

Influence. Innovate. Inspire.

The Gold Standard  
**Afforestation/Reforestation (A/R)  
Requirements**

Valid since      August 2013  
Version         0.9 (Road-Test)  
Author          The Gold Standard Foundation



### Background

In 2012, after an extensive consultation process with key stakeholders, The Gold Standard Foundation made the decision to expand its scope to include 'Land Use & Forests'.

After almost one year of development and with the continuous input and feedback from over 100 organizations worldwide, the first version of The Gold Standard Afforestation/Reforestation (A/R) Requirements have been released. For the upcoming months, this version will be road-tested by projects with varying scales and activities in different geographical regions. Refinements to the 'A/R Requirements' will be made as needed throughout this process. However, the CO<sub>2</sub>-certificated generated under this version will be classed as regular Gold Standard credits.

**We would like to thank ALL stakeholders for their continuous feedback and support throughout this long development process. Our appreciations especially go to:**

WWF, WorldVision, FSC, FairTrade, Rainforest Alliance, UNEP, TÜV Süd, Wetlands International, UNIQUE, Transparency International, CGIAR, DNV, myclimate, ForestConServ, ForestFinance, SouthPole Carbon, Forest Trends, Joannuem, Silvestrum, PwC Sustainability, German Federal Environment Agency, giz, Indonesian REDD+ Task Force, Nationaal Groenfonds, Bureau Veritas, NEPcon, International Network for Bamboo and Rattan, OroVerde, Sicirec, ETIFOR, Initiative Développement, GET-Carbon, CO<sub>2</sub>OL, Cochabamba Project, BaumInvest, Shared Value Africa, ForestSense, Querdenker, Green Resources, Ernst Baser + Partner, Environmental Accounting Services, Ferrero, global-woods, The Cirrus Group, ClearSky Climate Solutions, Hochschule Weihenstephan, CO<sub>2</sub>balanace, TREES, Woodrising, Winrock, University of Freiburg, International Forest Students Association, natureOffice, CO<sub>2</sub> Environment, Cepicafe/NorAndino, WithOneSeed, Taking Root, Woodland Carbon Code, Wilson Applied Consultancy, Climate Adapt, Climate Bridge, Ecological Carbon Offset Partners, Bullet Forestal, ProClimate, JustGreen, GHG Offset Services, Grattan MacGiffin Ecoinvest Services, Permian Global, ecoPartners, ProClimate, CleanAir Action

### Eligible Projects

The Gold Standard **A/R Requirements** are for projects that include the planting of trees on land that does not meet the definition of a *forest*<sup>1</sup> at planting start.

Projects can apply all silvicultural systems:

- Conservation forests (no use of timber)
- Forests with selective harvesting
- Rotation forestry

All projects can include agriculture (agroforestry) or pasture (silvopasture) activities.

### Eligible host-countries

Projects can be implemented in all countries.

If projects are located in a country or state that has an operational mandatory national or pan-national cap-and-trade scheme to reduce greenhouse-gas emissions, and hereby accounts for its own land-based activities under its national or subnational accounting, the project owner shall follow the 'A/R Guidelines - Double Counting' [coming soon].

### Guidelines and Background Information

'Guidelines' and 'Background Information' that are related to The Gold Standard 'A/R Requirements' are provided under: [www.CDMGoldStandard.org/LUF\\_AR-Requirements](http://www.CDMGoldStandard.org/LUF_AR-Requirements)

### Forest Stewardship Council (FSC) Partnership



© The Gold Standard and FSC are in partnership to promote environmentally appropriate, socially beneficial and economically viable management of the world's forests. It will be possible for projects to obtain a *dual certification* (Gold Standard and FSC) in a parallel process. Projects seeking *dual certification* will need to comply with all the FSC requirements.

With respect to potential *dual certification* The Gold Standard recognises that FSC certification can replace the requirements of section '3. Sustainability' (except for chapter '3.5 Legal Rights') and chapter '7.4 Reporting' of the 'A/R Requirements'.

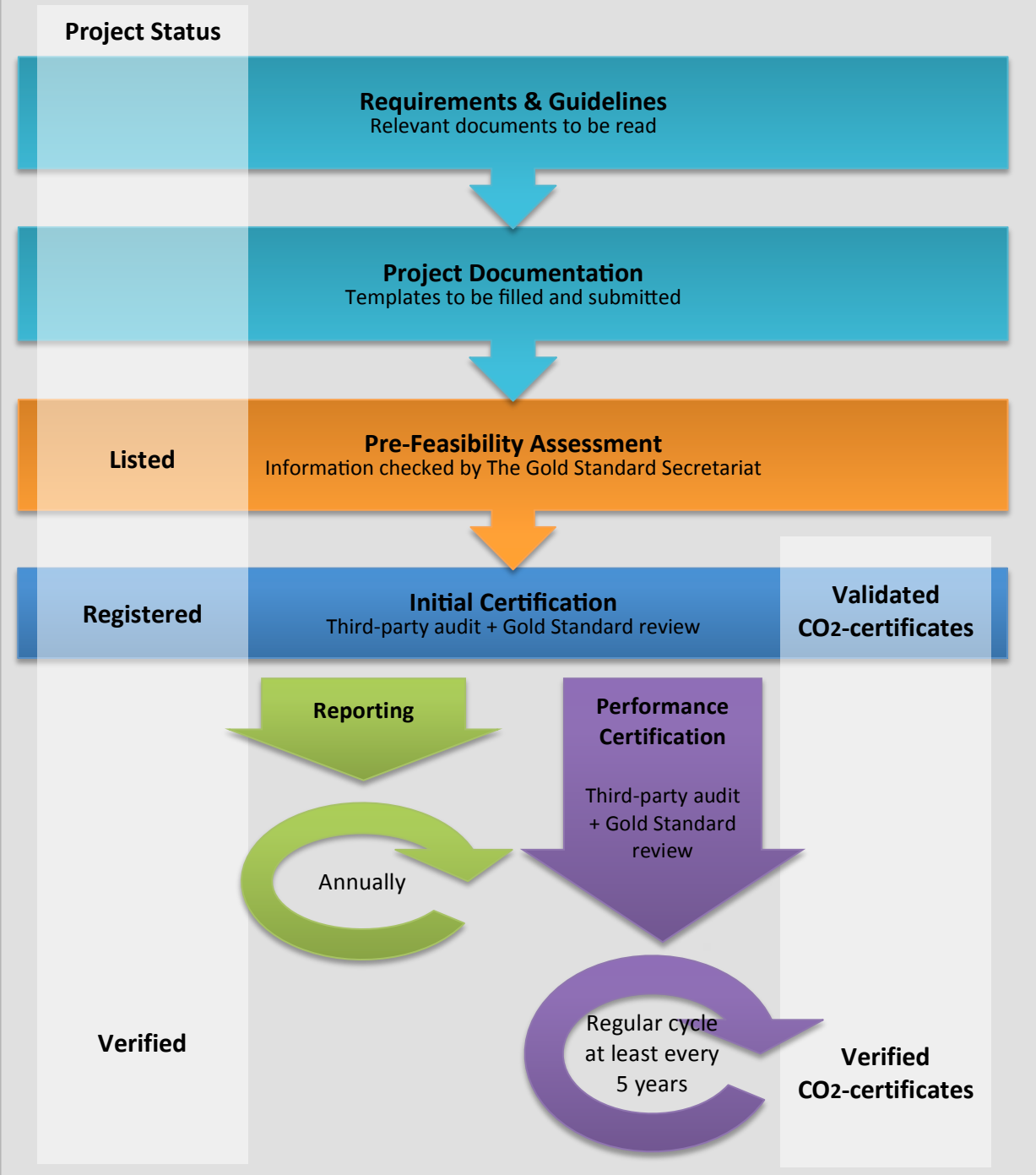
This will simplify the process of a *dual certification*. When applying a *dual certification*, the project owner shall provide the 'FSC Audit Report' instead of the template for 'Sustainability' and the 'FSC Annual Surveillance Report' instead of the template for 'Annual Report'.

For *dual certification*, FSC certification is required to be valid throughout the crediting period.

<sup>1</sup> Forest A forest is defined by the Designated National Authority (DNA) of the project's host-country: <http://cdm.unfccc.int/DNA/index.html>. In case no forest definition is yet given by the DNA, the project owner can take the forest definition of the FAO: <http://www.fao.org/docrep/003/x6896e/x6896e0e.htm> or the national forest definition of the project's host country.

**Certification Process**

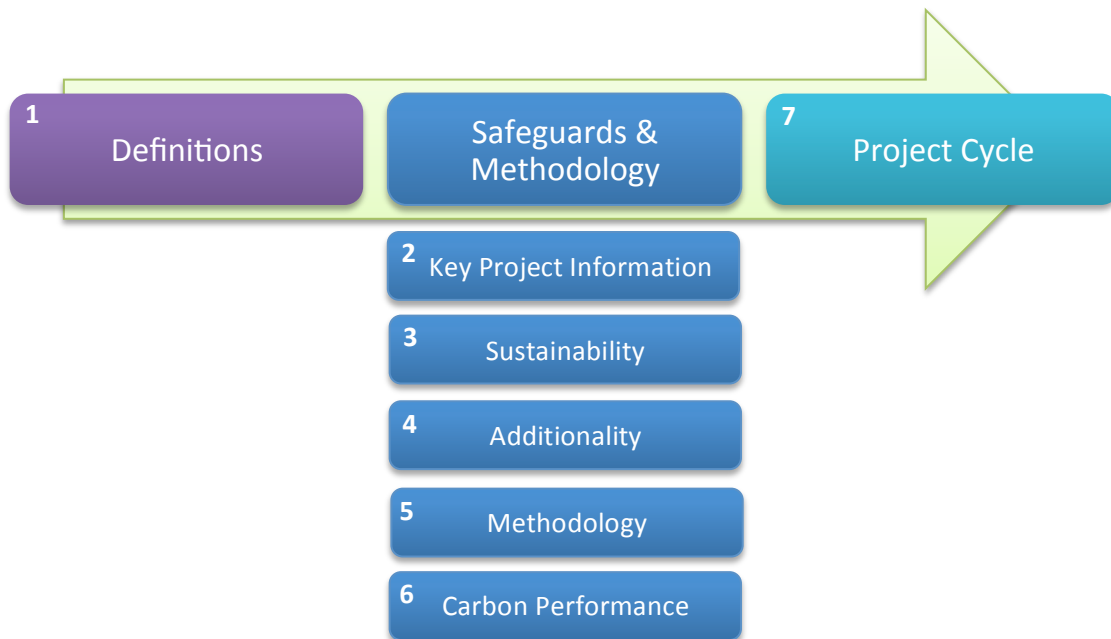
The following graph provides an overview of the different steps in The Gold Standard process along with the sequence of activities for *project registration* and the *issuance of CO<sub>2</sub>-certificates*:



## What you should know ...

### Structure

The Gold Standard 'A/R Requirements' are structured as follows:



### Documentation

*Templates* are used to document evidence that the project meets the requirements. Where useful, inputs to the *templates* should be backed by *supporting documents*. These documents can be scientific reports, copies of contracts, meeting minutes, pictures, maps, etc. The filled-in *templates* together with the *supporting documents* form the base of information for the certification process.

### How to read this document

- Dashed underlined words are defined in this section '1. Definitions'.
- Words in *italics* improve the readability and understanding of the requirements.
- **Shall** indicates requirements must be followed in order to conform to the standard.
- **Should** indicates that a certain course of action is preferred but not necessarily required.
- **May** indicates a course of action is permissible.
- **Can** is used for statements of possibility and capability.

**Clear boxes** | The information in the clear boxes is to assist in using this document and to define the different processes which must be followed for each chapter depending on the type of certification being undertaken.

**Green boxes** | Some of the requirements in this document appear in green boxes<sup>1</sup>. The project owner shall provide documentary evidence through the *templates* (and *supporting documents*) to demonstrate that they meet the requirements outlined in the green boxes.

**Grey boxes with a border** | Grey boxes with a border highlight the requirements and descriptions that do not require documentary evidence from the project owner unless otherwise noted.

<sup>1</sup> If black and white printing is used, the green boxes can be identified as the boxes with no lines as borders.

