data sets or analyses publicly available:

- **Accounting Area**
- **Activity Data** (e.g. forest-cover change or transitions between forest categories)
- Emission Factors
- Average annual emissions over the Reference Period, if the Reference Level has been adjusted above historical emissions
- associated estimates of uncertainty
- estimates of historical emissions and removals
- adjusted emissions, if applicable
- any spatial data used to adjust emissions (e.g. used in spatial or economic modeling), if applicable

Data in categories exempted by the Carbon Fund may be made available only to reviewers, and the Carbon Fund as necessary, with rationale provided for not making these data publicly available, subject to the World Bank Group Policy on Access to Information<sup>3</sup>.

### 3.2 Uncertainties

**Accounting Element 1: Stepwise approach to reduce uncertainties:** ER Program data and methods are **consistent** with IPCC Tier 2, and ER Programs should, by using conservative assumptions and quantitative assessment of uncertainties, be incentivized to reduce uncertainties associated with all aspects of accounting, inter alia, reference levels, monitoring, and reporting (i.e., such that reductions in uncertainty are rewarded by a corresponding upward **Adjustment** in ER volume).  
*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

<sup>3</sup> The World Bank Group Policy on Access to Information can be reviewed on its external website under: <http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTANDOPERATIONS/EXTINFODISCLOSURE/0,,menuPK:64864911~pagePK:4749265~piPK:4749256~theSitePK:5033734,00.html>



**Context and Rationale for the C&I:**

Uncertainties arise in Reference Level (RL) setting and measurement, monitoring and reporting (MMR). Uncertainty (the lack of knowledge of the true value) is due to both random and systematic errors. Uncertainties can be addressed in a number of ways. Systematic errors (bias) should be avoided by good measurement practices. Random errors tend to cancel each other out and can be managed by sampling. Using standard approaches to assessing uncertainty allows for **comparability** between ER programs.

ER Programs are required to follow a 3-step process to ensure consistency:

1. Identify and assess sources of uncertainty
2. Minimize uncertainty where feasible and cost effective
3. Quantify remaining uncertainty.

**Criterion 7: Sources of uncertainty are systematically identified and assessed in Reference Level (RL) setting and measurement, monitoring and reporting (MMR)**

**Indicator 7.1:** All assumptions and sources of uncertainty associated with **Activity Data**, Emission Factors and calculation methods that contribute to the uncertainty of the estimates of emissions and removals are identified.

**Indicator 7.2:** The sources of uncertainty identified in Indicator 7.1: are assessed for their relative contribution to the overall uncertainty of the emissions and removals.

**Criterion 8: The ER Program, to the extent feasible, follows a process of managing and reducing uncertainty of **Activity Data** and Emission Factors used in RL setting and MMR**

**Indicator 8.1:** Systematic errors are minimized through the implementation of a consistent and comprehensive set of standard operating procedures, including a set of quality assessment and quality control processes that work within the local circumstances of the ER Program.

**Indicator 8.2:** Random errors and other uncertainties are minimized to the extent practical based on the assessment of their relative contribution to the overall uncertainty of the emissions and removals.

**Criterion 9: Uncertainty of **Activity Data** and Emission Factors used in RL setting and MMR is quantified in a consistent way, so that the estimation of emissions, removals and Emission Reductions is comparable among ER Programs<sup>4</sup>.**

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<sup>4</sup> This uncertainty is subsequently applied in the calculation of the emission reduction, refer to Criterion 22.

**Indicator 9.1:** Uncertainty associated with [Activity Data](#) and Emission Factors is quantified using accepted international standards, for example by providing [accuracy](#), [confidence interval](#), distribution of error, propagation of error.

**Indicator 9.2:** Uncertainty of the estimate of Emission Reductions is quantified using accepted international standards, for example by providing [accuracy](#), [Confidence interval](#), distribution of error, propagation of error.

### 3.3 Reference Levels

**Accounting Element 2: “Reference Level** ERs from an ER Program should be conservatively measured and reported relative to a transparently presented and clearly documented forest reference emission level (REL) or forest reference level (RL) for the ER Program area, following the guidance of the Carbon Fund Methodological Framework and informed by the emerging national REL/RL.”

“**Rationale:** (a) Per UNFCCC REDD+ texts and discussions internationally and the FCPF Charter, the performance of REDD+ activities (and ER Programs for the CF) would be measured against a pre-established forest reference emission level and/or forest reference level. (b) The CF should have flexibility to provide guidance on how ER Programs should set their own reference level, to meet its needs and to ensure environmental integrity. Detailed, operational methods have not yet been proposed by the UNFCCC, and may be proposed for the CF in its evolving Methodological Framework”  
--*Guiding Principles on the key methodological framework for the Carbon Fund* (June 2012)

#### **Context and Rationale for the C & I:**

Reference Levels for ER programs may be developed prior to a national or subnational FREL/FRL that the country may submit to UNFCCC, or may be at a smaller scale or differ in other respects. As a result, ER Programs in the Carbon Fund may pilot approaches to establish a Reference Level that inform or are informed by the country’s work and methods developing its FREL/FRL to meet UNFCCC guidance.

When developing Reference Levels, ER Programs should ensure that consistent methods and [Accounting Area](#) are to be maintained between estimation of emissions in the reference period and the reporting period.

An approach is proposed that allows a limited set of ER Programs to adjust [Reference Levels](#) above average historical rates, states what [Adjustments](#) may be made, within what quantitative limits if any. Historical reference levels allow most ER Programs to contribute to mitigation and access finance through deforestation, degradation or carbon stock enhancement. However, adjusted Reference Levels would allow ER Programs within countries with a long-term history of minimal deforestation to contribute to mitigation and access finance as well. Additionality primarily is addressed through conservative approaches to setting [Reference Levels](#) (e.g., including existing and clearly funded programs or activities within the [Reference Level](#)), rather than through additionality tests often utilized

by project-level initiatives, which have proven difficult to operationalize.

**Criterion 10: The development of the Reference Level is informed by the development of a FREL/FRL for the UNFCCC.**

**Indicator 10.1:** The Reference Level is expressed in tonnes of carbon dioxide equivalent per year.

**Indicator 10.2:** The ER Program explains how the development of the Reference Level can inform or is informed by the development of a national FREL/FRL, and explains the relationship between the Reference Level and any intended submission of a FREL/FRL to the UNFCCC.

**Indicator 10.3:** The ER Program explains what steps are intended for the Reference Level to achieve consistency with the country's existing or emerging greenhouse gas inventory.

**Criterion 11: A Reference Period is defined.**

**Indicator 11.1:** The end-date for the Reference Period is the most recent date prior to 2011 for which forest-cover data is available to enable IPCC Approach 3. An alternative end-date should be allowed only with convincing justification, e.g., to maintain consistency of dates with a FREL/FRL, other relevant REDD+ programs, national communications, national ER program or climate change strategy.

**Indicator 11.2:** The start-date for the Reference Period is about 10 years before the end-date, i.e., the most recent date that is no fewer than ten years and not more than 15 years. An alternative start-date should be allowed only with convincing justification as in Indicator 11.1.

**Criterion 12: Forest definition follows available guidance from UNFCCC decision 12/CP.17.**

**Indicator 12.1:** The definition of forest used in the construction of the Reference Level is specified. If there is a difference between the definition of forest used in the national greenhouse gas inventory or in reporting to other international organizations (including an FREL/FRL to the UNFCCC) and the definition used in the construction of the Reference Level, then explain how and why the forest definition used in the Reference Level was chosen.<sup>5</sup>

**Criterion 13: The Reference Level does not exceed the average annual emissions over the Reference Period. For a limited set of ER Programs, the Reference Level may be adjusted upward by a limited amount above**

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<sup>5</sup> UNFCCC SBSTA 12/CP.17 Annex Para. 4

average annual historical emissions [<sup>6</sup>]<sup>7</sup>. For any ER Program, the Reference Level may be adjusted downward.

*Note for public sharing: further discussion and comments are expected from Carbon Fund Participants on this section in particular; text is preliminary, and may contain only one option eventually*

**Indicator 13.1:** The Reference Level does not exceed the average annual emissions over the Reference Period unless the ER Program meets the eligibility requirements in Indicator 13.2.:

**Indicator 13.2:** The Reference Level may be adjusted upward above average annual historical emissions if the ER Program can demonstrate to the satisfaction of the Carbon Fund that the following eligibility requirements are met:

- i. Long-term historical deforestation has been minimal across the entirety of the country; and
- ii. National circumstances have changed such that rates of deforestation and forest degradation during the historical reference period likely underestimate future rates of deforestation and forest degradation during the ERPA period.

**Indicator 13.3:** For countries meeting the eligibility requirements in Indicator 13.2., a Reference Level could be adjusted [using one of two options] [as follows]:

**Option 1<sup>8</sup>:** The [Comparative Baseline] would be set at the average of: (a) the average annual emissions in the [Accounting Area](#) during the [Reference Period](#), and (b) a rate of emissions from the Accounting Area equal to the average rate of deforestation in developing countries.

The value in (a) is calculated as the sum of the areas of each forest type in the [Accounting Area](#) times the corresponding emission factor for deforestation for that type (see Equation 3 in Annex 1).

The value in (b) is calculated as 0.43%/yr<sup>9</sup> times [Total Potential Emissions](#) (see equation 3 in Annex I).

