CDM Operations Plan
for Afforestation and Reforestation Projects
of the BioCF Portfolio

The World Bank
Carbon Finance Unit
www.carbonfinance.org

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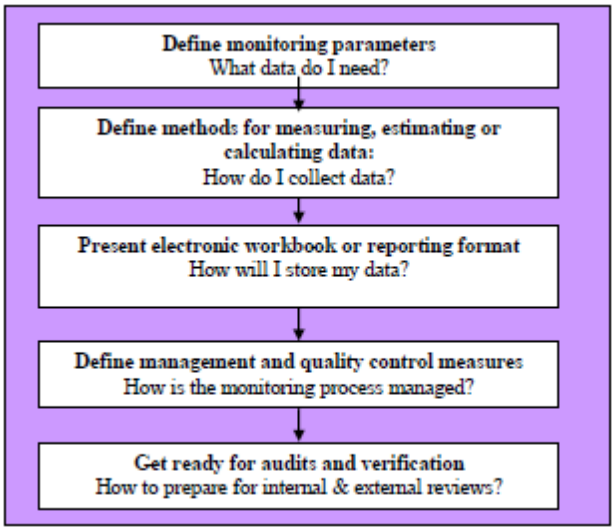
1 Introduction

1.1 Purpose of the CDM Operations Plan

The CDM Operations Plan is an integral part of the contractual agreement between the World Bank BioCarbon Fund and project developers. It forms the basis for the sale of emission reductions (ERs), provided they are verified following this CDM Operations Plan.

The CDM Operations Plan defines a standard against which the project performance in terms of its greenhouse gas (GHG) emission reductions and conformance with all relevant CDM and World Bank criteria will be monitored and verified. It is a tool to help project developers coordinate all the monitoring requirements for generating certified emission reductions (CERs) from their project and for ensuring compliance with applicable World Bank's standards.

The following figure defines the different steps that are required as part of this CDM Operations Plan.



1.2 Use of the Operations Plan

The CDM Operations Plan should be used during project operation. Adherence to the The CDM Operations Plan is necessary for the project operator to successfully measure and track the project impacts, to prepare for the periodic audit and verification process that will have to be undertaken to confirm the achieved ERs, and to ensure compliance with the project's contractual and regulatory obligations.

The collected information enables early corrective action if the baseline or project emissions or compliance with World Bank standards change unexpectedly. The CDM Operations Plan therefore assists the project in establishing a credible, transparent, and adequate data measurement, collection, recording and management system.

Specifically, the CDM Operations Plan provides the requirements and instructions for:

- Establishing and maintaining the appropriate monitoring system and collecting data in accordance with best practices;

- The collection, storage and archiving of relevant information;
- The calculation of ERs through the use of spreadsheets or other data processing procedures as instructed; and
- The implementation of the necessary management systems.

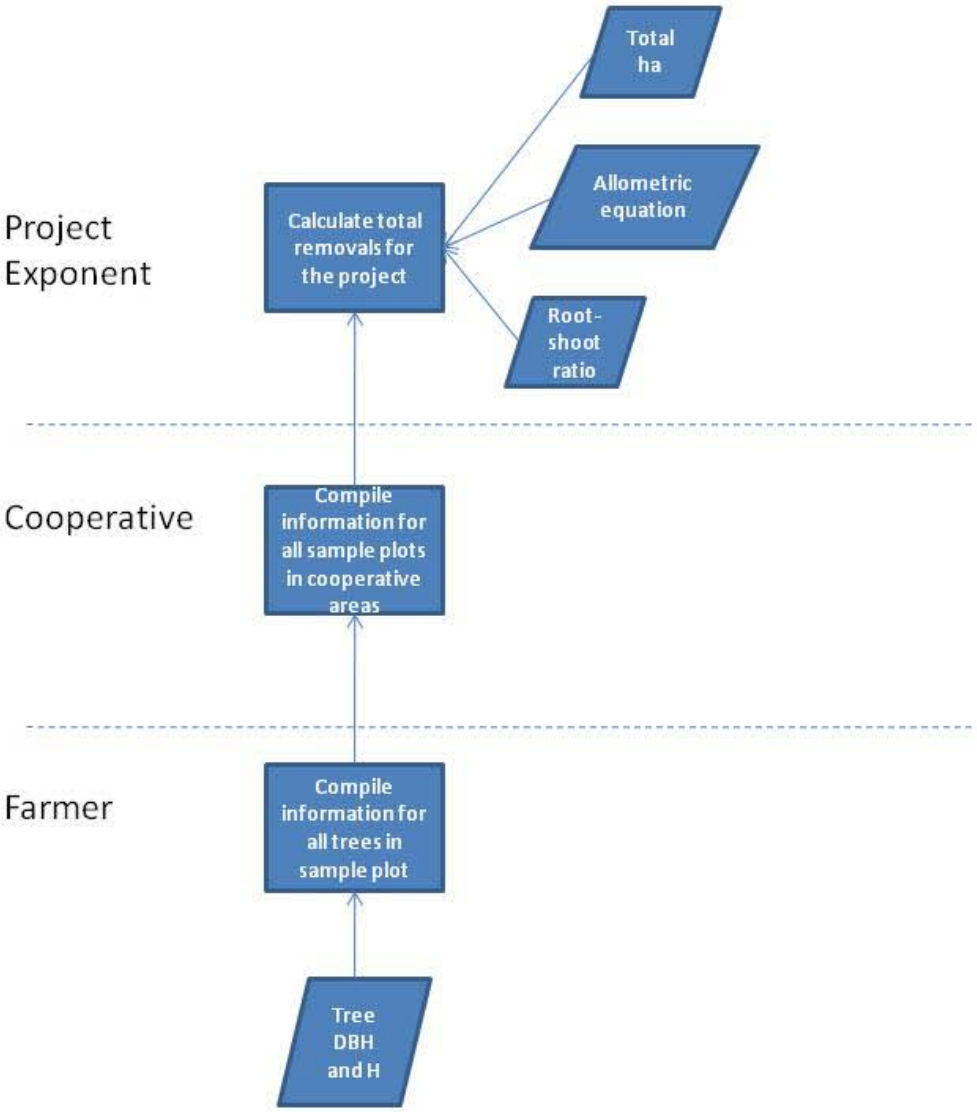
The CDM Operations Plan will be used throughout the life of the project. The CDM Operations Plan will be updated and adjusted to meet operational requirements, provided such modifications are approved during the process of initial or periodic verification by the World Bank.