## Table of Contents

<b>1. Definitions</b>	<b>7</b>
<b>2. Key Project Information</b>	<b>12</b>
<b>3. Sustainability</b>	<b>14</b>
3.1 Do-No-Harm Assessment	14
3.2 Local Stakeholder Consultation (LSC)	18
3.3 Input & Grievance Mechanism	20
3.4 Sustainability Monitoring Plan	21
3.5 Legal Rights	22
3.6 Risk Register	23
<b>4. Additionality</b>	<b>24</b>
<b>5. Methodology</b>	<b>26</b>
5.1 Applicability	26
5.2 Conversion Procedure	27
5.3 Calculation of CO <sub>2</sub> -certificates	30
5.4 Other Emissions	32
5.5 Baseline	33
5.6 Leakage	34
5.7 CO <sub>2</sub> -Fixation	36
<b>6. Carbon Performance</b>	<b>39</b>
<b>7. Project Cycle</b>	<b>40</b>
7.1 Certification Process	41
7.2 Reporting	44
7.3 New Area Certification	45
7.4 Technical Procedures & Formatting	46
<b>8. Non-Compliance</b>	<b>47</b>

# 1. Definitions

## General terms

1. **tCO<sub>2</sub>** | The unit of tCO<sub>2</sub>-e (tonnes of CO<sub>2</sub> equivalent) is expressed as tCO<sub>2</sub>.

2. **Tree** | A tree is a perennial woody plant with one or several dominant sprouts that increase its circumference due to secondary growth.

For a practical use of this document the definition of a tree in these 'A/R Requirements' goes beyond the scientific definition of a tree and also includes shrubs, palms and bamboo plants. Differences in the context of specific requirements are noted on the individual pages.

For forest inventories of these different types of trees additional guidance is provided by the forest inventory guidelines of the *BioCarbon Fund*<sup>1</sup>.

In any project, trees shall reach a minimum height of 2 meters.

3. **Planting** | Planting refers to the activity of putting trees in the ground for growth; it also includes sowing or assisted natural regeneration.

## Governance

4. **Gold Standard Secretariat** | The staff of The Gold Standard Secretariat administer and maintain the quality of The Gold Standard, including the execution of the Pre-Feasibility Assessments, answering clarification requests and conducting project spot-checks.

See also: [www.CDMGoldStandard.org/LUF\\_Team](http://www.CDMGoldStandard.org/LUF_Team)

5. **Technical Advisory Committee (TAC)** | The TAC is an independent technical body of experts for The Gold Standard Foundation. It provides expert advice and strategic input into The Gold Standard requirements.

6. **Auditor** | The auditor conducts audit processes by assessing the compliance of project information with the requirements of the standard.

For 'Afforestation/Reforestation' project activities, The Gold Standard recognises auditors that are:

- (a) Accredited by the UNFCCC as a *Designated Operational Entity (DOE)*<sup>2</sup> or *Accredited Independent Entity (AIE)*<sup>3</sup> under the sectorial scope of 'Afforestation and reforestation', OR
- (b) Accredited as a *certification body* by the FSC under the scope of 'Forest Management'. FSC auditors shall have at least one member of their audit team with direct experience in certifying carbon forest projects.

Auditors shall have at least one member of their audit team with local experience in the host country.

Contact details of auditors: [www.CDMGoldStandard.org/LUF\\_Auditors](http://www.CDMGoldStandard.org/LUF_Auditors)

<sup>1</sup> BioCarbonFund [http://www.cdmgoldstandard.org/wp-content/uploads/2013/07/Winrock-BioCarbon\\_Fund\\_Sourcebook-compressed.pdf](http://www.cdmgoldstandard.org/wp-content/uploads/2013/07/Winrock-BioCarbon_Fund_Sourcebook-compressed.pdf)

<sup>2</sup> DOEs DOEs (Designated Operational Entities) are accredited certifiers of the UN climate secretariat: <http://cdm.unfccc.int/DOE/list/index.html>

<sup>3</sup> AIEs AIEs (Accredited Independent Entities) are accredited certifiers of the UN climate secretariat: <http://ji.unfccc.int/AIEs/List.html>

## Project

7. **Project** | A project is the implementation and management of one or more activities in an area of similar environmental and social characteristics.

8. **Planting start** | The planting start is the date when the first trees are planted.

9. **Project information** | Project information is used as an umbrella term for *project documents* and *supporting documents*.

*Project documents* are documents that describe how the project meets the requirements. *Supporting documents* are referenced within the *project documents* and provide additional evidence to meet the requirements.

## Project Actors

10. **Project owner** | (Source: FSC, where the term is 'The Organization') The person or entity that holds or is applying for certification and therefore responsible for demonstrating compliance with the requirements upon which Gold Standard certification is based.

11. **Workers** | (Source: FSC) All employed persons including public employees as well as 'self-employed' persons. This includes part-time and seasonal employees, of all ranks and categories, including labourers, administrators, supervisors, executives, contractor employees as well as self employed contractors and sub-contractors.

12. **Stakeholders** | The stakeholders are persons, groups or entities that may be affected by the project and that show interest in the project.

The following are categories of stakeholders:

- (a) Local people impacted by the project or their representatives
- (b) Local policy makers and representatives of local authorities
- (c) *Designated National Authority (DNA)*<sup>1</sup> and *National Focal Point*<sup>2</sup>
- (d) Local NGOs working on topics relevant to the project
- (e) The *Gold Standard Regional Manager*<sup>3</sup> located closest to the project
- (f) *International Gold Standard NGO Supporters*<sup>4</sup> and *Gold Standard NGO Supporters*<sup>5</sup> located in the host country of the project.

13. **Customary rights** | (Source: FSC) Rights which result from a long series of habitual or customary actions, constantly repeated, which have, by such repetition and by uninterrupted acquiescence, acquired the force of a law within a geographical or sociological unit.

<sup>1</sup> Designated National Authority (DNA)

<sup>2</sup> National Focal Point

<sup>3</sup> Gold Standard Regional Managers

<sup>4</sup> International Gold Standard NGO Supporters

<sup>5</sup> Gold Standard NGO Supporters

<https://cdm.unfccc.int/DNA/index.html>

<http://maindb.unfccc.int/public/nfp.pl>

[www.CDMGoldStandard.org/Contact](http://www.CDMGoldStandard.org/Contact)

[www.CDMGoldStandard.org/our-supporters/NGOs](http://www.CDMGoldStandard.org/our-supporters/NGOs) - in yellow

[www.CDMGoldStandard.org/our-supporters/NGOs](http://www.CDMGoldStandard.org/our-supporters/NGOs)



## Areas

14. **Project area** | (Source: FSC, where the relevant term is 'Management Unit') The project area is a spatial area or areas submitted for certification with clearly defined boundaries managed to a set of explicit long term management objectives.

New areas can be added to an existing project area after its Initial Certification (see chapter '7.3 New Area Certification').

The project area can be made up of discrete parcels of land.

15. **Planting area** | The planting area is the part of the project area where tree planting activities take place.

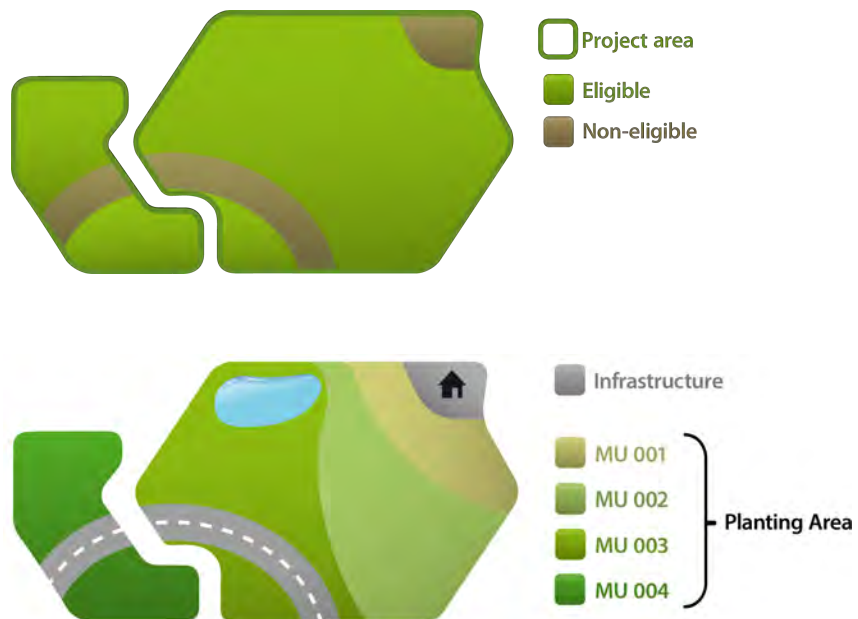
16. **Eligible planting area** | The eligible planting area is the part of the planting area which meets the applicability conditions (chapter '5.1 Applicability').

17. **Non-eligible planting area** | The non-eligible planting area are areas which do not meet the applicability conditions (chapter '5.1 Applicability'), but are still part of the project area.

18. **Modelling Unit (MU)** | Modelling Units are distinct parts of the planting area where carbon stocks can be quantified based on applying a forest growth-model.

To meet the precision level for the carbon stocks estimation (see chapter '5.7 CO<sub>2</sub>-Fixation'), MU areas normally have homogeneous characteristics in their growth patterns, silvicultural treatment and planting date.

19. **New area** | New areas are project areas that are added to an existing project after its 'Initial Certification'.



## Certificates

20. **CO<sub>2</sub>-certificate** | An issued CO<sub>2</sub>-certificate is either a *validated CO<sub>2</sub>-certificate*, or it is a *verified CO<sub>2</sub>-certificate*.

A *validated CO<sub>2</sub>-certificate* represents the expected sequestration of 1 metric ton CO<sub>2</sub>-equivalent by a Gold Standard A/R project activity. To issue *validated CO<sub>2</sub>-certificate* the 'A/R Guidelines - Validated CO<sub>2</sub>-certificates' shall be followed. A *validated CO<sub>2</sub>-certificate* represents an intervention in land-use change that is expected to lead to the sequestration of 1 metric ton of CO<sub>2</sub>-equivalent. A *validated CO<sub>2</sub>-certificate* does not represent the actual sequestration of 1 metric ton of CO<sub>2</sub>-equivalent and cannot be retired. Instead, *validated CO<sub>2</sub>-certificates* can be *assigned*<sup>1</sup> in the Gold Standard Registry. *Validated CO<sub>2</sub>-certificates* that are assigned will be retired once they are *verified*.

A *verified CO<sub>2</sub>-certificate* represents actual sequestration of 1 metric ton CO<sub>2</sub>-equivalent by a Gold Standard A/R project activity and is stored by the different carbon pools of a forest (see chapter '5.2 Calculation of CO<sub>2</sub>-certificates'). When a *verified CO<sub>2</sub>-certificate* is issued, it replaces the corresponding *validated CO<sub>2</sub>-certificate*. A *verified CO<sub>2</sub>-certificate* can be retired.

The number of CO<sub>2</sub>-certificates is determined based on the methodology outlined in chapter '5. Methodology'.

The vintage of a CO<sub>2</sub>-certificate represents the expected (*validated CO<sub>2</sub>-certificates*) or actual (*verified CO<sub>2</sub>-certificates*) timing for the corresponding sequestration.

21. **Crediting period** | The crediting period is the time span in which the fixation of CO<sub>2</sub> can be accounted for and is subject to monitoring.

The crediting period shall be minimum 30 years and maximum 50 years. The project owner selects the crediting period based on the characteristics of the project.

The crediting period starts with the planting start and may be up to 2 years prior to the date the project reaches the 'registration' status (see chapter '7.1 Certification Process').

22. **Baseline, Leakage and CO<sub>2</sub>-Fixation** | These terms are defined in the respective chapters '5.5 Baseline', '5.6 Leakage' and '5.7 CO<sub>2</sub>-Fixation'.

23. **Gold Standard Registry** | The Gold Standard Registry is the operating system to administer project information and issue CO<sub>2</sub>-certificates. It is operated by the company *Markit* under the guidance of The Gold Standard Secretariat: [www.CDMGoldStandard.org/our-projects/project-registry](http://www.CDMGoldStandard.org/our-projects/project-registry)

<sup>1</sup> Assign Assigning is the activity with which an account holder of The Gold Standard Registry can mark a *validated CO<sub>2</sub>-certificate* with a message. Such message should include the name of the receiving organization.

## Certification

24. The following terms are defined in the chapter '7.1 Certification Process':

- Pre-Feasibility Assessment
- Initial Certification
- Performance Certification
- Audit
- Review

25. **Corrective Action Request (CAR)** | With a CAR, the auditor or The Gold Standard Secretariat requests appropriate action be taken to show compliance with a requirement.

In order to achieve a successful *certification*, all CARs shall be formally closed.