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<sup>6</sup> [The Carbon Fund seeks both to achieve net emission reductions across its portfolio, and to pilot REDD+ across a diverse set of countries, including HFLD countries. Carbon Fund Participants will take this into account when selecting ER Programs for ERPA signature].

<sup>7</sup> Note: mathematical illustration of this criterion and its indicators is provided in Annex 1

<sup>8</sup> The concepts of Option 1 are graphically presented in Annex 2

<sup>9</sup> 0.43%/yr. represents the average rate of deforestation (forest loss) across developing countries, based on 2010 FAO FRA data for 2000-2010

In addition, an Emission Threshold will be established. The Emission Threshold is calculated as the average annual emissions in the Accounting Area during the Reference Period plus  $[0.0X\%/yr]^{10}$  times the **Total Potential Emissions**. (See Equation 4 in Annex 1)

If the measured, monitored and reported emissions from the Accounting Area in a certain accounting period exceed the Emission Threshold, the ER Program will not be able to transfer Emission Reductions to the Carbon Fund (see Equation 5A in Annex I). [Alternatively: The provisional Emission Reductions<sup>11</sup> could be calculated on a sliding scale that step-wise reduces the amount of transferable ERs as the program emissions approach the Emission Threshold (see Equation 5B in Annex 1).]

**Option 2: Adjustments** from the average historical emission rate over the reference period are credibly justified:

- 1) On the basis of expected emissions resulting from documented policy changes or investments that are underway [before the end date of the Reference Period], but the effects of which are not captured in the historical Reference Period. (Examples could include major infrastructure developments under construction or approved regulations or legislation).
- 2) [Or, on the basis of documented trends in emissions]

An adjustment made under Option 2 (see Equation 6 in Annex 1) may not exceed [the lower of an absolute rate of emissions set by the Carbon Fund or]<sup>12</sup> [ , the average annual emissions during the reference period plus  $[0.0Y\%/yr]^{13}$  times **Total Potential Emissions** (see Equation 7 in Annex 1)].

**Indicator 13.4:** An ER Program may voluntarily choose to use a Reference Level that is adjusted downward to take into account, inter alia, downward trends or any relevant domestic commitments to reduce emissions.

### 3.4 Measurement, Monitoring and Reporting on Emission Reductions

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<sup>10</sup> For example, the Guyana-Norway cooperation on REDD+ uses a value of 0.07%/yr (see Joint Concept Note 2012 ([http://www.regjeringen.no/upload/MD/2012/Nyheter/JCN\\_2012\\_final.pdf](http://www.regjeringen.no/upload/MD/2012/Nyheter/JCN_2012_final.pdf))).

<sup>11</sup> Provisional Emission Reductions are defined as the difference between the emissions and removals in a certain time period and the Reference Level. For the calculation of the Emission Reductions that can be transferred to the Carbon Fund, other factors will also need to be considered, e.g., accounting for leakage, reversals, uncertainty (see section 3.7 on calculation of Emission Reductions).

<sup>12</sup> For example, a previous draft version of Methodological Framework suggested that the **adjustment** would not exceed 0.2%/yr of Total Potential Emissions, corresponding to approximately half the average deforestation rate of deforesting developing countries

<sup>13</sup> Noting this Y could be different from X under Option 1. For example, the Guyana-Norway cooperation on REDD+ uses a value of 0.07%/yr (see Joint Concept Note 2012 ([http://www.regjeringen.no/upload/MD/2012/Nyheter/JCN\\_2012\\_final.pdf](http://www.regjeringen.no/upload/MD/2012/Nyheter/JCN_2012_final.pdf)))

**Accounting Element 3: Consistency with monitoring system:** ER Program monitors and reports ERs and other non-carbon variables consistent with the emerging national forest monitoring system, using methods appropriate for ER Program circumstances, including community monitoring that are transparently presented and clearly documented.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

**Context and Rationale for the C&I:**

Monitoring (repeated measurements of emissions and removals) is needed to estimate ERs generated by the ER program. The Carbon Fund should follow emerging UNFCCC guidance on REDD+, as much as possible. Monitoring systems need to be designed to allow for operational Measurement, Monitoring and Reporting (MMR) of **Activity Data** (AD) and Emission Factors (EF). AD and EF require different frequency and quality of measurements and are considered separately.

**Criterion 14: Robust Forest Monitoring Systems provide data and information that are transparent, consistent over time, and are suitable for measuring, reporting and verifying emissions by sources and removals by sinks as determined following Criterion 3 within the proposed **Accounting Area**.**

**Indicator 14.1:** The ER Program monitors emissions by **Sources** and removals by **Sinks** included in the ER Program's scope (Indicator 3.1:) using the same methods or demonstrably equivalent methods to those used to set the Reference Level.

**Indicator 14.2:** **Activity Data** are determined periodically, at least twice during the Term of the ERPA. Deforestation is determined using IPCC Approach 3. Other Sinks and Sources such as degradation may be determined using indirect methods such as survey data, proxies derived from landscape ecology or statistical data on timber harvesting and regrowth if no direct methods are available.

**Indicator 14.3:** Emission Factors are determined at least once during the Term of the ERPA. Emission Factors or the methods to determine them are the same for Reference Level setting and for Monitoring, or are demonstrably equivalent. IPCC Tier 2 or higher methods are used to establish Emission Factors, and the uncertainty for each Emission Factor is documented. IPCC Tier 1 methods may be considered in exceptional cases.

**Criterion 15: ER Programs apply technical specifications of the National Forest Monitoring System where possible.**

**Indicator 15.1:** ER Programs articulate how the Forest Monitoring System fits into the existing or emerging National Forest Monitoring System and provides a rationale for alternative technical design where applicable.

**Criterion 16: Community participation in monitoring and reporting is encouraged and used where appropriate.**

**Indicator 16.1:** The ER Program demonstrates it has explored opportunities for community participation in monitoring and reporting of **Activity Data**, Emission Factors, safeguards and Non-Carbon Benefits, and encourages such community participation where possible at reasonable cost.

### 3.5 Accounting for Displacement (Leakage)<sup>14</sup>

**Accounting Element 5: Address displacement** – Potential sources of domestic and international displacement of emissions (Displacement) are identified by assessment of all drivers of land-use change relevant for the ER Program; and measures to minimize and/or mitigate the risk of displacement of domestic emissions are incorporated into ER Program design and the estimation and monitoring of ERs.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

#### **Context and Rationale for the C & I:**

Emphasis should be placed on good program design that reduces the risk of market- or subsistence-driven displacement, e.g., by maintaining the same level of production of commodities in the ER Program that occurred prior to the Program, and by introducing and supporting alternative sustainable livelihoods in the ER Program.

ER Programs should seek to minimize and mitigate Displacement outside the Accounting Area (domestic and international) to the extent possible via design of the Program. However, due to accounting and attribution challenges and following UNFCCC guidance on REDD+, potential international Displacement should not have to be accounted for or deducted from the ERs credited to ER Programs.

**Criterion 17: The ER Program is designed and implemented to prevent and minimize potential displacement.**

**Indicator 17.1:** Deforestation and degradation drivers that may be impacted by the proposed **ER Program Measures** are identified, and their associated risk for displacement is assessed, as well as possible risk mitigation strategies.

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<sup>14</sup> Additional discussion on risk management approaches is expected, and further edits or guidance may be developed for the next version of the Methodological Framework that revises the way that uncertainty, displacement, reversals, and possibly other risks are addressed.

**Indicator 17.2:** The ER Program has in place an effective strategy to mitigate and/or minimize, to the extent possible, potential displacement, prioritizing the most significant sources of displacement risk.

**Indicator 17.3:** By the time of verification, the ER Program has implemented its strategy to mitigate and/or minimize potential displacement.

**Criterion 18: The ER Program estimates increased emissions from Displacement<sup>15</sup>**

**Indicator 18.1:** The ER Program has in place a procedure to estimate in-country Displacement. This procedure may include for example the monitoring of potential areas where Displacement occurs in the National Forest Monitoring System, or use of default factors of Displacements<sup>16</sup> appropriate for the Host Country context and drivers of deforestation and forest degradation, or other appropriate methods.

**Indicator 18.2:** The ER Program applies the procedure to estimate Displacement and uses this estimate for the calculation of Emission Reductions.

**3.6 Accounting for Reversals (Non-permanence)<sup>17</sup>**

**Accounting Element 4: Address reversals** – ER Programs should identify potential sources of reversal of ERs (non-permanence); have the capacity to monitor and report any reversal of previously monitored and reported ERs; and have measures in place to address major risks of anthropogenic reversals for the ER Program area, to the extent feasible.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

**Context and Rationale for C & I:**

Emphasis should be on sound ER Program design and implementation that reduces the risk of reversals. ER Programs should have in place a robust reversal management mechanism. The current C & I provide the flexibility to adopt different approaches for effectively dealing with reversals, potentially including buffer reserves, use of insurance, host country guarantees, etc., as long as they can be shown to address reversal risk effectively and address ER sustainability over the long term.

<sup>15</sup> This estimate is subsequently applied in the calculation of the emission reduction, refer to Criterion 22:

<sup>16</sup> Standard coefficient or other assumption on the magnitude of the land use activities and/or associated emissions moving from inside the ER Program Accounting Area to an area outside the ER Program Accounting Area. This can be based on an analysis of historic observed trends in drivers and interventions. This can be generated by the ER Program using country data, or by an independent process, and is peer reviewed.