2 Project information

Name of Project:	*Please mention as it appear in the registered PDD*
Registration date:	*Please list date the project was registered with the UNFCCC*
UNFCCC Project Reference No.	*Please mention this no. from UNFCCC website*
Link to PDD and Validation Report	
Methodology used	
Project participants contact person	*Please name and position of the contact person and person responsible for the implementation and monitoring of the project. If these are different persons, please list both and their respective responsibilities*
Contact details	*Please insert the e-mail and telephone number of the persons identified above*

3 Define monitoring parameters

This section should discuss the all the parameters included in the monitoring plan. Ideally create some kind of flow diagram showing the data collection and data handling at different levels. Below is a simplified example but this is not prescriptive in anyway, please feel free to create something that works for the project specific. The main purpose is to create a clear overview of all the parameters that will need to be collected and or reviewed as part of the project monitoring



4 Methods for measuring, estimating or calculating data

4.1 Methods for parameters that will be measured

It needs to be ensured that data are measured according to standard or even best industry practices ensuring high quality. For each parameter that is actually measured, it needs to be discussed how this will be done. For most projects this will be a limited number of parameters such as DBH, H and parameters related to project emissions and leakage. The World Bank will

provide a operations manual that will give an overview of best practices and other (national level) manuals might exist. If project use the practices from these manuals, it can be sufficient to refer to them without repeating them. Sometimes project specific circumstances would make it difficult to collect data in accordance with standard procedures. In that case deviations from standard procedures or even project specific practices might need to be developed which should be discussed.

4.2 Methods for parameters that will be estimated

The project will also need to identify parameters that are estimated or collected from external sources (such as default values etc). One simple procedure discussing the collection of these data and the sources will usually be sufficient.

4.3 Methods for parameters that will be calculated

The World Bank will make the SMART system available to projects for storing monitored parameters and performing the calculations. If project use SMART, they can refer to that system to provide the calculations. Projects that have their own systems can use this as long as it is defined in this operational plan and approved by the BioCarbon Fund

5 Data storage

The World Bank will make the SMART system available to projects for storing monitored parameters and performing the calculations. If project use SMART, they can refer to that system for data storage. However. it needs to be ensured that the audit trail is available for the verifiers. Projects will therefore need to discuss here how they will store any papers etc (such as field data collection forms, bills to support fuel or fertilizer use etc) for the required period (crediting period + 2 years) in a way that makes it accessible and available when necessary

Projects that have their own systems and don't want to use SMART can use this as long as the system is defined in this operational plan and approved by the BioCarbon Fund

6 Define management and quality control measures

6.1 Process management and responsibilities

Building on information already provided in the PDD and the analysis of the parameters in section 3 , the project will need to consider each parameter that is being measured, estimated or collected and the steps in data handling of these parameters. For each parameter or data handling step consider:

- *Who will be responsible (projects should identify roles, not necessarily specific persons)*
- *What kind of qualifications are required to perform this responsibility*
- *How will training will be provided to perform certain roles if necessary*

The first 2 bullets can be captured in a table define the different roles and responsibilities.

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The last bullet might required more information. For example if a field crew is responsible for collecting data on trees and the project states they will use the SOP from the World Bank for collecting this information…. It is very likely that the field crew will not be able to understand a written SOP in English. Therefore specific training might need to be provided to members of the field crew and certain forms might need to be developed. This operational plan would discuss how this is to be done including for example development of training curricula, development of procedures for record keeping and to ensure staff that participates in monitoring activities have received the training etc (actual procedures etc can be annexed to this plan). If all this is already available, reference can be made to existing material and procedures

6.2 Quality control measures

Quality control procedures bring together the process of collecting and handling data and the different responsibilities. Discuss the need for developing quality control procedures or refer to existing ones (for example exiting ISO based Quality management system). This will include procedures for:

- *Data handling and review → the procedure should ensure that the risks of errors in each step are being minimized (e.g if data are transferred from a piece of paper to a spreadsheet, there is a risk that the wrong data are entered for a certain plot (for example because the collection sheet was marked incorrectly). This could show as trees shrinking over time or experiencing a miraculous growth. Simply having somebody that understands the growth of trees to enter the data and compare it with previously collected data might already solve this problem (this refers back to the previous section on responsibilities). However if the person entering the numbers doesn't have this understanding, some kind of analysis by an expert might be required at a later stage and this needs to be incorporated in the procedure)*
- *Handling and reporting of unexpected events such as fires, floods etc*
- *Data storage*
- *Where possible, some kind of internal auditing process to ensure that procedures are being implemented properly might be considered*

Basically the chances of error in the whole data process will need to be controlled and minimized by the project and written procedures can be an important part of this.

7 Audit and verification

This section should discuss the sharing of the responsibilities for the verification process between the project and the World Bank. This should include the preparation of the monitoring report. The project will need to ensure the availability of the data (on time) and during the actual verification, access to data and staff.