CARs can be converted to FARs.

26. **Forward Action Request (FAR)** | With a FAR, the auditor or The Gold Standard Secretariat requests appropriate action be taken to become fully compliant with a requirement.

A FAR will be issued where the impact of the infraction is:

- (a) not material within the current certification, **AND**
- (b) unusual or non-systematic, **AND**
- (c) correctable in a specific timeframe less than 5 years.

FARs can be closed by The Gold Standard Secretariat or an auditor.

27. **Observation (OBS)** | With an OBS, the auditor or The Gold Standard Secretariat provides an observation on possible *future* non-compliance with a requirement.

Unlike CARs and FARs, observations are warnings and do not need to be formally corrected. They are given special attention during the next certification.

28. **Non-Compliance (NC)** | The term is defined in the chapter '8. Non-Compliance'.

CARs and FARs are converted to NCs when they are not corrected or inadequately addressed by the project owner.

## 2. Key Project Information

### Requirements

#### 2.1 Key Project Information

The information in this chapter should be used to provide a general overview of the project. The project overview should use the template 'Key Project Information' and be no longer than 4-5 pages.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide the information in requirement 1, using the template 'Key Project Information'.

#### Process for Performance Certification

For the Performance Certification the project owner shall provide any updates to the existing filled-in template 'Key Project Information'. The most recent version of the template shall be used.

#### Process for New Area Certification

See Performance Certification. The *existing* version of the template shall be used.

1. A general description shall be provided which includes all of the following items:
  - (a) Project activities
  - (b) Organisations that are involved in the project (project participants)
  - (c) Communities involved in the project
  - (d) Location of the project area and the planting area
  - (e) Size of the project area and the planting area
  - (f) Risk of the project area to change (during the crediting period)
  - (g) Risk of the project activities to change (during the crediting period)
  - (h) Timeframe for the project activities
  - (i) Number of predicted CO<sub>2</sub>-certificates
  - (j) Land-use history and current situation of the project area
  - (k) Socio-economic history and current situation
  - (l) Forest management applied (past and future)
  - (m) Forest characteristics (including main tree species planted)
  - (n) Main social impacts (risks and benefits)
  - (o) Main environmental impacts (risks and benefits)
  - (p) Financial structure

## 2. Key Project Information

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

### Process for Initial Certification

For the Initial Certification the project owner shall provide the information in requirement 2 by uploading the *shapefiles*<sup>1</sup> in its Gold Standard Registry account.

### Process for Performance Certification

For the Performance Certification the project owner shall provide the information in requirement 2 by updating its existing *shapefiles* in its Gold Standard Registry account.

### Process for New Area Certification

See Performance Certification.

2. The following information shall be clearly defined by the use of *shapefiles*:

- (a) Project area
- (b) Planting areas
- (c) Eligible planting area
- (d) Modelling Units
- (e) Infrastructure (roads, houses, etc.)
- (f) Water bodies
- (g) Sites with special significance for *indigenous people and local communities* - resulting from the Local Stakeholder Consultation (LSC)
- (h) Where *indigenous people and local communities* are situated
- (i) Where *indigenous people and local communities* have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance.

3. Boundaries of the project area and the planting area shall be clearly distinguishable in the field.

<sup>1</sup> Shapefile

A shapefile is a digital vector (non-topological) storage format for storing geometric location and associated attribute information.

### 3. Sustainability Requirements

This section '3. Sustainability' ensures that projects are designed and implemented in a sustainable and participatory way.

In its first chapter '3.1 Do-No-Harm Assessment' the minimum social and ecological safeguards are set. In the following two chapters '3.2 Local Stakeholder Consultation' and '3.3 Input & Grievance Mechanism' requirements are set on how to build a continuous dialogue with stakeholders to ensure participatory implementation.

In chapter '3.4 Sustainable Development (SD) Matrix' the project owner examines the co-benefits and impacts of the project compared to the business-as-usual scenario. Relevant sustainability indicators and safeguards that show risk of non-compliance are subject to continuous monitoring through the '3.5 Sustainability Monitoring Plan'. Lastly, chapter '3.6 Legal Rights' and '3.7 Risk Register' provide requirements that safeguard other risks which may impact a project and its long-term viability.

#### 3.1 Do-No-Harm Assessment

The 'Do-No-Harm Assessment' provides minimum requirements for the social and ecological integrity based on The Gold Standard safeguarding principles.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

##### Process for Initial Certification

- For the Initial Certification each of the 'Do-No-Harm' requirements shall be assessed on their relevance to the project.
- If not relevant; the project owner shall provide a description to the non-relevance.
- If relevant; the project owner shall provide evidence of how the project is in compliance with the requirement **AND** provide a rating of the future risk of non-compliance (*low, medium, or high*).
- If the rating is *medium* or *high*; mitigation measures shall be put in place and subject to monitoring under the '3.5 Sustainability Monitoring Plan'.

For documentation of meeting these requirements, the project owner shall use the template 'Do-No-Harm Assessment'.

##### Process for Performance Certification

For the Performance Certification, the project owner shall update the existing filled-in template 'Do-No-Harm Assessment'. The most recent version of the template shall be used.

##### Process for New Area Certification

For the New Area Certification, the project owner shall update the existing filled-in template 'Do-No-Harm Assessment' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

#### Social

##### Indigenous Peoples and Local Communities

1. Sites with legal rights and customary rights of *indigenous people and local communities* shall be identified, known and respected by the workers.
2. Sites for special cultural, ecological, economic, religious or spiritual significance to the *indigenous people and local communities* shall be identified, known and respected by the workers.
3. The transfer of control of any activities from *indigenous people and local communities* to the project owner shall be documented.
4. The project shall not involve and shall not be complicit in the involuntary relocation of people.
5. On sites with significant disputes, all operations should be stopped until the disputes are resolved.

##### Working Conditions

6. Workers shall be able to establish and join labour organizations.
7. Workers and labour organizations shall be generally satisfied with their working agreements.
8. Working agreements with all individual workers shall be documented and implemented.
9. There shall not be forced labour, as defined by the *ILO Forced Labour Convention*<sup>1</sup>.
10. There shall not be child labour, as defined by the *ILO Minimum Age Convention*<sup>2</sup>.
11. If the host country did not ratify one or more of the 8 *ILO Fundamental Conventions*<sup>3</sup>, the project owner shall provide a written affirmation to uphold them.
12. Copies of the 8 *ILO Fundamental Conventions* shall be available for workers.

##### No Discrimination

13. The project owner shall not be involved, and shall not be complicit, in any form of:
  - (a) sexual harassment, **AND**
  - (b) discrimination based on gender, race, religion, sexual orientation or any other basis.

##### Anti-Corruption

14. The project owner shall not be involved and shall not be complicit in corruption. The project owner shall publicize a commitment not to offer or receive bribes in money or any other form of corruption. The project owner shall comply with anti-corruption legislation where this exists.

##### Occupational Health & Safety

15. There shall be a 'Health & Safety Policy' that is documented, implemented and regularly updated. This policy shall include at a minimum:
  - (a) provisions for first aid, **AND**
  - (b) provisions for the safe transport of workers, **AND**
  - (c) provisions for timely evacuation of workers to an adequately equipped medical facility in case of serious accident, **AND**
  - (d) a health insurance scheme for workers who are impacted by workplace accidents **AND**
  - (e) if workers stay in camps for a longer period of time, measures shall be provided to ensure that conditions for accommodation and nutrition comply at least with those specified in the *ILO Code of Practice on Safety & Health in Forestry*<sup>4</sup>.
16. An individual shall be appointed to have overall responsibility for 'Health & Safety' at the worksite.
17. Workers shall have job-specific training and supervision to safely implement the project.
18. Workers shall have safe protective equipment, tools and machinery appropriate for their work.

<sup>1</sup> ILO Forced Labour Convention [www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/forced-labour/lang--en/index.htm](http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/forced-labour/lang--en/index.htm)

<sup>2</sup> ILO Minimum Age Convention [www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/child-labour/lang--en/index.htm](http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/child-labour/lang--en/index.htm)

<sup>3</sup> ILO Fundamental Conventions [www.ilo.org/dyn/normlex/en/f?p=1000:12000:0::NO](http://www.ilo.org/dyn/normlex/en/f?p=1000:12000:0::NO)

<sup>4</sup> ILO Safety & Health in Forestry [www.ilo.org/safework/info/standards-and-instruments/codes/WCMS\\_107793/lang--en/index.htm](http://www.ilo.org/safework/info/standards-and-instruments/codes/WCMS_107793/lang--en/index.htm) - criteria 226 to 229

### Environmental

#### Tree species

19. The genotypes of the tree species planted shall be well-adapted to the site.
20. *Exotic tree species*<sup>1</sup> shall not be used, unless direct experience, or scientific research, demonstrate that there is, or can be, no invasiveness and no adverse impacts.

#### Habitat connectivity

21. Through a smart mosaic of the planting areas, buffer zones and infrastructure habitat connectivity for flora and fauna should be enhanced.

#### GMOs

22. *Genetically Modified Organisms (GMOs)*<sup>2</sup> as defined by FSC shall not be used.

#### Biodiversity

23. Minimum 10% of the project area shall be *identified* and *managed* to protect or enhance the *biological diversity*<sup>3</sup> of *native ecosystems*<sup>4</sup>. For this, the *HCV*<sup>5</sup> approach should be followed.
24. (a) Existing patches of trees or single solitary stems of *native tree species*<sup>6</sup>, AND  
(b) habitats of *endangered species*<sup>7</sup>  
shall always be *identified* and *managed* to protect or enhance the *biological diversity*<sup>3</sup>.

#### Erosion

25. To ensure healthy soils the following aspects shall be identified and appropriate measures shall be put in place to protect them:
  - (a) soil types, AND
  - (b) biota, AND
  - (c) erosion, AND
  - (d) compaction.
26. Ploughing on slopes with a gradient greater than 10% (5°) shall follow the land contour.

<sup>1</sup> Exotic tree species (Source: FSC where the term is 'Alien tree species') A species, subspecies or lower taxon, introduced outside its natural past or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce.

<sup>2</sup> GMO (Source: FSC) An organism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. See 'FSC Interpretation on GMO - FSC-POL-30-602': <https://ic.fsc.org/policies.338.htm>

<sup>3</sup> Biological diversity (Source: FSC) The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.

<sup>4</sup> Native ecosystem (Adapted from FSC) Sites to favour or restore native species and associations of native species that are typical of the locality, and for managing these associations and other environmental values so that they form ecosystems typical of the locality.

<sup>5</sup> HCV High Conservation Value - [www.HCVnetwork.org](http://www.HCVnetwork.org)

<sup>6</sup> Native tree species (Source: FSC) Species, subspecies, or lower taxon, occurring within its natural range (past or present) and dispersal potential (that is, within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).

<sup>7</sup> Endangered species All *endangered* and *critically endangered* species as defined by the IUCN Red List - [www.IUCNredlist.org](http://www.IUCNredlist.org)



#### Fertilizers

27. Fertilizers shall be avoided, or their use shall be minimised and justified.
28. If the aerial application of fertilizer is used, then measures shall be put in place to prevent drift.

#### Chemical pesticides

29. Chemical pesticides shall be avoided, or their use shall be minimised and justified.
30. Chemical pesticides shall be used in accordance with the *FSC Pesticides Policy*<sup>1</sup>.
31. There shall be a 'Chemical Pesticides Policy' that is documented, implemented and regularly updated. This policy shall include at a minimum:
  - (a) provisions for safe transport, storage, handling and application, AND
  - (b) provisions for emergency situations.
32. In the case that chemical pesticides are used and two or more different chemical pesticides are equally effective, the least hazardous chemical pesticide shall be used.

#### Biological control agents

33. *Biological control agents*<sup>2</sup> shall be avoided, or their use shall be minimised and justified.

#### Water resources

34. On both sides of permanent or temporary *water bodies* (lakes, streams, rivers, wetlands, etc.) riparian buffer zones of 15 meters shall be implemented on each site. In these riparian buffer zones:
  - (a) only *native tree species*<sup>3</sup> may be planted, AND
  - (b) *invasive species*<sup>4</sup> shall be removed, AND
  - (c) all existing vegetation shall be kept, AND
  - (d) no timber harvesting activities shall take place, AND
  - (e) no use of fertilizer or chemical pesticides.
35. The flows of *water bodies* shall not be blocked.
36. The groundwater in and around the planting area shall not be negatively affected by the project.