<sup>17</sup> Additional discussion on risk management approaches is expected, and further edits or guidance may be developed for the next version of the Methodological Framework that revises the way that uncertainty, displacement, reversals, and possibly other risks are addressed.



**Criterion 19: The ER Program is designed and implemented to prevent and minimize reversal risk and address the long-term sustainability of ERs.**

**Indicator 19.1:** The ER Program has undertaken an assessment of the anthropogenic and natural reversal risks that might affect ERs during the Term of the ERPA [and has assessed, as feasible, the potential risk of reversals after the end of the Term of the ERPA].

**Indicator 19.2:** The ER Program demonstrates how effective ER Program design and implementation will mitigate significant reversal risks identified in the assessment to the extent possible, and will address the sustainability of its emission reductions, both during the Term of the ERPA, and for a reasonable period beyond that Term.

**Criterion 20: The ER Program accounts for reversals from ERs that have been transferred to the Carbon Fund during the Term of the ERPA; and proposes, as feasible, how it has built or will build on its arrangements put in place during the readiness phase and during the Term of the ERPA to address reversal risk for the long term<sup>18</sup>.**

**Indicator 20.1:** During Term of the ERPA, the ER Program has in place a robust reversal management mechanism [(e.g. buffer reserve or insurance), appropriate for the ER Program's assessed level of risk which in the event of a Reversal during the ERPA period will be used to fully cover such reversals.]

**Indicator 20.2:** [This reversal management mechanism or another specified approach addresses potential risks to the longevity of Carbon Fund credited ERs beyond the Term of the ERPA]

**Criterion 21: The ER Program monitors and reports major emissions that could lead to reversals of credited ERs during the Term of the ERPA.**

**Indicator 21.1:** The ER Program Monitoring Plan and system are technically capable of identifying reversals.

**Indicator 21.2:** The ER Program reports to the Carbon Fund as soon as practical [within 90 days] [any] [significant] emissions in the Accounting Area, as identified by its monitoring system, that the ER Program considers to be reversals of previously credited ERs or that have the potential to lead to reversals. If such emissions become reversals, the ER Program explains how the reversals will be addressed by the mechanism described in Indicator 20.1 and Indicator 20.2.

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<sup>18</sup> This is subsequently applied in the calculation of the emission reductions, refer to Criterion 22.

### **3.7 Calculation of Emission Reductions**

**Criterion 22:** [The net Emissions Reductions to be claimed is calculated by the following steps:

- 1. Subtracting the reported and verified emissions and removals from the Reference Level, including any Reversals that may have occurred; and using either option A or B below:**

**[Step 2, Option A:**

- 2. (A1) Subtracting from the result of step 1, above, an amount appropriate to address the level of uncertainty associated with the determination of the RL and estimated emissions and removals during the ERPA period; and**
- 2. (A2) Subtracting from the result of step 2, above, the estimated emissions from displacement (i.e., if not addressed by the ER program buffer or other accounting mechanism); and**
- 2. (A3) Subtracting from the result of step 3, above, any credits that are withheld in a buffer or other reversal management mechanism to address the longevity of ERs; and emissions monitored and reported and considered a reversal of ERs previously reported to the Carbon Fund ]**

**[Step 2, Option B:**

- 2. (B1) Setting aside a number of ERs in a buffer or other reversal management mechanism created or used by an ER Program to address reversals, and potentially displacement and uncertainty]**

**And then, for either option:**

- 3. To prevent double-counting, do not include any reported and verified emissions and removals that have been verified and issued under a third-party agreement or domestic scheme to another entity. Such emissions and removals within the Accounting Area and during the monitoring and reporting period shall not be considered ERs for the Carbon Fund.]**

## 4. SAFEGUARDS

### 4.1 Actions to Meet World Bank Safeguards and Promote and Support Cancun Safeguards

#### **Programmatic Element 3 – Safeguards**

The ER Program meets World Bank social and environmental safeguards, promotes and supports the safeguards included in UNFCCC guidance related to REDD+, and provides information on how these safeguards are addressed and respected, including through the application of appropriate grievance mechanisms.

Rationale:

- The World Bank acts as both the Trustee and the delivery partner of the Carbon Fund.
- All ER Programs will need to meet applicable World Bank policies and procedures, including the safeguard policies triggered during Readiness Preparation, through the ER Program design and implementation of the country-specific ESMF (which reflect relevant social and environmental sustainability issues identified in the SESA process)<sup>5</sup>.
- In addition, ER Programs should promote and support the safeguards included in the UNFCCC decisions on REDD+.

<sup>5</sup> The Strategic Environmental and Social Assessment (SESA) is the assessment process to be used in FCPF REDD+ countries during R-PP implementation and REDD+ readiness preparation. The Environmental and Social Management Framework (ESMF) is an output of SESA that provides a framework to examine the issues and impacts associated with projects, activities, and/or policies/regulations that may occur in the future in connection with the implementation of the national REDD+ strategy but that are not known at the present time.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

#### **Context and Rationale for the C & I:**

With the World Bank acting as both the Trustee and the Delivery Partner of the Carbon Fund, all ER Programs will need to meet applicable World Bank policies and procedures. ER Programs also should promote and support the safeguards included in the UNFCCC guidance on REDD+. The World Bank's view is that the World Bank safeguards policies, procedures and practices are consistent with the Cancun safeguards for REDD+.

The Carbon Fund should require a feedback and grievance redress mechanism (FGRM) for the ER Program, but it could vary from country to country or from one ERPA to another, depending on local context. It will build on any existing FGRM in the country established during Readiness, as applicable. Guidance on key items of the FGRM is anticipated to be included in an eventual good practices annex.

**Criterion 23: The ER Program meets the World Bank social and environmental safeguards and promotes and supports the safeguards included in UNFCCC guidance related to REDD+.**

**Indicator 23.1:** The ER Program meets the World Bank social and environmental safeguards, and promotes and supports the safeguards included in UNFCCC guidance related to REDD+, by paying particular attention to Decision 1/CP.16 and its Appendix I as adopted by the UNFCCC<sup>19</sup>.

**Indicator 23.2:** Safeguard Plans consider social and environmental issues and related risk mitigation measures identified during the national Readiness process, e.g., in the SESA process and the ESMF, that are relevant for the specific ER Program context, taking into account relevant existing institutional and regulatory frameworks. The Safeguard Plans are prepared concurrently with the ER Program Document, and are publicly disclosed in a manner and language appropriate for the affected stakeholders.

**Criterion 24: Information is provided on how the Program meets the World Bank social and environmental safeguards and addresses and respects the safeguards included in UNFCCC guidance related to REDD+, during ER Program implementation.**

**Indicator 24.1:** Appropriate monitoring arrangements for safeguards are included in the Safeguards Plans.

**Indicator 24.2:** During ER Program implementation, information on the implementation of Safeguards Plans is included in an annex to each ER Monitoring Report and Interim Progress Report. It is publicly disclosed and is an input to the national Safeguard Information System (SIS) required by the UNFCCC guidance related to REDD+.

**Criterion 25: Appropriate FGRM(s) developed during the Readiness phase or otherwise exist(s) before signing an ERPA, building on existing institutions, regulatory frameworks, mechanisms and capacity.**

**Indicator 25.1:** An assessment of existing FGRM(s), including any applicable customary FGRMs, is conducted and is made public before signing of an ERPA. The FGRM(s) applicable to the ER Program demonstrate(s) the following:

- i) Legitimacy, accessibility, predictability, fairness, rights compatibility, transparency, and capability to address a range of grievances, including those related to benefit-sharing arrangements for the ER Program
- ii) Access to adequate expertise and resources for the operation of the FGRM(s).

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<sup>19</sup> FMT Note CF-2013-3 FMT describes World Bank Safeguard Policies and the UNFCCC REDD+ Safeguards

**Indicator 25.2:** The description of FGRM procedures, included in the [Benefit Sharing Plan](#) and/or relevant Safeguards Plans, specifies the process to be followed to receive, screen, address, monitor, and report feedback on, grievances or concerns submitted by affected stakeholders. As relevant, the [Benefit Sharing Plan](#) and/or relevant Safeguards Plans and/or ER Program Document describe(s) the relationship among FGRM(s) at the local, ER Program, and national levels.

**Indicator 25.3:** If found necessary in the assessment mentioned in Indicator 25.1:, a plan is developed to improve the FGRM(s).

## 5. SUSTAINABLE PROGRAM DESIGN AND IMPLEMENTATION

### 5.1 Sustainable Program Design

**Programmatic Element 1: Endorsement and implementing capacity.** “The ER Program is endorsed by the national government (or governments, as appropriate) and is implemented by an entity (or entities) that has (have) the capacity to implement the proposed REDD+ interventions, potentially via a stepwise approach.”

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

**Criterion 26:** [The ER Program describes how the ER Program addresses key drivers of deforestation and degradation.

**Indicator 26.1:** The ER Program Document identifies the key drivers of deforestation and degradation, and potentially opportunities for forest enhancement.

**Indicator 26.2:** The ER Program identifies currently planned [ER Program Measures](#), the entities that would undertake them, and their capacity to implement these [ER Program Measures](#).]

### 5.2 Benefit Sharing

#### **Programmatic Element 5: Benefit sharing**

“The ER Program uses clear, effective and transparent benefit-sharing mechanisms with broad community support and support from other relevant stakeholders.

Rationale:

- ER Programs should use clear and transparent benefit-sharing mechanisms;
- The design of the benefit-sharing mechanisms should respect customary rights to lands and territories and reflect broad community support, so that REDD+ incentives are applied in an effective and equitable manner.
- The status of rights to carbon and relevant lands should be assessed to establish a basis for successful implementation of the ER Program.”

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

#### **Context and Rationale for the C & I:**

Criteria here should ensure the quality of the process to develop benefit-sharing mechanisms and explain how the mechanisms are linked with consultation, transparency, and participation work under SESA and otherwise in the readiness phase. (The relationship between the [Benefit Sharing](#)

Plan and feedback and grievance redress mechanism is addressed in the FGRM criteria within the Safeguards section.)

Land and resources tenure can be a potential risk factor for program sustainability, and could contribute to determining title to ERs, potentially via the Benefit Sharing Plan. Assessing tenure status should be an early step in the Program design process.

**Criterion 27: The ER Program Document provides a description of the benefit-sharing arrangements for the ER Program, including information specified in Indicator 28.1:, to the extent known at the time.**

**Criterion 28: Building on the description in the ER Program Document, the Benefit Sharing Plan will elaborate on the benefit sharing arrangements.**

**Indicator 28.1:** The Benefit-Sharing Plan is made publicly available prior to ERPA signature, at least as an advance draft, and is disclosed for consultation in a manner that is physically accessible and using language understandable to the affected stakeholders for the ER Program.<sup>20</sup> The Plan contains the following information:

(i) The categories of potential Beneficiaries, describing their eligibility to receive potential Benefits under the ER Program and examples of the types and scale of potential monetary and non-monetary Benefits that may be received. The identification of such potential Beneficiaries takes into account Emission Reduction strategies to effectively address drivers of net emissions, anticipated implementers and geographical distribution of those strategies, land and resource tenure rights (including legal and customary rights of use, access, management, ownership, etc.), and Title to ERs, among other considerations.

(ii) Criteria, processes, and timelines for the distribution of the Benefits.

(iii) Monitoring provisions for the implementation of the Benefit-Sharing Plan, including, as appropriate, an opportunity for participation in monitoring and/or validation process by the Beneficiaries themselves.

**Criterion 29: The benefit sharing arrangements are designed in a consultative, transparent, and participatory manner appropriate to the country context. This process is informed by and builds upon the national Readiness process, including the SESA.**

**Indicator 29.1:** The Benefit-Sharing Plan results from a consultation process leading to broad community support, and is designed to facilitate the delivery of Benefits facilitate successful program implementation, and that are culturally appropriate and gender and inter-generationally inclusive.

<sup>20</sup> At the time of ERPA signature if a final Benefit Sharing Plan is not provided, it must be submitted before the sale and purchase obligations under the ERPA become effective.

The Plan is disclosed in a manner and language understandable to the affected stakeholders for the ER Program.

**Criterion 30: The implementation of the [Benefit-Sharing Plan](#) is transparent.**

**Indicator 30.1:** Information on the implementation of the [Benefit-Sharing Plan](#) is annexed to each ER Program Monitoring Report and Interim Progress Report and is made publicly available.

**Criterion 31: The benefit sharing arrangement for the ER Program reflects the legal context.**

**Indicator 31.1:** The design and implementation of the [Benefit-Sharing Plan](#) comply with relevant applicable laws.

**Criterion 32: The ER Program has undertaken and made publicly available an assessment of the land and resource tenure regimes present in the ER Program [Accounting Area](#).**

**Indicator 32.1:** The ER Program reviews and incorporates relevant issues from the assessment of land and resource tenure regimes carried out during the Readiness phase that identifies aspects such as the range of land and resource tenure rights (including legal and customary rights of use, access, management, ownership, exclusion, etc.) and categories of rights-holders. If necessary, the ER Program undertakes any additional assessment of land and resource tenure regimes critical to its implementation, e.g., the legal status of such rights, any contested areas, how significant disputes related to such rights have been addressed, and the ability to transfer Title to ERs to the Carbon Fund. The assessment reflects key stakeholder inputs.

**Indicator 32.2:** The ER Program [[Document](#)] explains how the relevant issues identified in the above assessment(s) have been or will be taken into consideration in the design and implementation of the ER Program.

### 5.3 Non-Carbon Benefits

**Programmatic Element 6: Non-carbon benefits**



“The ER Program contributes to broader sustainable development. This could include, but is not limited to, improving local livelihoods, building transparent and effective forest governance structures, making progress on securing land tenure and enhancing or maintaining biodiversity and/or other ecosystem services. The ER Program should monitor and report on these non-carbon benefits as feasible, taking note of existing and emerging guidance on monitoring of non-carbon benefits by the UNFCCC, CBD, and other relevant platforms.

- ER Programs inherently provide social and environmental **Benefits** beyond carbon and the mitigation of social and environmental risks.
- ER Programs are encouraged to further enhance non-carbon benefits, to contribute to broader sustainable development; and to measure non-carbon benefits in simple and cost-effective ways where feasible.

--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)

#### **Context and Rationale for the C & I:**

The non-carbon aspects are an integral part of any ER Program. ER Programs should review non-carbon Benefits, identify a set of priority non-carbon Benefits, and report information on the generation or enhancement of such non-carbon Benefits.

#### **Criterion 33: Non-carbon benefits are integral to the ER Program.**

**Indicator 33.1:** The ER Program Document identifies priority non-carbon benefits and demonstrates how the ER Program would likely generate and/or enhance such priority non-carbon benefits.

**Indicator 33.2:** Stakeholder engagement processes carried out for the ER Program design and for the Readiness Preparation phase inform the identification of such priority non-carbon benefits. These Stakeholder engagement processes are participatory, culturally appropriate, and gender and inter-generationally inclusive.

#### **Criterion 34: The ER Program Document indicates how the information on the generation and/or enhancement of priority non-carbon benefits will be provided during the ER Program implementation, as feasible.**

**Indicator 34.1:** The ER Program Document proposes an approach utilizing methods available at the time to collect and provide information on priority non-carbon benefits<sup>21</sup>, including e.g. possibly using proxy indicators. If relevant, this approach may also use information drawn from or contributed as an input to the national Safeguard Information System.

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<sup>21</sup> Community participation in these methods is referred to in Criterion 16.

**Indicator 34.2:** Information on generation and/or enhancement of priority non-carbon benefits is in an annex to each ER Program Monitoring Report and Interim Progress Report, and will be made publicly available.

## 6. ER PROGRAM TRANSACTIONS

### 6.1 Transfer of Title to Emission Reductions

**Programmatic Element 5: Benefit Sharing** contains, in its rationale, the following:

The “status of rights to carbon and relevant lands should be assessed to establish a basis for successful implementation of the ER Program”.

*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

#### **Context and Rationale for the C & I:**

An ER Program Proponent needs to transfer Title to ERs it receives payment for to the Carbon Fund. Title to ERs may not be entirely clear in many countries at the start of ER Program design. Hence the ER Program design phase prior to an ERPA may provide opportunities for finding solutions to perceived uncertainty regarding Title, potentially including use of arrangements among entities involved in the Benefit Sharing Plan to be implemented after the ERPA is signed.

At the time of ERPA signing, the ER Program Proponent must be able to demonstrate how it will obtain authority to transfer Title to ERs. This should take into account the different types of potential right-holders. At the time of transfer of the ERs, the ER Program Proponent must be able to demonstrate that it has obtained authority to transfer Title to ERs to the Carbon Fund.

#### **Criterion 35: The ER Program demonstrates its ability to transfer to the Carbon Fund Title to ERs.**

**Indicator 35.1:** At the time of ERPA signature, the ER Program Proponent demonstrates that it has the ability to transfer to the Carbon Fund Title to such ERs. Documentary evidence would typically include references to relevant statutory and customary rights, and/or contracts or other arrangements with potential rights-holders.

**Indicator 35.2:** [If the ability to transfer to the Carbon Fund Title some ERs generated by the ER Program cannot be demonstrated at the time of ERPA signature, the ER Program design needs to demonstrate what measures it will take to address remaining uncertainties and to allow transfer of ER Title within an agreed schedule. Measures may include use of sub-arrangements with potential [Beneficiaries](#) regarding ER transfers and their inclusion in the [Benefit Sharing Plan](#).]

**Indicator 35.3:** [In the event that at the time of transfer of ERs to the Carbon Fund the ability of the ER Program Proponent to transfer to the Carbon Fund Title to ERs generated by the ER Program is still unclear or contested, an amount of ERs proportional to the ER Program Accounting Area where title is unclear or contested shall not be sold or transferred to the Carbon Fund.]

## 6.2 Data Management and ER Transaction Registries

**Programmatic Element:** Consistency with UNFCCC principles of transparency and completeness  
*--Guiding Principles on the key methodological framework for the Carbon Fund (June 2012)*

### **Rationale for the C & I:**

A comprehensive REDD+ Program and Projects Database is necessary to avoid having multiple entities claiming the same ER. An Emission Reduction Transaction Registry is required to “offer assurance against double counting and provide transparency to the public that there is no double claiming of the environmental benefit, in respect of the GHG emission reductions or removals,” as the VCS Jurisdictional Nested REDD Requirements indicate.