#### Waste

37. All sources of waste and *waste products* shall be identified and classified. *Waste products* include amongst others:
  - (a) chemical wastes, AND
  - (b) containers, AND
  - (c) fuels and oils, AND
  - (d) human waste, AND
  - (e) rubbish (including metals, plastics, organic and paper products), AND
  - (f) abandoned buildings, machinery or equipment.
38. Measures for waste products and their spillage shall be in place for safe and environmentally appropriate:
  - (a) collection, AND
  - (b) transport, AND
  - (c) storage, AND
  - (d) handling, AND
  - (e) disposal.

<sup>1</sup> FSC Pesticides Policy See guideline FSC-GUI-30-001 on [www.pesticides.fsc.org](http://www.pesticides.fsc.org)

<sup>2</sup> Biological control agents (Source: FSC) Organisms used to eliminate or regulate the population of other organisms.

<sup>3</sup> Native tree species (Source: FSC) Species, subspecies, or lower taxon, occurring within its natural range (past or present) and dispersal potential (that is, within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).

<sup>4</sup> Invasive species (Source: FSC) Species that are rapidly expanding outside of their native range. Invasive species can alter ecological relationships among native species and can affect ecosystem function and human health.

### 3.2 Local Stakeholder Consultation (LSC)

The requirements for the 'Local Stakeholder Consultation' ensure that stakeholders are actively involved in the project from the beginning, thus enabling them to influence the project design and implementation. It shall be finalized before the Pre-Feasibility Assessment of a project has been completed.

This participatory process empowers stakeholders to define the *mitigation measures* that safeguard the social, economic and environmental success of the project.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the templates 'Local Stakeholder Consultation' and following the 'A/R Guidelines - LSC'.

#### Process for Performance Certification

For the Performance Certification chapter '3.2 Local Stakeholder Consultation' does not apply. The continuous dialogue is ensured through the requirements of chapter '3.3 Input & Grievance Mechanism' and the yearly reporting and regular certifications that include feedback from The *Gold Standard NGO Supporters*.

#### Process for New Area Certification

For the New Area Certification the project owner shall identify the stakeholders that are *new* to the projects due to its expansion. With these *new stakeholders* a LSC shall be conducted.

For the documentation, the project owner shall use an empty template 'Local Stakeholder Consultation'.

1. The Local Stakeholder Consultation (LSC) shall be conducted in accordance with 'A/R Guidelines - LSC'.

#### Invitation of Stakeholders

2. The project owner shall proactively invite The Gold Standard Secretariat and the stakeholders, including all *Gold Standard NGO Supporters*<sup>1</sup> active in the host country of the project, to provide comments on the proposed project in accordance with the guidelines provided in 'A/R Guidelines - LSC'.

#### Notice to Designated National Authority and National Focal Point

3. The *Designated National Authority (DNA)*<sup>2</sup> or *National Focal Point*<sup>3</sup> shall be notified about the existence of the project.

#### Timeline

4. The LSC should be conducted prior to the planting start date. If the LSC is conducted after the planting start date, the project owner shall provide further explanation of how comments received during the LSC are taken into account in the project.

#### Public consultation meeting

5. The LSC shall include at least one public in-person meeting, which shall be open to anyone willing to attend and which shall be conducted in accordance with the guidelines provided in this document.

#### Input & Grievance Mechanism

6. Projects applying The Gold Standard 'A/R Requirements' shall have a formal input and grievance mechanism in place in accordance with the chapter 'Input & Grievance Mechanism'. This mechanism shall be described during the LSC.

<sup>1</sup> Gold Standard NGO Supporters

<sup>2</sup> Designated National Authority (DNA)

<sup>3</sup> National Focal Point

<http://www.cdmgoldstandard.org/our-supporters/ngos>

<https://cdm.unfccc.int/DNA/index.html>

<http://maindb.unfccc.int/public/nfp.pl>

#### Documentation

7. The LSC documentation shall be prepared using the 'LSC' template and in accordance with the guidelines provided in this document. The documentation shall include the outcome from the physical meeting(s) and feedback received via other means, and it shall be submitted for the Pre-Feasibility Assessment.

#### Confidentiality

8. The LSC documentation shall be made publicly available on The Gold Standard Registry once the project is 'listed'. Prior to being 'listed', only The Gold Standard Secretariat and Technical Advisory Committee shall be able to access the documentation.

#### Sustainable Development Assessment

9. Part of the LSC is the *Sustainable Development Assessment*, which makes use of the table below. This table, also called the 'SD Matrix', provides a general overview and a rating of the sustainability impacts of a project, together with a list of *mitigation measures* that relate to these impacts.

The *Sustainable Development Assessment* shall show that the project, at a minimum, contributes positively to two of the three indicator categories (Environmental, Social Development, Economic & Technical Development) and is neutral in the third category. All individual indicators are given the same weight.

10. For each indicator describe briefly what the without project scenario (baseline scenario) would be and what the situation you aim for in the project is. Based on this description of the baseline and targeted values of your parameters, score each indicator 'negative (-1)', 'positive (+1)' or 'neutral (0)' in comparison with the baseline situation.

11. Negative (-1) indicators can potentially be 'neutralised' with *mitigation measures*. These *mitigation measures* shall then be monitored under the chapter '3.5 Sustainability Monitoring Plan'. All indicators that score positive (+1) or negative (-1) shall also be monitored.

Indicator	Description and Score	Mitigation measure
	<ul style="list-style-type: none"> <li>• Negative impact:               <ul style="list-style-type: none"> <li>○ score negative (-1) if the negative impact on the indicator is not fully mitigated</li> <li>○ score neutral (0) if the impact on the indicator is or is planned to be fully mitigated</li> </ul> </li> <li>• No change in impact: score neutral (0)</li> <li>• Positive impact: score positive (+1)</li> </ul>	Where relevant, describe <i>mitigation measures</i> used to neutralise a negative (-1) score
<b>Environment</b>		
1. Air quality		
2. Water quality and quantity		
3. Soil condition		
4. Other pollutants		
5. Biodiversity		
<b>Social Development</b>		
6. Quality of employment		
7. Livelihood of the poor		
8. Access to affordable and clean energy services		
9. Human and institutional capacity		
<b>Economic &amp; Technical Development</b>		
10. Quantitative employment and income generation		
11. Access to investment		
12. Technology transfer and technological self-reliance		

### 3.3 Input & Grievance Mechanism

The 'Input & Grievance Mechanism' provides a transparent and continuous communication channel with stakeholders and is used in addition to the LSC. It ensures that issues that arise during the lifetime of a project are properly addressed.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

**Process for Initial Certification**

Not applicable, as the project is only starting.

**Process for Performance Certification**

The 'List of Inputs & Grievances' is part of the annual reporting process (see chapter '7.2 Reporting'), thus for the Performance Certification all of the annually prepared lists of inputs and grievances since the last certification shall be provided.

**Process for New Area Certification**

See Initial Certification.

1. The project owner shall establish an 'Input & Grievance Mechanism' in accordance with the 'A/R Guidelines - Input & Grievance Mechanism'.

### 3.4 Sustainability Monitoring Plan

This chapter provides the requirements for developing the 'Sustainability Monitoring Plan' for monitoring the *mitigation measures* identified in the chapters '3.1 Do-No-Harm Assessment' and '3.2 Local Stakeholder Consultation'.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the templates 'Sustainability Monitoring Plan' which contains the table below.

#### Process for Performance Certification

For the Performance Certification the project owner shall use an empty template 'Sustainability Monitoring Plan'. To complete the template, copy *remaining* parameters that have not yet reached their target and add *new* parameters from the update of the chapter '3.1 Do-No-Harm Assessment' or '3.3 Input & Grievance Mechanism'.

#### Process for New Area Certification

For the New Area Certification the project owner shall update the existing filled-in template 'Sustainability Monitoring Plan' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

1. The project owner shall use the table below to define the monitoring for the *mitigation measures* identified in the chapters '3.1 Do-No-Harm Assessment' and '3.2 Local Stakeholder Consultation'.

2. The selected parameters shall be practical to measure and be relevant to the *mitigation measure*.

The table format for the 'Sustainability Monitoring Plan' is provided below. A separate table should be prepared for each of the parameters to be monitored.

Sustainability Monitoring ID		
Indicator for		
Mitigation measure		
Chosen parameter		
Current situation of parameter		
Estimation of baseline situation of parameter		
Target for parameter		
Monitoring	How will it be monitored and documented?	
	Who is responsible for monitoring and documentation?	
	When will it be monitored (duration and frequency)?	

### 3.5 Legal Rights

This chapter outlines the requirements to ensure that ownership and title for the CO<sub>2</sub>-certificates and the projects implementation are transparent and enforceable.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the template 'Project Participants & Secured Titles' and submit with the signed 'Gold Standard Terms & Conditions' and 'Cover Letter'.

#### Process for Performance Certification

For the Performance Certification the project owner shall update the existing filled-in template 'Project Participants & Secured Titles'. The most recent version of the template shall be used.

#### Process for New Area Certification

For the New Area Certification the project owner shall update the existing filled-in template 'Project Participants & Secured Titles' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

#### Secured Titles

1. For all project participants, the following information shall be provided:
  - (a) Name and contact details
  - (b) Each entity's legal registration number and documentation by the governing jurisdiction that proves that the entity is in good standing.
2. For the duration of the crediting period the project owner shall:
  - (a) own the CO<sub>2</sub> user rights or carbon sequestration rights for the project area, AND
  - (b) hold an uncontested legal land title for the project area, AND
  - (c) own the rights for timber and non-timber forest products for the project area, AND
  - (d) hold all necessary permits to implement the project (planting permits, infrastructure permits, harvesting permits, etc.), AND
  - (e) participate in the financing of the project.

If the project owner does not meet all of the above requirements, the persons or legal entities that do meet those respective requirements shall endorse the expected project being undertaken by the project owner through an agreement that aligns with the duration of the crediting period.

#### Project Representatives

3. The project owner shall define the authorities of all project participants with respect of:
  - (a) instructing The Gold Standard secretariat, AND
  - (b) requesting or communicating the addition or edits of project participants, AND
  - (c) receiving all information from The Gold Standard Secretariat on matters related to the project.

#### Terms & Conditions and Cover Letter

4. The project owner shall sign The 'Gold Standard Terms & Conditions' and the declarations of the 'Cover Letter'.

### 3.6 Risk Register

This section provides requirements to ensure that sufficient human, technical and financial capacities are available to the project in the long-term, and that material risks to the project are mitigated.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

- For the Initial Certification each of the following risks shall be assessed on their relevance to the project.
- If not relevant; the project owner shall provide a description of the non-relevance.
- If relevant; the project owner shall score the risk with regard to the viability of the project during the crediting period into the category *low*, *medium*, or *high*. The scoring shall be based on the likelihood of the risk occurring and the impact of that occurrence on the project during the crediting period.
- If the rating is *medium* or *high* the mitigation measure shall be described and implemented.

For the documentation, the project owner shall use the template 'Risk Register'.

#### Process for Performance Certification

For the Performance Certification the project owner shall update the existing filled-in template 'Risk Register'. The most recent version of the template shall be used.

#### Process for New Area Certification

For the New Area Certification the project owner shall update the existing filled-in template 'Risk Register' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

The table format for the 'Risk Register' is provided below with risk topics.

Risk Topics	Risk score, based on likelihood and impact on the project	Mitigation measure
	high (+) medium (0) low (-) not relevant (/)	
<b>Management qualifications</b> in forestry, operations, finance, legal		
<b>Workers qualifications</b> in the technical implementation		
<b>Technical equipment</b>		
<b>Financial means:</b> complete and realistic income streams (investment, funding, co-funding, sales, etc.) and expenditure (administration, infrastructure, machines, labour, audits, unexpected expenditures, etc.)		
<b>Water:</b> drought, flood, hail, snow, heavy rains		
<b>Wind:</b> heavy wind, storms		
<b>Animals:</b> domestic, wild		
<b>Fire:</b> natural fires, fire management		
<b>Diseases:</b> insects, bacteria, viruses		
<b>Temperatures:</b> frost, heat		
<b>Irregular resettlement or illicit crop production</b>		
<b>Exploitation of underground resources:</b> mining, water, etc.		

# 4. Additionality

## Requirements

### 4.1 Additionality

The requirements in the section *Additionality* ensure that projects can demonstrate that they would not have been implemented without the benefits of carbon certification.

The project owner shall select **between option 1 OR 2** to demonstrate that the project is additional.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the template 'Additionality'.