**Criterion 36: Based on national needs and circumstances, the ER Program works with the host country to select an appropriate arrangement to avoid having multiple claims to an ER Title.**

**Indicator 36.1:** Based on the needs assessment carried out in the national Readiness process, the ER Program host country has made a decision whether to maintain its own comprehensive National REDD+ Program and Projects Database, or instead to use a centralized ER Program database managed by a third party on its behalf.

In either case of a country’s use of a 3<sup>rd</sup> party Registry, or a country’s own National REDD+ Program and Projects Database, the indicators below apply:

**Indicator 36.2:** A National REDD+ Program and Projects Database or a 3rd party Registry needs to provide the attributes of ER Programs, including: (i) the entity that has Title to ERs produced, (ii) geographical boundaries of the ER Program or project, (iii) scope of REDD+ activities and Carbon Pools and, (iv) the Reference Level used. An ER Program for the Carbon Fund should report its activities and estimated ERs in a manner that conforms to the relevant FCPF Methodological Framework criteria and indicators.

**Indicator 36.3:** The information contained in the National REDD+ Program and Projects Database or in a centralized ER Program database is available to the public via the internet in the national official language of the host country (other means may be considered as required).

**Indicator 36.4:** Administrative procedures are defined for the operations of the National REDD+ Program and Projects Database or of a centralized ER Program database [and an audit of the operations is carried out by an independent third party periodically as agreed with the Carbon Fund].

**Criterion 37: Based on national needs and circumstances, ER Program host country selects an appropriate arrangement to ensure that any ER from REDD+ activities under the ER Program are not generated more than once; and that any ER from REDD+ activities under the ER Program sold and transferred to the Carbon Fund are not used again by any entity for sale, public relations, compliance or any other purpose.**

**Indicator 37.1:** Based on the needs assessment carried out in the national Readiness process, the ER Program host country has made a decision whether to maintain its own National ER Transaction Registry or instead to use a centralized ER transaction registry managed by a third party on its behalf.

**Indicator 37.2:** The registry reports ERs for the Carbon Fund using the accounting methods and definitions described above in the MF

**Indicator 37.3:** An independent audit report certifying that the National ER Transaction registry performs required functions is made public biannually.

**Indicator 37.4:** Operational guidance exists, or is in advanced stage of preparation, that clarifies the roles and responsibilities of entities involved in the National ER transaction registry, as well as rules for operation of the registry.

## 7. GLOSSARY

1. **Accounting Area:** area for which a reference level is established and over which emissions and removals from forests or select REDD+ Activities are being measured, reported and verified consistently.
2. **Activity Data:** Data on the magnitude of human activity (e.g. land use and land use changes related to forests) resulting in emissions or removals taking place during a given period of time<sup>22</sup>. For the purposes of the FCPF Carbon Fund, **Activity Data** should be expressed in hectares (unit of activity).
3. **Adjustments** (for national circumstances): projections of the future ER-program reference level that diverge from the historical emissions trend in order to take into account anticipated changes in drivers of deforestation, degradation or enhancement of carbon stocks, policies and measures introduced, or other factors.
4. **Benefits:** monetary or non-monetary goods or services generated by an ER Program and/or contracted for under the ERPA or from an Advance Payment
5. **Benefit-Sharing Plan:** a plan developed by the Program Entity in accordance with the ER Program Document and Methodological Framework and submitted to the Trustee on how the Program Entity will share the **Benefits** generated by the implementation and operation of the ER Program with **Beneficiaries**.
6. **Beneficiaries:** recipients of **Benefits** identified in the **Benefit Sharing Plan**. **Beneficiaries** may include Sub-Entities and other relevant stakeholders (including, e.g., forest-dependent indigenous peoples and other forest dwellers, affected communities/groups, local civil society organizations, etc.) and may have to be updated from time to time.
7. **Carbon Pools:** components of the climate system where carbon is stored, i.e. reservoirs of carbon. In the context of the Carbon Fund Methodological framework, **Carbon Pools** are:
  - a. Above ground biomass
  - b. Below ground biomass
  - c. Dead wood
  - d. Litter
  - e. Soil organic carbon
8. **Displacement:** emissions occurring outside the ER program boundary as a consequence of land use activities moving from inside the ER Program **Accounting Area** to an area outside the ER Program **Accounting Area**.

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<sup>22</sup> IPCC defines **Activity Data** as “data on the magnitude of a human activity resulting in emissions or removals taking place during a given period of time.” Data on energy use, metal production, land areas, management systems, and lime and fertilizer use are examples of **Activity Data**.

Displacement is typically caused through (i) **activity** shifting (e.g. related to the movement of subsistence agriculturalists in response to limits on their practices due to the ER Program Interventions), or (ii) market effects, related to deforestation or degradation causing commodity production to move to other regions in market response to reduced supply due to implementation of the REDD+ activities, e.g. conserving agricultural or timber lands).

9. **Emission factor:** A coefficient that quantifies the emissions or removals of a gas per unit REDD+ **activity**. Emission factors are often based on a sample of measurement data, averaged to develop a representative rate of emission for a given level of land use changes related to forests under a given set of operating conditions.
10. **Emission Reductions and Removals:** difference between the ER-program reference level and the ER-program emissions and/or removal which have been measured, reported and verified consistently.
11. **Emissions:** The release of carbon dioxide into the atmosphere over a specified area and period of time. The release of other greenhouse gases can be considered as feasible<sup>23</sup>.
12. **ER Program:** the program described in the ER Program Document
13. **ER Program Measures [or: Interventions]:** policies, measures or projects to reduce deforestation and/or forest degradation and enhance and conserve carbon stocks, that directly address the key drivers of deforestation and degradation, and are described in the ER program document (e.g. subsidies for reforestation, investments in agricultural intensification, land-use planning, etc.).
14. **ER Program Measures [Intervention] Area:** the geographic area(s) (which may contain more than one discrete area of land) delineating the ER Program Measures [or Interventions], as described in the ER Program Document.
15. **ER Program Monitoring Plan:** the plan referred to as such and incorporated in the ER Program Document that guides the Program Entity in its ER Monitoring activities and ensures that all data collection and management systems are in place to allow subsequent successful ER Monitoring and Verification of GHG Reductions generated under the ER Program.
16. **ER-Program Participant:** an entity listed as such in the ER Program Document or; any entity added to the ER Program by consent of the existing ER Program Participants in accordance with the International Rules, if any and any other applicable rules and procedures.
17. **ER Registry:** a repository for information set up, or determined [as part of the Methodological Framework] to be used for the purposes of the Facility, to document and record, among others, the acquisition, holding and transfer of ERs generated under ER Program;

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<sup>23</sup> Emissions (IPCC): The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. (UNFCCC Article 1.4)

18. Feedback and Grievance Redress Mechanism (FGRM): a locally based, formalized way to accept, assess, and resolve stakeholder feedback or complaints related to the preparation and implementation of the ER Program.
19. Forest Monitoring System: an operational system capable of meeting the data and [accuracy](#) requirements of the Methodological Framework used by the ER Program Participant for monitoring and reporting on ERs or reduction in emissions and increases in removals generated under the ER Program (including the occurrence of any Reversal Event).
20. Jurisdictional scale: a geographical area encompassing one or more administrative units.
21. Measurement: the assignment of numbers to objects. All measurements consist of three parts: magnitude, dimensions (units) and uncertainty. In the case of the Carbon Fund methodological framework, the following variables will have to be measured along with their associated [accuracy](#):
  - a. forest area, and forest area change ([Activity Data](#)),
  - b. carbon stock, and carbon stock change (Emission Factors)
22. Monitoring: repeated measurements, collection/compilation and recording of all relevant data necessary for estimating [ERs or reduction in emissions and increases in removals] generated under the ER Program (including the occurrence of any Reversal Event); and for conducting Verification in accordance with the ER Program Monitoring Plan. Monitoring is performed in a systematic (using standard operating procedures) and consistent fashion (using the same or comparable operational procedures) in accordance with the [Forest Monitoring System OR REDD Country Participant's National Forest Monitoring System] and the Methodological Framework.
23. National Forest Monitoring System: a system used by a REDD+ Country Participant for monitoring and reporting on REDD+ Activities, programs, projects and interventions related to the implementation of its national REDD+ strategy [in line with the relevant provisions of Decisions 4/CP.15 (Paragraph 71) and 1/CP.16 of the United Nations Framework Convention on Climate Change (UNFCCC)].
24. Non-Carbon Benefits: any benefits generated by the implementation and operation of the ER Program other than [Benefits that will be included in the Benefit Sharing Plan](#), as specified in the ER Program Document[, which may include, but not be limited to, the improvement of local livelihoods, building of transparent and effective forest governance structures, making progress on securing Land tenure and enhancing or maintaining biodiversity and/or other ecosystem services];
25. Program Entity: the Party or Parties specified as such in the ERPA.
26. REDD+ Activities:
  - a. Reducing emissions from deforestation: reducing the emissions associated with conversion of forested land to a non-forested state. (Requires a country to adopt a definition of Forest.)
  - b. Reducing emissions from forest degradation: reducing emissions on forested land that remains forested land (Requires that country adopt a definition of Forest and Forest Degradation)
  - c. Enhancement of forest carbon stocks: increasing removal on forested land that remains forested land; or on non-forest converted to forests. (Requires that country adopt a definition of Forest, Forest Degradation and enhancement)
  - d. Conservation