#### Process for Performance Certification

For the Performance Certification the project owner is not required to update the template 'Additionality'.

#### Process for New Area Certification

For the New Area Certification the project owner can select between the following 3 options:

- a) Identify *key elements* of the project's existing *additionally test* and provide evidence that these *key elements* are not changed due to the *new areas*. *Key elements* shall include barriers (in case of the barrier analysis), the economic assumptions (in case of the investment analysis), or elements of 'Option 2 - Positive List' (in case this was selected). The most recent version of the 'Additionality - New areas' template shall be used.
- b) Repeat the process for the Initial Certification, but only with regard to the *new areas*, not the entire project. The most recent version of the 'Additionality' template shall be used.

#### Option 1 - A/R CDM Tools

1. The project shall meet the additionality requirements of the latest version of the A/R CDM '*Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities*'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

The CDM specific terms of the A/R CDM additionality tool (tCERs, A/R CDM project, etc.) shall be interpreted within The Gold Standard context.

The '*Guideline on the assessment of investment analysis*' and the '*Guidelines for objective demonstration and assessment of barriers*' can be used.

Link: <http://cdm.unfccc.int/Reference/Guidclarif/index.html>



### Option 2 - Positive List

2. The project shall meet **all** of the requirements (a), (b) and (c) in the list below and at least **one** of the requirements from (d) to (g) in order to be considered as additional under Option 2.
  - (a) The project is located in a Less Developed Country (LDCs) or in a region with a recent *UNDP Human Development Indicator*<sup>1</sup> below 0.8.
  - (b) The project shall have no intention of creating a forest for the commercial use of the timber or non-timber forest products.
  - (c) The project activities shall not be mandatory by any law or regulation, **OR** if it is mandatory, it shall demonstrate that these laws or regulations are systematically not enforced.
  - (d) The project area is located in a region with a mean annual precipitation of less than 600 mm.
  - (e) The soil pH of the planting area is less than 4.0.
  - (f) The planting area is planted with minimum 5 different native tree species in mixed stands, covering at minimum 50% of the planting area.
  - (g) The project area is located:
    - In a country or region with a recent *UNDP Human Development Indicator*<sup>1</sup> below 0.5, **OR**
    - In a *Small Island Developing State (SIDS)*<sup>2</sup>

The different choices under Option 2 are an extraction of choices from the CDM guideline '*Land type and/or land uses and socio-economic conditions in which afforestation/reforestation project activities are not likely to be implemented without the financial incentives of the CDM*'.

Other options not included in this list can be submitted to The Gold Standard Secretariat for approval.

### Retroactive submission

3. If the submission to the Pre-Feasibility Assessment was after the planting start, the project owner shall demonstrate that
  - (a) the revenues from CO<sub>2</sub>-certificates were seriously considered in the decision to implement the project, **AND**
  - (b) there was continuous interest in CO<sub>2</sub>-certificates for the project in parallel with its implementation.

Evidence to support this can include: contracts, draft versions of project information, correspondence with financial institutions or other stakeholders, minutes and notes of meetings, agreements or negotiations with auditors, publications in newspapers.

For Option 1, this replaces requirement 7 of the '*Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities*'.

### No Deforestation

4. The planting area shall not have been forest<sup>3</sup> for at least 10 years prior to the planting start, **OR**  
 If the planting area was deforested during the 10 years prior to the planting start, the eligibility of the project shall be determined by The Gold Standard Secretariat. This will be done as part of the Pre-Feasibility Assessment.

<sup>1</sup> UNDP Human Development Indicator

<sup>2</sup> Small Island Developing States (SIDS)

<sup>3</sup> Forest

<http://hdr.undp.org/en/data/profiles/www.un.org/special-rep/ohrrls/sid/list.htm>

A forest is defined by the Designated National Authority (DNA) of the project's host-country: <http://cdm.unfccc.int/DNA/index.html>

# 5. Methodology

## Requirements

The section *Methodology* describes how a project determines its number of CO<sub>2</sub>-certificates.

In its first chapter '5.1 Applicability', the planting area is assessed on its *eligibility* to apply this methodology. The following chapter '5.2 Conversion Procedure' describes the conversion process from cubic meters [m<sup>3</sup>] of timber to tonnes of carbon dioxide equivalent [tCO<sub>2</sub>]. In the subsequent chapters the '5.3 Calculation of CO<sub>2</sub>-certificates' is described, based on the parameters '5.4 Project Emissions', '5.5 Baseline', and '5.6 Leakage' which are deducted from the actual '5.7 CO<sub>2</sub>-Fixation' by the trees.

### 5.1 Applicability

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the *Initial Certification* the project owner shall provide documentation using the template 'Applicability'.

#### Process - Performance Certification

For the *Performance Certification* the project owner is not required to update the template 'Applicability'.

#### Process for New Area Certification

For the *New Area Certification* the project owner shall update the existing filled-in template 'Applicability' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

The project area shall meet all of the requirements below for this methodology to be applicable for the calculation of CO<sub>2</sub>-certificates from the project.

1. Areas shall not be on *wetlands*<sup>1</sup>.
2. Areas with *organic soils* shall not be drained or irrigated (except for irrigation for planting).
3. Soil disturbance (through ploughing, digging of pits, stump removals, infrastructure, etc.) on *organic soils*<sup>2</sup> shall be in less than 10% of the area that is submitted to certification (not 10% of the entire project area).
4. The most likely scenario without the project (baseline scenario) shall be defined for the project area. This scenario shall not show any *significant*<sup>3</sup> increase of the Baseline biomass ('tree' and 'non-tree').

<sup>1</sup> Wetland Definition of wetland according to the IPCC: 'This category includes land that is covered or saturated by water for all or part of the year (e.g. peatland) and that does not fall into the forest land, cropland, grassland or settlements categories.' Source: IPCC - Good Practice Guidance - Wetlands.

<sup>2</sup> Organic soils Organic soils fulfil one of the following requirements:

1. If the soil is never saturated with water for more than a few days, and contains >20% (by weight) of organic carbon (35% organic matter)
2. If the soil is subject to water saturation episodes and has either:
  - >12% (by weight) organic carbon (20% organic matter) if it has no clay
  - >18% (by weight) organic carbon (30% organic matter) if it has >60% clay
  - a proportional lower limit of organic carbon content between 12 and 18% if the clay content of the mineral fraction is between 0 and 60%

<sup>3</sup> Significant Significant is defined to be more than 5% of the 'long-term CO<sub>2</sub>-Fixation' - see chapter '5.7 CO<sub>2</sub>-Fixation'.

### 5.2 Conversion Procedure

The requirements of the chapter *Conversion Procedure* prescribe how to convert from the unit of cubic meters [m<sup>3</sup>] or tonnes of dry matter [tdm] to tonnes of carbon [tC] and then to tonnes of carbon dioxide equivalent [tCO<sub>2</sub>].

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation with the templates of the chapters '5.5 CO<sub>2</sub>-Fixation', '5.6 Baseline' and '5.7 Leakage'.

#### Process - Performance Certification

For the Performance Certification the project owner is not required to update the *conversion factors*.

#### Process for New Area Certification

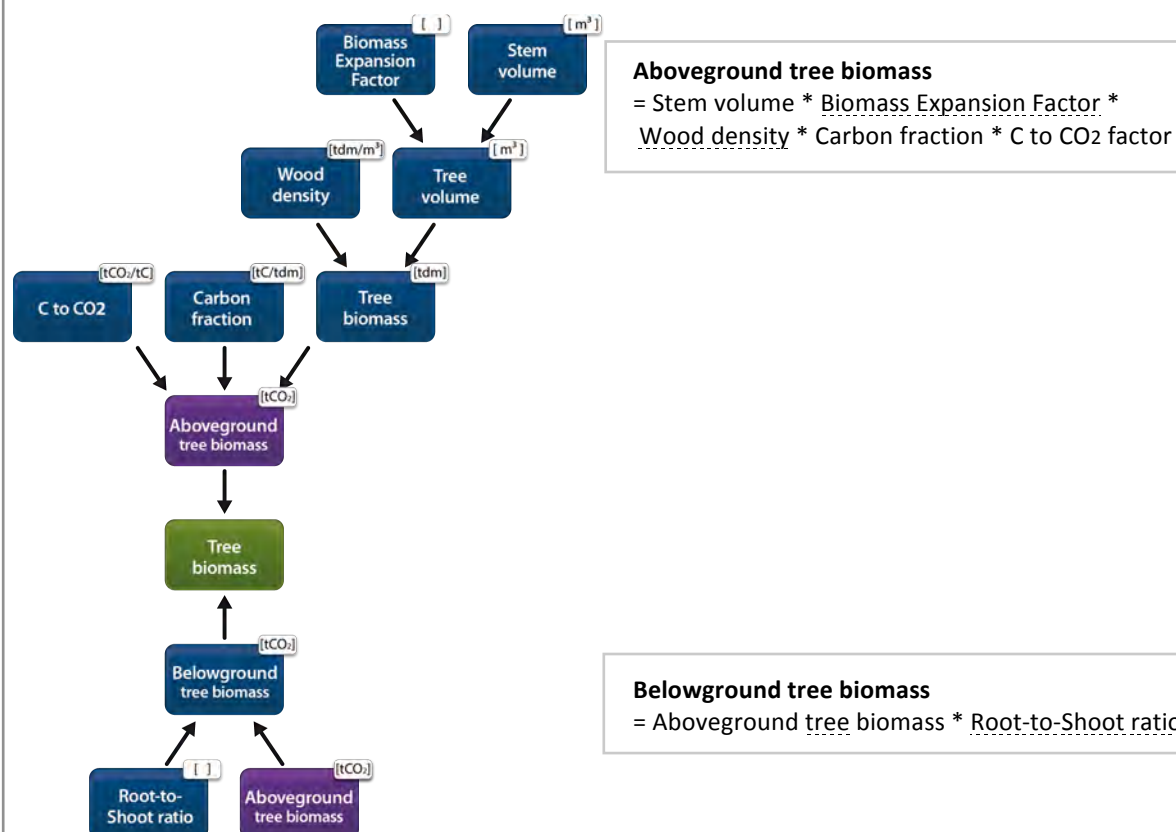
For the New Area Certification the project owner shall update the existing filled-in templates (see Initial Certification) with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used.

1. *Conversion factors* shall be determined at the level of a Modelling Unit:

- (a) Wood Density
- (b) Biomass Expansion Factor
- (c) Root-to-Shoot ratio

All factors shall be based on the best available scientific sources.

For the conversion the following factors are the influencing parameters:

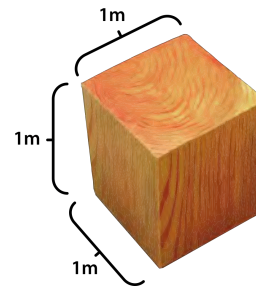


**Wood density** | The wood density is the ratio between the mass of dry wood divided by its volume.

Example:

$$\begin{aligned}\text{Wood density} &= \text{Mass} / \text{Volume} \\ &= 0.6 \text{ t} / 1 \text{ m}^3 \\ &= 0.6 \text{ t} / \text{m}^3\end{aligned}$$

Often the unit t (tonnes) is expressed as tdm (tonnes of dry matter).

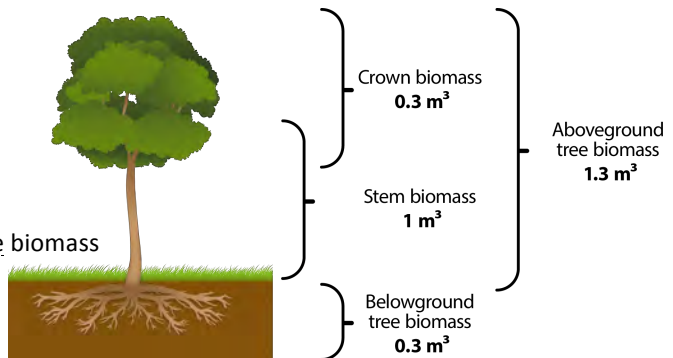


**Biomass Expansion Factor (BEF) and Root-to-Shoot ratio** | The following graph shows how the BEF and Root-to-Shoot ratio are determined based on the ratio of different parts of the tree.