- e. Sustainable forest management
27. REDD+ programs or projects: a set of interventions aimed at changing the dynamics of deforestation and/or forest degradation and/or increasing forest carbon stocks, within a geographically defined area, in order to reduce emissions and/or increase removals of greenhouse gas emissions associated with these dynamics in order to value these emission reductions or removals in a results-based payment mechanism (carbon markets or other).
  28. REL/FRL: forest reference emission level and/or forest reference level expressed in tonnes of carbon dioxide equivalent per year that is a benchmark for assessing each country's performance in implementing REDD+ Activities under the UNFCCC.
  29. Reference Level (RL): an amount of emissions from the Accounting Area, expressed in tonnes of carbon dioxide equivalent per year, relative to which ERs are measured, reported and verified.
  30. Reference Period: time period for which historical emissions from carbon stocks changes from forests or select REDD+ Activities are estimated to establish the Reference Level.
  31. Removals: removal of carbon dioxide (CO<sub>2</sub>) from the atmosphere by a sink.
  32. Reversals: A situation where the cumulative monitored and verified ERs are less than the currently transferred ERs, i.e., at any point in time more ERs have been transferred than is warranted by the underlying reported and verified results of the ER Program.
  33. Safeguards Plan: document that describe the actions to be taken by the ER-program proponent during the implementation and operation of the ER Program to eliminate, offset or reduce adverse environmental and social impacts, in accordance with World Bank requirements. Depending on the results of the World Bank's safeguards due diligence, these documents may include, among others, e.g., an Environmental Management Plan, a Resettlement Action Plan and/or an Indigenous Peoples Plan.
  34. Safeguards Information System (SIS): A national system for providing information on how the Cancun safeguards are addressed and respected, as contained in UNFCCC Decision 12/CP.17 (<http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf#page=16>, page 16/17)
  35. Sink: Any process, activity or mechanism which removes a greenhouse gas, an aerosol, or a precursor of a greenhouse gas from the atmosphere. (from UNFCCC Article 1.8)
  36. Source: Any process or activity which releases carbon dioxide a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere. (from UNFCCC Article 1.9)
  37. Term of the ERPA: The period in which the ERPA is in force.
  38. Title to Emission Reductions: The full legal and beneficial title and exclusive right to ERs.  
NB: It is important for the Trustee to ensure that the ERs acquired by the Carbon Fund are free of dispute and the legal title to the ERs is transferred to the Trustee in accordance with the ERPA.

However, the definition relates to the ERs only. In particular, it does not entail any rights, titles or interests to land and territories.

39. Total Potential Emissions: the sum of the areas of each forest type in the Accounting Area times the corresponding emission factor for deforestation for that type
40. Verification: the process in which the ER-program document is checked for adherence to requirements established by the *methodological framework* and ER-Program reporting is checked for [accuracy](#), scientific validity and adherence to the requirements established by the ER-Program document

## Annex 1: Mathematical illustration of Criterion 13, Indicator 13.3 proposed options

### For ER Programs not meeting Indicator 13.2:

$$RL = E_{\text{Defor}} + E_{\text{Degrad}} - R_{\dots} \text{ (tCO}_2\text{e/yr) \{Equation 1\}}$$

$$pERs = RL - MMR \text{ (tCO}_2\text{e/yr) \{Equation 2\}}$$

### For ER Programs meeting Indicator 13.2:

#### Equations for Option 1 as defined in the draft text

$$CB = \frac{1}{2} * ((E_{\text{Defor}} + E_{\text{Degrad}} - R_{\dots}) + (D_{\text{FAO-Average}} * \sum_i \text{Area}_i \text{EF}_{\text{Defor-i}})) \text{ (tCO}_2\text{e/yr) \{Equation 3\}}$$

$$T \leq (E_{\text{Defor}} + E_{\text{Degrad}} - R_{\dots}) + (0.0x \% / \text{yr} * \sum_i \text{Area}_i \text{EF}_{\text{Defor-i}}) \text{ (tCO}_2\text{e/yr) \{Equation 4\}}$$

$$pERs = \begin{cases} CB - MMR & \text{if } MMR < T \\ 0 & \text{if } MMR > T \end{cases} \text{ (tCO}_2\text{e/yr) \{Equation 5A\}}$$

OR [illustrative example of sliding scale]

$$pERs = \begin{cases} CB - MMR & \text{if } MMR < IT_1 < IT_2 < T \\ (CB - MMR)^{\frac{1}{2}} & \text{if } IT_1 < MMR < IT_2 < T \\ (CB - MMR)^{\frac{1}{4}} & \text{if } IT_1 < IT_2 < MMR < T \\ 0 & \text{if } IT_1 < IT_2 < T < MMR \end{cases} \text{ (tCO}_2\text{e/yr) \{Equation 5B\}}$$

#### Equations for Option 2 as defined in the draft text

$$RL = (E_{\text{Defor}} + E_{\text{Degrad}} - R_{\dots}) + \text{Adj} \text{ (tCO}_2\text{e/yr) \{Equation 6\}}$$

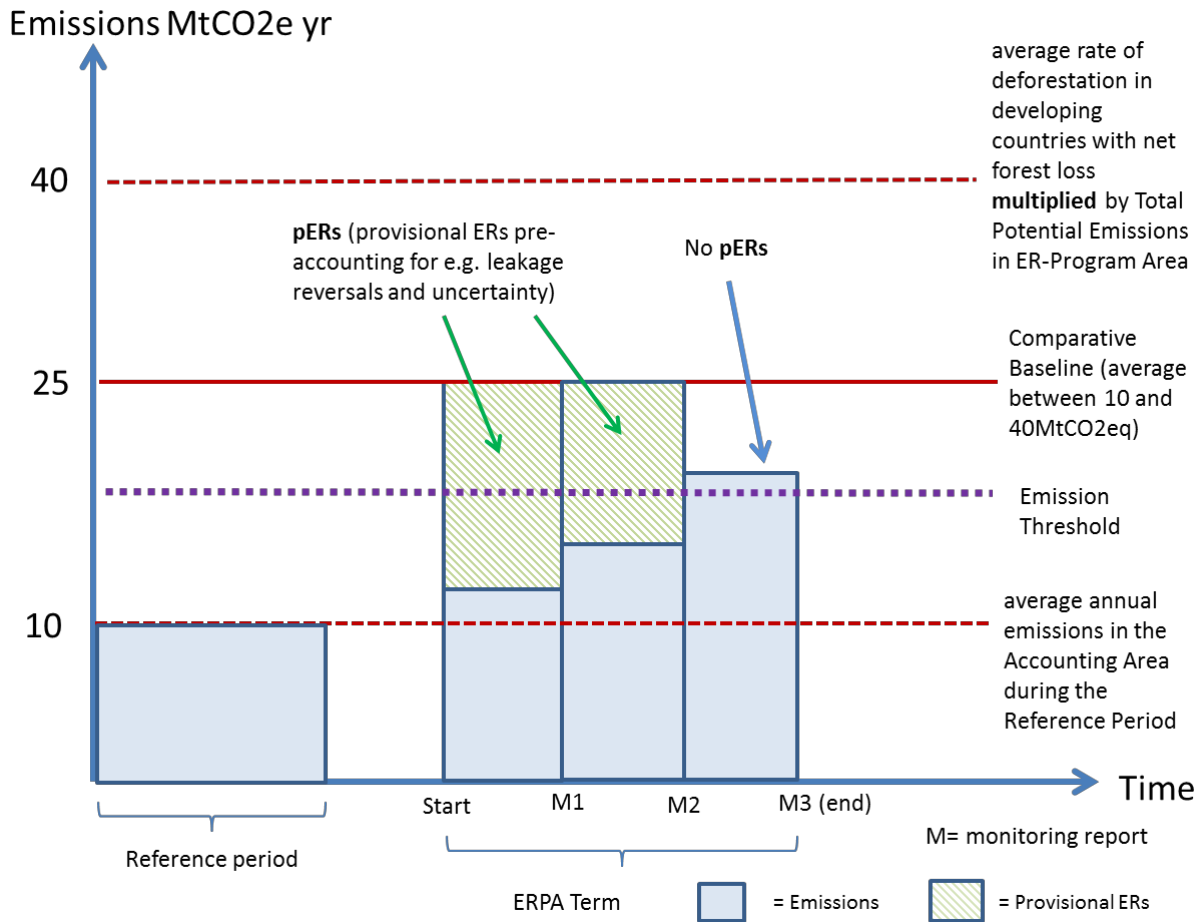
$$\text{With a rule that } \text{Adj} \leq (0.0y \% / \text{yr} * \sum_i \text{Area}_i \text{EF}_{\text{Defor-i}}) \text{ (tCO}_2\text{e/yr) \{Equation 7\}}$$

$$pERs = RL - MRV \text{ (tCO}_2\text{e/yr) \{Equation 8\}}$$

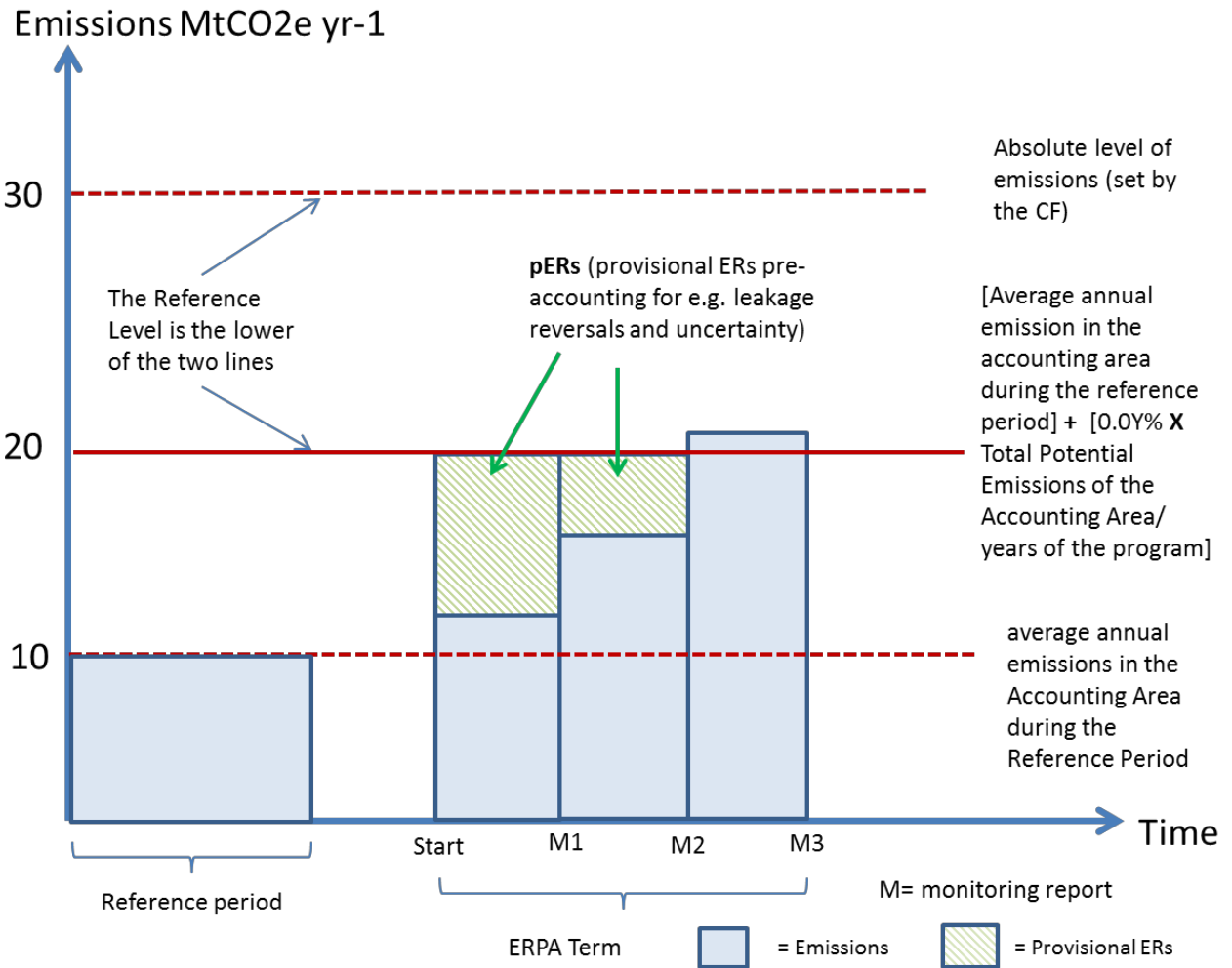
Abbreviation	Term	Unit
RL	Reference Level	(tCO <sub>2</sub> e/yr)
E <sub>Defor</sub>	Average annual emissions from Deforestation during the historical Reference Period	(tCO <sub>2</sub> e/yr)
E <sub>Degrad</sub>	Average annual emissions from Degradation during the historical Reference Period	(tCO <sub>2</sub> e/yr)
R...	Removals during the historical Reference Period, if applicable	(tCO <sub>2</sub> e/yr)
MMR	Measured, monitored and reported emissions	(tCO <sub>2</sub> e/yr)
pERs	Provisional Emission Reductions (pre-accounting for e.g. leakage, reversals, uncertainty...)	(tCO <sub>2</sub> e/yr)
CB	[Comparative Baseline]	(tCO <sub>2</sub> e/yr)
D <sub>FAO-Average</sub>	Average rate of deforestation in developing countries with net forest loss (weighted by forest area), based on the 2010 FAO FRA data for 2000-2010	(%/yr)

Area <sub><i>i</i></sub>	Area of forest type <i>i</i>	(ha)
EF <sub>Defor-<i>i</i></sub>	Emission Factor for Deforestation for forest type <i>i</i>	(tCO <sub>2</sub> e/ha)
T	Threshold of emissions above which pERs would be zero	(tCO <sub>2</sub> e/yr)
IT <sub>1</sub> , IT <sub>2</sub> , ...	Intermediate Thresholds below Threshold	(tCO <sub>2</sub> e/yr)
Adj	Adjustment	(tCO <sub>2</sub> e/yr)

### Annex 2: Graphical illustration of Reference Levels Option 1 in Indicator 13.3



**Annex 3: Graphical illustration of Reference Levels Option 2 in Indicator 13.3**



## Annex 4: Relationship of the Methodological Framework to related FCPF and World Bank processes

Figure 4.1

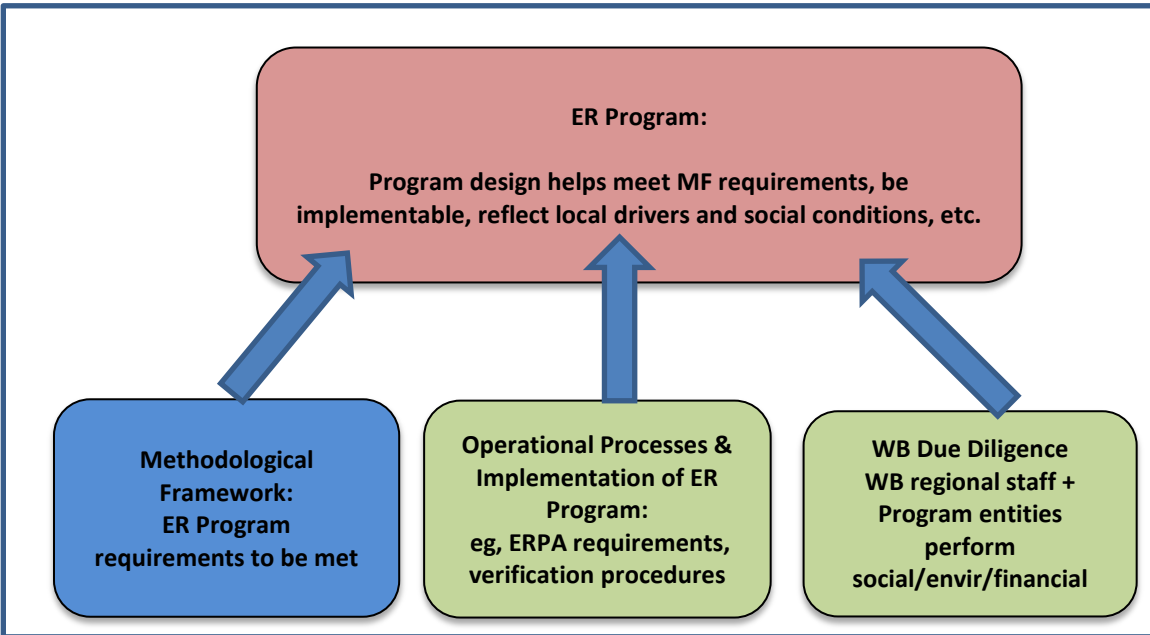
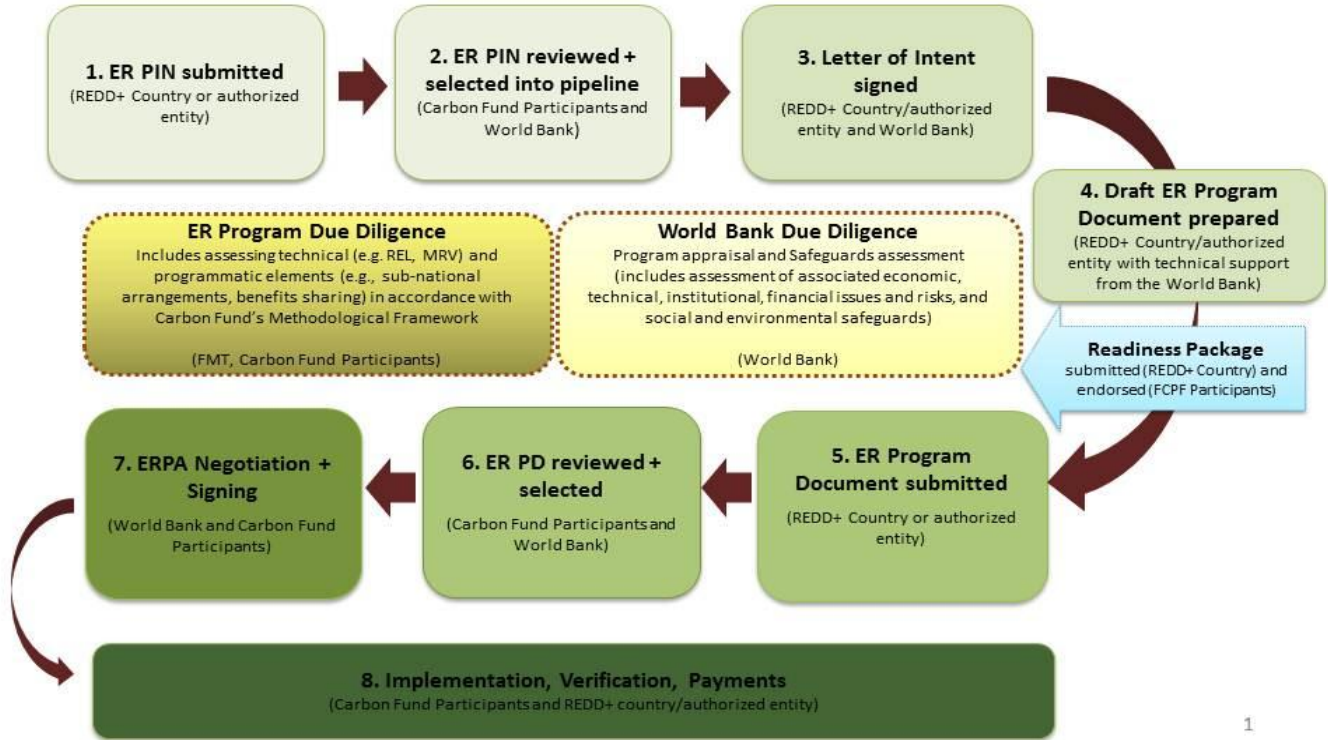