Examples:

$$\begin{aligned}\text{BEF} &= \text{Aboveground tree biomass} / \text{Stem biomass} \\ &= 1.3 \text{ m}^3 / 1 \text{ m}^3 \\ &= 1.3\end{aligned}$$

$$\begin{aligned}\text{Root-to-Shoot ratio} &= \text{Belowground tree biomass} / \text{Aboveground tree biomass} \\ &= 0.3 \text{ m}^3 / 1.3 \text{ m}^3 \\ &= 0.23\end{aligned}$$



The different factors can be influenced by one or several of the following attributes. The project owner should consider these in deciding which factors are most appropriate for a particular Modelling Unit:

- Some BEFs already include the Root-to-Shoot ratio.
- The 'Stem volume' is based on a specific diameter of stump (x cm). The BEF should relate to this.
- Most Root-to-Shoot ratios are calculated from the 'Tree volume' (including branches and leaves/needles), but some are based on the 'Stem volume'.
- In cases where a *Biomass Conversion and Expansion Factor* (BCEF) is used the factors BEF and Wood density are both integrated.
- The BEF can be age-dependent and thus change over time.
- Dead-wood differs in its Wood density, BEF and Root-to-Shoot ratio from the living tree.
- Scientific sources can relate to a *relative* figure (0.4) or *calculative* figure (1.4).

### Conservative Approach

2. When aggregated together, the factors shall lead to a conservative calculation approach. This means that in the consideration and calculation of uncertainties:
  - (a) the CO<sub>2</sub>-Fixation shall not be overestimated, **AND**
  - (b) the Baseline and Leakage shall not be underestimated.

### Default Factors

3. The following *default factors* shall be used for all conversions:

- (a) 0.5 [tC/tdm] as the 'Carbon fraction' for 'tree biomass'
- (b) 0.4 [tC/tdm] as the 'Carbon fraction' for 'non-tree biomass'
- (c)  $^{44}_{12}$  [tCO<sub>2</sub>/tC] is used to convert 'C to CO<sub>2</sub>'

4. The following *default factors* shall be used when no rigorous scientific information is available:

For the parameters of CO<sub>2</sub>-Fixation:

- (a) 0.3 [tdm/m<sup>3</sup>] Wood density
- (b) 1.1 [ ] BEF
- (c) 0.2 [ ] Root-to-Shoot ratio for 'tree biomass'

For the parameters of Baseline or Leakage:

- (d) 0.7 [tdm/m<sup>3</sup>] Wood density
- (e) 3.5 [ ] BEF
- (f) 0.8 [ ] Root-to-Shoot ratio for 'tree biomass'
- (g) 4.0 [ ] Root-to-Shoot ratio for 'non-tree biomass'

More *default values* for 'tree biomass' are in the *IPCC Guidelines for National GHG Inventories*:  
[www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_04\\_Ch4\\_Forest\\_Land.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_04_Ch4_Forest_Land.pdf)

More *default values* for 'non-tree biomass' are in the *IPCC Guidelines for National GHG Inventories*:  
[www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_06\\_Ch6\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf)

### 5.3 Calculation of CO<sub>2</sub>-certificates

1. The number of CO<sub>2</sub>-certificates is determined for every year (t) of the crediting period using the following formula.

$$\begin{array}{c}
 \text{CO}_2\text{-certificates} \\
 \text{[tCO}_2\text{]}
 \end{array}
 = \left( \begin{array}{c} \text{CO}_2\text{-Fixation} \\ \text{Baseline} \\ \text{Leakage} \\ \text{Other Emissions} \end{array} \right) * \begin{array}{c} \text{Eligible} \\ \text{planting area} \\ \text{[ha]} \end{array}$$

of every MU [tCO<sub>2</sub>/ha]

#### Summary of this Methodology

- The number of CO<sub>2</sub>-certificates is determined for each Modelling Unit. Therefore, the CO<sub>2</sub>-Fixation of every MU is determined and its portion of the total Baseline and total Leakage is deducted.
- The sum of all MUs CO<sub>2</sub>-certificates make up the CO<sub>2</sub>-certificates of the entire project.
- With the applicability conditions this methodology assumes no *significant*<sup>1</sup> increase in the Baseline, so the Baseline is only deducted in year 1 (t=1).
- All Leakage is deducted in year 1 (t=1).
- Other Emissions are either linked to the Baseline and therefore deducted in year 1 (t=1) or linked to the use of fertilizer and deducted over time.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall meet the requirements by entering the numbers from chapters '5.4 Other Emissions', '5.5 Baseline', '5.6 Leakage' and '5.7 CO<sub>2</sub>-Fixation' in its *ClimateProjects*<sup>2</sup> account. The system will create a 'MU Report' that the project owner shall submit to The Gold Standard Registry.

#### Process for Performance Certification

For the Performance Certification the project owner shall meet the requirements by updating the numbers from the chapters '5.4 Other Emissions' and '5.7 CO<sub>2</sub>-Fixation' and in its *ClimateProjects* account. The system will create a 'MU Report' that the project owner shall submit to The Gold Standard Registry.

#### Process for New Area Certification

See Initial Certification. To enter the numbers of the *new areas* into the *ClimateProjects* system the project owner has to create a new 'Modelling Units Cluster'.

For all types of certification the project owner can also submit its 'MU Report' by creating a spreadsheet with the calculations instead of using the *ClimateProjects* software.

<sup>1</sup> Significant

Significant is defined to be more than 5% of the 'long-term CO<sub>2</sub>-Fixation' - see chapter '5.7 CO<sub>2</sub>-Fixation'.

<sup>2</sup> ClimateProjects

ClimateProjects is a web-based software that allows project owners to manage their carbon calculation:  
[www.ClimateProjects.info](http://www.ClimateProjects.info)

### Scientific formulas of this Methodology

#### CO<sub>2</sub>-certificates MU,t

= (CO<sub>2</sub>-Fixation MU,t - Baseline MU,t - Leakage MU,t - Other Emissions MU,t) \* Eligible planting area MU

$$\text{CO}_2\text{-certificates Project area, t} = \sum_{\text{MU}=1}^{\text{MUs}} \sum_{t=1}^{\text{CP}} \text{CO}_2\text{-certificates MU, t}$$

CO<sub>2</sub>-certificates Project area, t = [tCO<sub>2</sub>] CO<sub>2</sub>-certificates of a project area in year t

CO<sub>2</sub>-certificates MU,t = [tCO<sub>2</sub>] CO<sub>2</sub>-certificates of a MU in year t

MUs = 1, 2, 3, ... MUs of a project area

t = 1, 2, 3, ... Years of the crediting period

CP = [ ] Year the crediting period ends

The CO<sub>2</sub>-certificates are determined in a cumulative way, alongside the growth of a forest. This implies that at the beginning of a project, emissions from the parameters Other Emissions, Baseline, and Leakage can outweigh the parameter CO<sub>2</sub>-Fixation and the net amount of CO<sub>2</sub> sequestered is negative. In this case, no CO<sub>2</sub>-certificates are generated. Only when the accumulation becomes positive can CO<sub>2</sub>-certificates be issued.

The different parameters of this formula are described on the following pages.

### Carbon Pools

For the calculation of the parameters CO<sub>2</sub>-Fixation, Baseline and Leakage, the following carbon pools shall be assessed:

Carbon Pools		Includes	CO <sub>2</sub> -Fixation	Baseline	Leakage
Tree biomass	Aboveground	Stem, branches, bark	Yes	Yes	Yes
	Belowground	Tree roots	Yes	Yes	Yes
Non-tree biomass	Aboveground	Grass, herbs, etc.	No	Yes	No
	Belowground	Roots of grass, herbs, etc.	No	Yes	No
Soil		Organic material	No	No	No
Harvested wood (timber & energy wood)		Furniture, construction material, etc.	No	No	No
Litter & Lying dead-wood		Leaves, small fallen branches, lying dead wood	No	No	No

Standing dead-wood is part of the carbon pool 'tree biomass'.

Positive leakage as well as market leakage shall not be accounted for under this methodology.

### 5.4 Other Emissions

The requirements in this chapter relate to the emissions that result from certain land preparation techniques, from the use of fertilisers and energy during project activities, and from nitrogen-fixing trees.

#### Site preparation

1. Where existing 'tree' and 'non-tree' biomass of the Baseline is burned for the purpose of land preparation, an additional 10% of the Baseline shall be deducted. This is to account for the non-CO<sub>2</sub> green-house-gas emissions (N<sub>2</sub>O and CH<sub>4</sub>) that are released during the burning process.

#### Fertilizer

0.005 tCO<sub>2</sub> per kg of nitrogen (N) fertilizer shall be deducted. No differentiation is made between synthetic and organic fertilizer.

#### Combustion of fossil fuel

2. Non-CO<sub>2</sub> green-house-gas emissions caused by the use of fossil fuel from project activities (flights, management operations, etc.) are insignificant and may therefore be neglected.

#### N-fixing trees

3. Non-CO<sub>2</sub> green-house-gas emissions caused by the use of N-fixing species may be conservatively assumed to be zero.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall tick in its *ClimateProjects* account the Modelling Units (MUs) where the Baseline vegetation was burned (requirement 1). For the fertilizer (requirement 2) the project owner shall submit the amounts in the provided fields of its *ClimateProjects* account.

#### Process for Performance Certification

No monitoring for requirement 1. For requirement 2 the project owner shall update the amount of fertiliser used - in accordance with the figures submitted in its 'Annual Reports'.

#### Process for New Area Certification

See Initial Certification.

For all types of certification the project owner can also submit its 'MU Report' by creating a spread sheet with the calculations instead of using the *ClimateProjects* software.



### 5.5 Baseline

The Baseline is the estimated carbon stock that would occur in the *baseline scenario*. The *baseline scenario* describes the activities that would occur in the absence of the proposed project.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the template 'Baseline'. The resulting figures of this documentation shall be submitted to the projects ClimateProjects account.

#### Process for Performance Certification

For the Performance Certification the project owner is not required to update the template 'Baseline'.

#### Process for New Area Certification

For the New Area Certification the project owner shall update the existing filled-in template 'Baseline' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used. The resulting figures of this documentation shall be submitted to the projects ClimateProjects account.

For all types of certification the project owner can also submit its 'Modelling Units Report' by creating a spreadsheet with the calculations instead of using the *ClimateProjects* software.

1. The Baseline shall be determined by estimating the 'tree' and 'non-tree' biomass that is present in the eligible planting area just prior to the planting start.

2. To determine the Baseline of the eligible planting area the land shall be
  - (a) stratified according to its vegetation types (grassland, bushland, etc.), AND
  - (b) for each of these strata scientifically based *project-specific*<sup>1</sup>, regional or national *default values* shall be found which state 'tree' and 'non-tree' biomass of these vegetation types.

*International default values*<sup>2</sup> from the IPCC shall only be used if no other values are available.

3. The Baseline shall be determined on a Modelling Unit (MU) level using the following formula:

$$\text{Baseline MU}_t [\text{tCO}_2/\text{ha}] = \text{Baseline Eligible planting area} [\text{tCO}_2] / \text{Eligible planting area} [\text{ha}]$$

The Baseline is deducted in the first year ( $t=1$ ).

4. The Baseline is not subject to monitoring.

<sup>1</sup> Project-specific

Project-specific *default values* are generated through a 'tree' and 'non-tree' inventory on the project area.

<sup>2</sup> International default values

International *default values* are found e.g. in the *IPCC Guidelines for National GHG Inventories*: [http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_04\\_Ch4\\_Forest\\_Land.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_04_Ch4_Forest_Land.pdf)

### 5.6 Leakage

Leakage are emissions that occur due to a *shift of activities* from the inside of a project area to the outside of a project area.

These *shifts of activities* can cause four different categories of Leakage by:

- (a) collection of wood (for firewood, charcoal, etc.)
- (b) timber harvesting
- (c) agriculture (crop cultivation, shrimp cultivation, etc.)
- (d) livestock.

These four categories are used in the formulas below.

Note that only the 'tree biomass' affected by these activity shifts shall be considered.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### **Process for Initial Certification**

For the Initial Certification the project owner shall provide documentation using the template 'Leakage'. The resulting figures of this documentation shall be submitted to the projects ClimateProjects account.

#### **Process for Performance Certification**

For the Performance Certification the project owner is not required to update the template 'Leakage'.

#### **Process for New Area Certification**

For the New Area Certification the project owner shall update the existing filled-in template 'Leakage' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used. The resulting figures of this documentation shall be submitted to the projects ClimateProjects account.

For all types of certification the project owner can also submit its 'Modelling Units Report' by creating a spreadsheet with the calculations instead of using the *ClimateProjects* software.

1. To determine the Leakage of a project area the formulas below shall be applied.

2. Leakage shall be determined on a Modelling Unit (MU) level using the following formula:

$$\text{Leakage MU,t [tCO}_2\text{/ha]} \\ = \text{Leakage Project area [tCO}_2\text{]} / \text{Eligible planting area [ha]}$$

Leakage is deducted in the first year (t=1).

3. With the application of formulas below all potential Leakage caused by a project within its crediting period is accounted for in year 1. Thus the parameter is not subject to monitoring.

### Formula for category (a) (b) and (c)

**Leakage** Project area [tCO<sub>2</sub>]

= Area [ha] \* % of activity-shift [%] \* CO<sub>2</sub>-stock [tCO<sub>2</sub>/ha]

Area = Land within the project area where the activity is taking place

% of activity-shift = Percentage of the activity that

- will be displaced during the crediting period, AND
- will have impact on the 'tree biomass' outside the project area

The factor is determined by:

- credible estimations, OR
- a representative survey

CO<sub>2</sub>-stock = Average stock of 'tree biomass' on the area where the activity will be displaced to

If it is not known where the activity will be displaced to, the CO<sub>2</sub>-stock = the average stock of 'tree biomass' of a natural forest in the projects host-country

### Formula for category (d)

**Leakage** Project area [tCO<sub>2</sub>]

= Displaced heads [head] \* Grazing capacity [ha/head] \* CO<sub>2</sub>-stock [tCO<sub>2</sub>/ha]

Displaced heads = Amount of heads that

- will be displaced during the crediting period, AND
- will have impact on the 'tree biomass' outside the project area

The factor is determined by:

- credible estimations, OR
- a representative survey

Grazing capacity = Grazing capacity of the area where the livestock will be displaced to

CO<sub>2</sub>-stock = Average stock of 'tree biomass' on the area where the activity will be displaced to

If it is not known where the activity will be displaced to, the CO<sub>2</sub>-stock = the average stock of 'tree biomass' of a natural forest in the project's host-country

### 5.7 CO<sub>2</sub>-Fixation

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

For the Initial Certification the project owner shall provide documentation using the template 'CO<sub>2</sub>-Fixation'. Where useful, the *supporting documents* should contain a spreadsheet file with the growth-models of the Modelling Units. The resulting figures of this documentation shall be submitted to the projects *ClimateProjects* account.

#### Process for Performance Certification

For the Performance Certification the project owner shall update the existing filled-in template 'CO<sub>2</sub>-Fixation' based on the information of the 'Forest Inventory'. The most recent version of the template shall be used. The resulting figures of this documentation shall be used to update the projects *ClimateProjects* account.

#### Process for New Area Certification

For the New Area Certification the project owner shall update the existing filled-in template 'CO<sub>2</sub>-Fixation' with the information from the *new areas* added. The new information shall be clearly distinguishable by the use of a different colour. The existing version of the template shall be used. The resulting figures of this documentation shall be submitted to the projects *ClimateProjects* account.

For all types of certification the project owner can also submit its 'Modelling Units Report' by creating a spreadsheet with the calculations instead of using the *ClimateProjects* software.

1. The yearly (t) CO<sub>2</sub>-Fixation is determined at the level of Modelling Unit (MU) during the crediting period.
2. For every MU a growth-model and *conversion factors* (see chapter '5.2 Conversion Procedure') shall be determined.
3. The *conversion factors* allow the conversion of the 'Stem volume', which is normally measured in cubic meters [m<sup>3</sup>] during the *forest inventories*, to 'tree biomass' with the unit tCO<sub>2</sub>. For the conversion the chapter '5.2 Conversion Procedure' shall be followed.  
  
The *conversion factors* are not subject to monitoring.
4. Existing 'tree biomass' from the carbon stock of the Baseline that is not removed shall be reflected in the growth-model.
5. A realistic survival-rate shall be reflected in the growth-model.

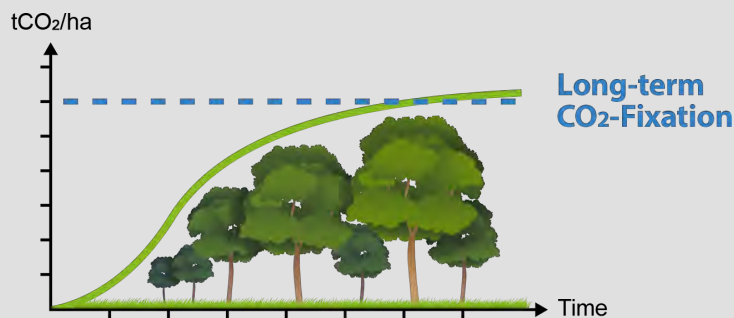
### Long-term CO<sub>2</sub>-Fixation

6. The *long-term CO<sub>2</sub>-Fixation* shall be determined depending on the *silvicultural method* applied / envisioned (see options below).

#### Option 1 - Selective harvesting or Conservation forest

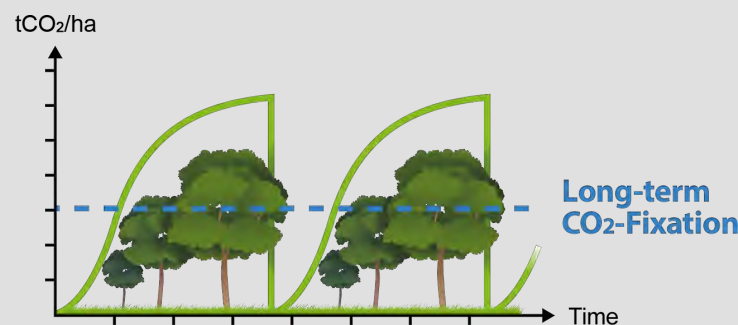
If the silvicultural method applied/envisioned is *selective harvesting*<sup>1</sup> or *conservation forest*<sup>2</sup>, the *long-term CO<sub>2</sub>-fixation* is determined by the 'tree biomass' when a MU reaches its equilibrium.

If the 'tree biomass' is still increasing at the end of the *crediting period*, the *long-term CO<sub>2</sub>-Fixation* is determined by the 'tree biomass' of a MU in the year the *crediting period* ends.



#### Option 2 - Rotation forestry

If the silvicultural method applied/envisioned is 'rotation forestry', the *long-term CO<sub>2</sub>-Fixation* is the average 'tree biomass' of a MU during the *planting start* and the end of the *crediting period*.



$$CF_{MU, long\_term} = \frac{\sum_{t=1}^T CF_{MU, t}}{T}$$

$CF_{MU, long\_term}$	= [tCO <sub>2</sub> /ha]	Long-term CO <sub>2</sub> -fixation of a MU
$CF_{MU, t}$	= [tCO <sub>2</sub> /ha]	CO <sub>2</sub> -fixation of a MU in year t
T	= [ ]	Number of years between the <i>planting start</i> and the end of the <i>crediting period</i>
t	= 1, 2, 3, ...	Years

<sup>1</sup> Selective harvesting Selective harvesting is done through the continuous harvest of single *trees* or groups of *trees* by maintaining forest on the area.

<sup>2</sup> Conservation forest Conservation forest is forest managed without any intention of *tree* cutting.

### Forest Inventory

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

Normally, there are no results of a *forest inventory* during the Initial Certification. If there are, follow the process of the Performance Certification.

#### Process - Performance Certification

For the Performance Certification the project owner shall provide documentation using the template 'Forest Inventory'. Its *supporting documents* shall contain a spreadsheet file with the calculation of the *forest inventory* for each MU. The resulting figures of this documentation shall be used to update the template 'CO<sub>2</sub>-Fixation'.

#### Process for New Area Certification

See Initial Certification.

1. The growth-models of the MUs shall be confirmed/adjusted by the results of MU specific *forest inventories*.
2. For the *forest inventories* the guidelines of the *BioCarbon Fund*<sup>1</sup> or *CarbonFix*<sup>2</sup> shall be followed.
3. The process of a *forest inventory* shall be documented clearly and easy replicated.
4. *Forest inventories* shall be repeated at minimum before every Performance Certification.
5. The number of sample plots of a *forest inventory* shall be sufficient to meet a MU precision with a maximum error of  $\pm 20\%$  at a 90% confidence interval. Where the error is above 20%, the additional difference shall be deducted (see example below).

#### Example:

A *forest inventory* determined the mean 'Stem volume' of a MU at 100 m<sup>3</sup>/ha with an error of 23%.  
The error is 3% higher than required:  $3\% \cdot 100 \text{ m}^3/\text{ha} = 3 \text{ m}^3/\text{ha}$   
The mean 'Stem volume' which can be accounted for is:  $100 - 3 = 97 \text{ m}^3/\text{ha}$

<sup>1</sup> BioCarbonFund

[www.winrock.org/ecosystems/files/winrock-biocarbon\\_fund\\_sourcebook-compressed.pdf](http://www.winrock.org/ecosystems/files/winrock-biocarbon_fund_sourcebook-compressed.pdf)

<sup>2</sup> CarbonFix

[www.carbonfix.info/chameleon/outbox/public/216/Forest-Inventory-Guideline.pdf](http://www.carbonfix.info/chameleon/outbox/public/216/Forest-Inventory-Guideline.pdf)

# 6. Carbon Performance

## Requirements

Note the requirements of this chapter are preliminary and during the road-testing period of the 'A/R Requirements' this chapter will still be subject to adaptations.

### 6.1 Carbon Performance

The section *Carbon Performance* describes how a project owner must ensure that the project carbon stocks are aligned with the number of issued CO<sub>2</sub>-certificates over time. This section also defines the activities that shall be implemented if the project carbon stocks decline below the levels of issued CO<sub>2</sub>-certificates.

The project owner shall undertake the following **process** based on the type of certification that is being pursued:

#### Process for Initial Certification

Not applicable.

#### Process for Performance Certification

For the Performance Certification the project owner shall provide documentation using the template 'Carbon Performance'. The most recent version of the template shall be used.

#### Process for New Area Certification

Not applicable.

1. At any time during a crediting period, the project owner shall ensure that the quantity of the validated and verified CO<sub>2</sub>-certificates with respect to the project is less than or equal to the project's expected carbon stocks (validated CO<sub>2</sub>-certificates) and actual carbon stocks (verified CO<sub>2</sub>-certificates).
2. Incidents, or events, that effect compliance with requirement 1 shall be reported to The Gold Standard Secretariat. If they occur outside a certification process, the incidents or events shall be reported to The Gold Standard Secretariat no more than 30 days after their discovery. The template 'Carbon Performance' shall be used for this reporting.
3. If compliance with requirement 1 is not maintained, the project owner shall demonstrate to The Gold Standard Secretariat how the project will realistically recover appropriate levels of carbon stocks to comply with requirement 1.  
The project owner shall use one or more of the following approaches:
  - (a) retiring/locking of CO<sub>2</sub>-certificates from the project which are not yet transferred or retired/locked
  - (b) purchasing of CO<sub>2</sub>-certificates from any other Gold Standard certified projects (these can also be from other project types such as renewable energy)
  - (c) replanting of an appropriate planting area and recovery of the project carbon stocks over time
  - (d) planting of new areas to generate further CO<sub>2</sub>-certificates