Figure 4.2



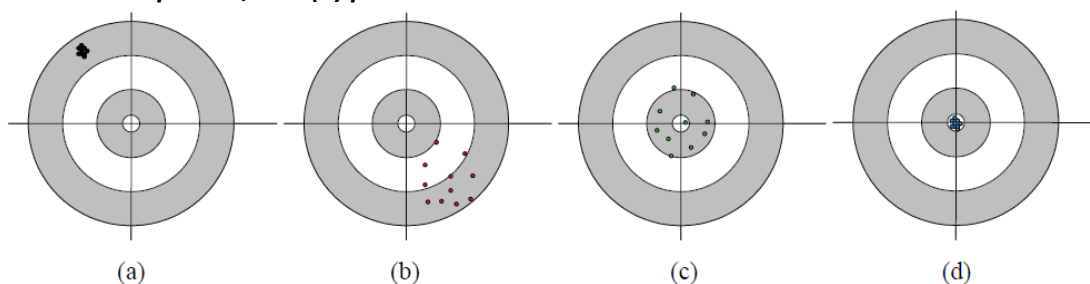


## Annex 5: Other useful definitions

1. **Accuracy:** describes agreement between the reported value and the true value. For carbon accounting, this specifically refers to repeated measured observations or estimations of a quantity, relevant for quantitative estimates of carbon stocks and flows.

An accurate measurement or prediction lacks bias or, equivalently, systematic error (defined below). Estimates should be accurate in the sense that they are systematically neither over nor under true emissions or removals, so far as can be judged, and that uncertainties are reduced so far as is practicable. Appropriate methodologies conforming to guidance on *good practices* should be used to promote accuracy in inventories. Accuracy should be distinguished from precision as illustrated below.

**Illustration of Accuracy and Precision: (a) inaccurate but precise; (b) inaccurate and imprecise; (c) accurate but imprecise; and (d) precise and accurate.**



2. **Activity (IPCC):** A practice or ensemble of practices that take place on a delineated area over a given period of time.
3. **Comparability:** means that estimates of emissions and removals reported by countries in inventories should be comparable among countries. For this purpose, countries should use agreed methodologies and formats for estimating and reporting inventories.
4. **Completeness:** helps assure that ER Programs consider all the relevant information. For carbon accounting, this includes carbon pools and categories of activities producing emissions or removals of carbon for reporting on the implementation of REDD+ Activities. For Programmatic elements, this includes information on how the UNFCCC safeguards are being addressed and respected.
5. **Confidence Interval:** The true value of the quantity for which the interval is to be estimated is a fixed but unknown constant, such as the annual total emissions in a given year for a given country. The **confidence interval** is a range that encloses the true value of an unknown fixed quantity with a specified confidence (probability).

For example, a 95 per cent **confidence interval** has a 95 per cent probability of enclosing the true but unknown value of the quantity. An alternative interpretation is that the **confidence interval** is a range that may safely be declared to be consistent with observed data or information. The 95 per cent

[confidence interval](#) is enclosed by the 2.5th and 97.5th percentiles of the probability distribution function.

6. [Consistency \(IPCC\)](#): provides for use of similar methods to enhance comparisons across ER Programs, and over time within an ER Program, taking into account Accounting Element 1 on stepwise approach.
7. [Criteria \(ISO\)](#): Criteria are the 'content' level of a standard which set out the conditions which need to be met in order to deliver a principle. It can be possible to verify criteria directly but they can also be further elaborated through indicators. In the case of the methodological framework, the set of criteria allow to judge or decide whether or not the ER-Program meets methodological requirements of the FCPF Carbon Fund.
8. [Good Practice](#): is a set of procedures intended to ensure that criteria of the methodological framework are fulfilled and information on indicators is produced in adequate fashion.
9. [Guidance](#): a set of documents and tools that detail and explain how to apply good practice.
10. [Independent Reviewer](#): an independent third party entity, agreed on by the Program Entity and the Trustee, to carry out an ex post Verification of the ER Monitoring Reports to verify the actual amount of ERs generated under the ER Program during a given Reporting Period in accordance with the REDD Country Participant's MRV system and the evolving Methodological Framework.
11. [Indicators \(ISO\)](#): quantitative or qualitative parameters which can be achieved and verified in relation to a criterion. In the case of the meth framework an indicator would provide information on the state or condition of a criterion.

NB: It is generally accepted that a good indicator should be Specific, Measurable, Attainable, Relevant and Time bound (SMART).

12. [IPCC Approach 3](#): Approach 3 is characterized by spatially-explicit observations of land-use categories and land-use conversions, often tracking patterns at specific point locations and/or using gridded map products, such as derived from remote sensing imagery. The data may be obtained by various sampling, wall-to-wall mapping techniques, or combination of the two methods. c
13. [IPCC sub-categories related to forests](#):
  - a. Forests converted to other lands
  - b. Forests remaining as forests
  - c. Other lands converted to forests
14. [IPCC Tier 1 methods](#): use of the basic method and the default emission factors provided in the IPCC Guidelines (Workbook and Reference Manual). Tier 1 methodologies usually use [Activity Data](#) that are spatially coarse, such as national or global deforestation rates, agricultural production statistics, and global land cover maps.

15. IPCC Tier 2 methods: use of the same methodological approach as Tier 1 but applies emission factors and [Activity Data](#) which are defined by the host country for the most important land uses or activities. Tier 2 can also apply stock change methodologies based on host country-specific data. Host country-defined emission factors or [Activity Data](#) are more appropriate for the climatic regions and land use systems in that country. Higher resolution [Activity Data](#) are typically used in Tier 2 to correspond with country-defined coefficients for specific regions and specialised land-use categories.
16. Quality Assurance Quality Assurance (QA): activities include a planned system of review procedures conducted by personnel not directly involved in the inventory compilation and development process to verify that data quality objectives were met, ensure that the inventory represents the best possible estimate of emissions and sinks given the current state of scientific knowledge and data available, and support the effectiveness of the quality control (QC) programme.
17. Quality Control Quality Control (QC) is a system of routine technical activities, to measure and control the quality of the inventory as it is being developed. The QC system is designed to:
  - (i) Provide routine and consistent checks to ensure data integrity, correctness, and [completeness](#);
  - (ii) Identify and address errors and omissions; (iii) Document and archive inventory material and record all QC activities. QC activities include general methods such as [accuracy](#) checks on data acquisition and calculations and the use of approved standardised procedures for emission calculations, measurements, estimating uncertainties, archiving information and reporting. More detailed QC activities include technical reviews of source categories, [activity](#) and emission factor data, and methods.
18. Systematic Error and Random Error (IPCC): the difference between the true, but usually unknown, value of a quantity being estimated, and the mean observed value as would be estimated by the sample mean of an infinite set of observations. The random error of an individual measurement is the difference between an individual measurement and the above limiting value of the sample mean.
19. Transparency provides for transparent and consistent information accessible by relevant stakeholders on the assumptions, data collected, and methods used by an ER Program, other than confidential business information, to allow assessment of the credibility and reliability of data and assumptions.
20. Uncertainty (IPCC): Lack of knowledge of the true value of a variable (e.g., reductions in emissions or increases in removals) that can be described as a probability density function characterizing the range and likelihood of possible values. Uncertainty depends on the analyst's state of knowledge, which in turn depends on the quality and quantity of applicable data as well as knowledge of underlying processes and inference methods.