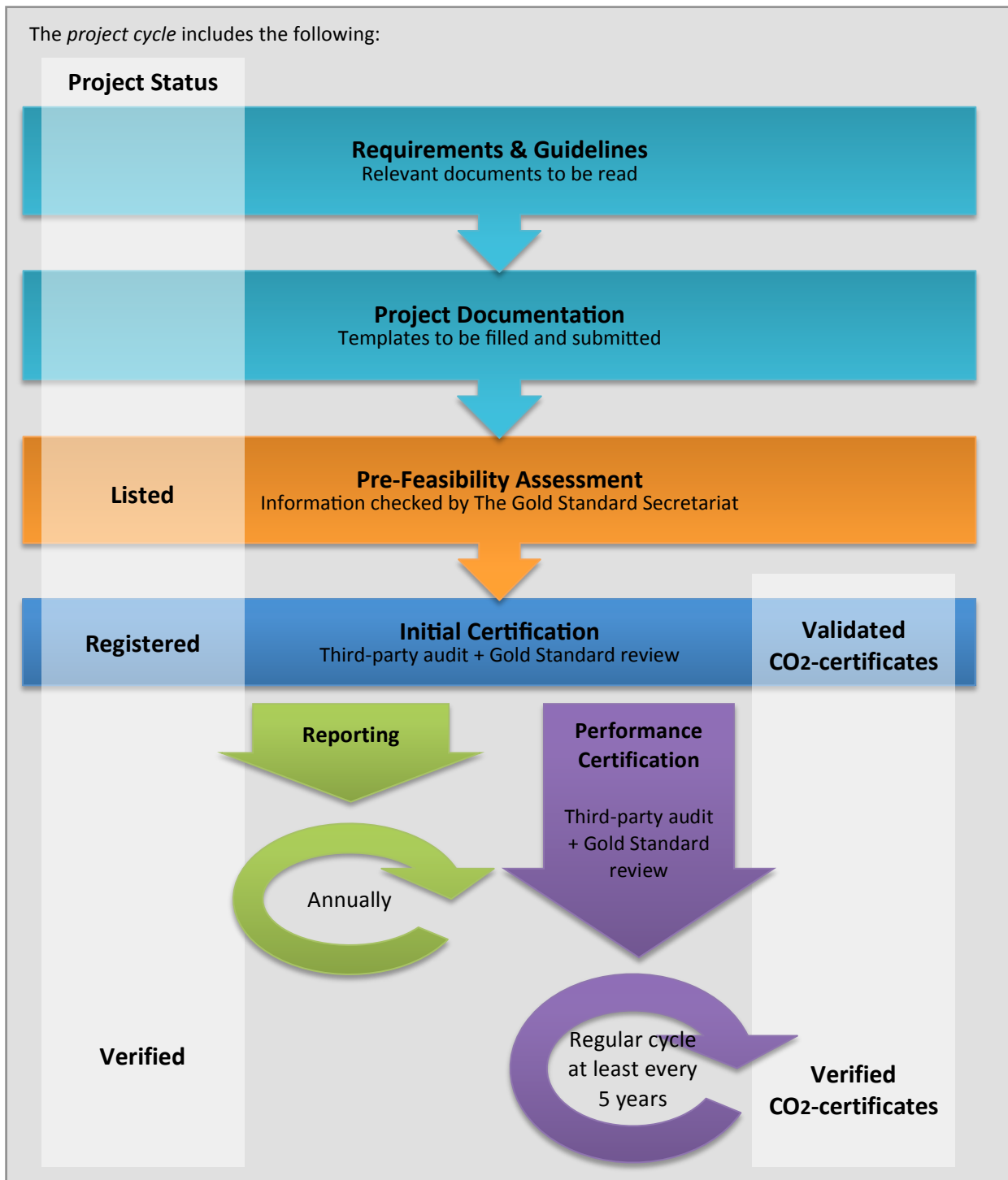
During the period where the project owner is not in compliance with requirement 1, an equal number of CO<sub>2</sub>-certificates from The *Gold Standard Compliance Buffer* will be put 'on-hold'.
4. Further CO<sub>2</sub>-certificates shall only be issued for the project after the project owner has complied with requirement 1.

If the project owner after 5 years cannot demonstrate that compliance with requirement 1 will occur, the project owner shall follow the Non-Compliance (NC) process as outlined in section '8. Non-Compliance'.

## 7. Project Cycle

### Requirements

The *project cycle* includes the *certification* and *reporting* process for The Gold Standard 'A/R Requirements'. Fees related to the different steps are outline on: [www.CDMGoldStandard.org/LUF\\_Certification-process](http://www.CDMGoldStandard.org/LUF_Certification-process)





### 7.1 Certification Process

1. A Pre-Feasibility Assessment is conducted only once by The Gold Standard Secretariat at the beginning of the project.
2. The Pre-Feasibility Assessment is followed by the Initial Certification, which includes an audit by an accredited auditor together with a review.
3. A Performance Certification shall follow the Initial Certification. Performance Certification shall occur at least every 5 years until the end of the crediting period.

### Pre-Feasibility Assessment

4. During the Pre-Feasibility Assessment The Gold Standard Secretariat checks the project information through a desk review. It assesses whether the project is likely to comply with the requirements.

The outcome of the Pre-Feasibility Assessment is the *Pre-Feasibility Assessment report*.

5. The Pre-Feasibility Assessment starts when the project owner has
  - (a) signed and submitted the template 'Cover Letter' and 'General Terms and Conditions', AND
  - (b) submitted the template 'Project Participants & Secured Titles', AND
  - (c) submitted the first documents of the project information through The Gold Standard Registry, AND
  - (d) paid the *fee*<sup>1</sup> for the Pre-Feasibility Assessment.

6. A Pre-Feasibility Assessment can lead to:
  - (a) a successful *Pre-Feasibility Assessment report* without any CARs, FARs or OBSs, OR
  - (b) a successful *Pre-Feasibility Assessment report* with CARs, FARs or OBSs, OR
  - (c) an unsuccessful *Pre-Feasibility Assessment report* with at least one NC.

7. With a successful *Pre-Feasibility Assessment report* the project will obtain 'listed' status in The Gold Standard Registry. This means that:
  - (a) the project information is made publically available, AND
  - (b) the project owner can promote the project according the 'A/R Guidelines - Brand and Communications'.

<sup>1</sup> Fee See: [www.CDMGoldStandard.org/LUF\\_Certification-process](http://www.CDMGoldStandard.org/LUF_Certification-process)

Every certification includes a third-party audit by an accredited auditor together with a review.

### Audits

8. An audit is the assessment by an auditor to confirm the project's compliance with the requirements. It shall include, but is not limited to:
  - (a) Audit planning, AND
  - (b) *Desk review*, AND
  - (c) Field visit (field observations and interviews with workers and stakeholders), AND
  - (d) Reporting.

9. The *desk review* shall take into account:
  - (a) the submitted project information (*project documentation* and *supporting documents*), AND
  - (b) the 'Annual Reports' since the last certification, AND
  - (c) the audit report and review report of the last certification.

10. Once an audit is completed, the auditor provides a written report to The Gold Standard Secretariat. This report shall:
  - (a) give an overview of the audit (including the quantity of *validated* and *verified* CO<sub>2</sub>-certificates)
  - (b) describe the competency of the audit team
  - (c) give an overview on the history of the document
  - (d) describe the objectives and scope of the report
  - (e) describe the level of assurance and materiality levels for the estimation of CO<sub>2</sub>-certificates
  - (f) describe the methodology applied
  - (g) provide a summary of the assessment from the audit process
  - (h) provide an audit conclusion and opinion
  - (i) list the individual requirements of the assessment, including its Corrective Action Requests (CARs), Forward Action Requests (FARs), Observations (OBSs), and Non-Conformities (NCs).

The auditor shall use the template provided: [www.CDMGoldStandard.org/LUF\\_AR-Requirements](http://www.CDMGoldStandard.org/LUF_AR-Requirements)

11. An audit can lead to:
  - (a) a successful audit report without any CARs, FARs and OBSs, OR
  - (b) a successful audit report with FARs and OBSs, OR
  - (c) an unsuccessful audit report with at least one NC.

### Review

12. During the review period The Gold Standard Secretariat, Gold Standard NGO Supporters and the Technical Advisory Committee may open new CARs or FARs on the project and the successful audit report.

If any new CARs or FARs are opened, these shall be addressed by either the project owner or the auditor. The Gold Standard Secretariat will document this in a review report.

13. The review period ends
- (a) after 8 weeks for the Initial Certification or after 3 weeks for a Performance Certification, AND
  - (b) when no more CARs are pending.

14. When the review period has ended, the project will obtain 'registered' or 'verified' status ('registered' in case of the Initial Certification). This means that:
- (a) the updated project information is made publically available, AND
  - (b) the project owner can promote the project according the 'A/R Guidelines - Brand and Communications'.

### Issuance

15. After the review period the validated and verified CO<sub>2</sub>-certificates are issued into the project owner's Gold Standard Registry account.

16. 20% of the issued validated and verified CO<sub>2</sub>-certificates shall be transferred into The Gold Standard Compliance Buffer. The transfer is distributed pro rata according to the vintage years. The project owner may transfer CO<sub>2</sub>-certificates from other Gold Standard certified projects to the Gold Standard Compliance Buffer in lieu of the CO<sub>2</sub>-certificates from the project.

### 7.2 Reporting

Through the 'Reporting' requirements, transparent and frequent updates on the project's performance and compliance are ensured, in addition to the information provided by the certifications.

1. *Reporting* shall take place on an annual basis, after the Initial Certification was completed.

2. For the *reporting*, the project owner shall use the template 'Annual Report' and  
 (a) upload it through The Gold Standard Registry, AND  
 (b) send it to stakeholders that show interest in the project.

3. The 'Annual Report' shall focus on information since the last 'Annual Report'. It shall include:  
 (a) a summary of the recent projects activities  
 (b) a clear statement on how stakeholders can provide inputs/grievances  
 (c) a list of inputs/grievances which have been received together with their respective answers/actions

The following documents shall be submitted together with the 'Annual Report' as *supporting documents*:

- (d) an update of the template 'Key Project Information'
- (e) an update of the list of stakeholders who will receive the 'Annual Report'
- (f) the most recent certification report
- (g) an update of the template 'Project Participants & Secured Titles' (in case of changes)

The project owner shall attest to the accuracy of the information provided by its signature on the 'Annual Report'.

4. Based on the uploaded 'Annual Report', The Gold Standard Secretariat, *Gold Standard NGO Supporters* and the Technical Advisory Committee can assess the continuous compliance of the project to the 'A/R Requirements'.

Identified or reported Non-Compliances (NCs) are processed according to the procedures outlined in section '8. Non-Compliance'.

### 7.3 New Area Certification

At any time after the Initial Certification, the project owner can add *new areas* to its *existing project*. For this the following requirements are set.

1. By adding *new areas* the 'project' definition (chapter '1. Definitions', term 6) shall be maintained.
2. The *new areas* shall meet ALL requirements of the 'Gold Standard A/R Requirements' according to the processes outlined for New Area Certification under the individual chapters.
3. The crediting period of *new areas* cannot go beyond the crediting period of the existing project, as by the Initial Certification.

### 7.4 Technical Procedure & Formatting

1. The project owner shall create an account on The Gold Standard Registry - [www.CDMGoldStandard.org/our-projects/project-registry](http://www.CDMGoldStandard.org/our-projects/project-registry)
2. With this account project information can be submitted for the Pre-Feasibility Assessment and any certification.
3. All project information, except confidential information, shall be made publically available through *The Gold Standard Registry*.
4. For the documentation of the project information templates are available at [www.CDMGoldStandard.org/LUF\\_AR-Requirements](http://www.CDMGoldStandard.org/LUF_AR-Requirements)
5. Templates shall be filled out in green using a Calibri, size 10 font.
6. Red coloured comments in the template shall be deleted before document submission.
7. The *project documents* and *supporting documents* shall be submitted in
  - (a) English, OR
  - (b) a language that has been agreed upon by the project owner, The Gold Standard Secretariat and the auditor.
8. Figures above one thousand shall be formatted with a space (1'000'000), and decimals will be separated by a point (1.35).
9. Pictures, graphs, tables and *supporting documents* within project documentation shall be clearly marked with a unique ID.
10. Maps shall include the following information:
  - (a) Name of the project
  - (b) ID of the project
  - (c) Legend
  - (d) Printing date
  - (e) Scale
  - (f) Direction of North
  - (g) GPS coordinate system (e.g. WGS 84)
  - (h) GPS grid
  - (i) Infrastructure (roads, houses, etc.) and rivers
  - (j) Information on the satellite or aerial picture (date, resolutions, data source)

## 8. Non-Compliance Requirements

Note that the requirements of this chapter are preliminary and during the road-testing period of the 'A/R Requirements' this chapter will still be subject to adaptations.

### 8.1 Non-Compliance Process

1. Project owners shall report possible Non-Compliances (NCs) on requirements within 30 days of their discovery.

2. Any reported NC will be investigated by The Gold Standard Secretariat together with the Technical Advisory Committee.

A NC shall have at minimum one of the following characteristics:

- (a) it continues over a long time
- (b) it is repeated/systematic
- (c) it affects a significant area
- (d) it causes significant damage

3. Depending on the extent of the reported NC, the project owner's account on *The Gold Standard Registry* may be frozen during the time of investigation.

4. When evidence is found confirming the NC the project is *suspended*.

5. When evidence is found confirming the project cannot rectify the NC, the *suspended* project is *cancelled*, and the project is no longer a Gold Standard certified project.

6. The *cancellation* of a project leads to the retirement of a corresponding number of CO<sub>2</sub>-certificates from *The Gold Standard Compliance Buffer*. With this, the permanence of CO<sub>2</sub>-certificates that have been transferred or retired is maintained.

#### History of this document

Version	Date	Nature of revision
0.9	August 2013	Initial publication