CLEAN DEVELOPMENT MECHANISM REVISED GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT FOR A/R (CDM-AR-PDD), THE PROPOSED NEW METHODOLOGY FOR A/R: BASELINE AND MONITORING (CDM-AR-NM)

Version 05

CONTENTS

History of the document

Version	Date	Nature of revision(s)
01	3 September 2004	Initial adoption at EB15
02	30 September 2005	Incorporation of decisions by EB19 and EB21: • The "Glossary of CDM terms" was updated to reflect guidance and clarifications provided by the Board since adoption of this document • Treatment of confidential/proprietary information submitted through forms • Further guidance on how to structure information submitted in ~~a~~ some sections (i.e. A.3 "Project participants", A4.11.1 "Estimated amount of net anthropogenic GHG removals by sinks over the chosen crediting period", D.5 "Table providing values obtained when applying formulae above") • Reflecting that, in filling in a form, a user must state explicitly that a section was left blank on purpose
03	28 November 2005	Incorporation of decisions by EB21 and EB22: • Revision of the guidelines and a form CDM-AR-NM which should replace the previous guidelines and forms CDM-AR-NMB and CDM-AR-NMM as contained in annex 14 of the report of EB22 • Revision of glossary of terms to incorporate guidance provided by the Board with regards to retroactivity of crediting periods for afforestation and reforestation project activities as contained in paragraph 64 of the report of EB21 • Revision of the glossary of terms and guidelines to incorporate procedures to define the eligibility of lands for afforestation and reforestation project activities as contained in annex 16 of the report of EB22
04	03 March 2006	Incorporating the following decisions • The EB21 decision on the retroactive credits for AR CDM project activities. • To reflect the changes approved by EB23 in the CDM-AR-PDD.
05	29 September 2006	Incorporating the following changes: • Multiple changes introduced in order to align the AR forms with relevant forms used by the Methodology Panel • Glossary of terms has been separated and included into a stand alone document.

PART I

A. General Information on the Project Design Document for A/R (CDM-AR-PDD), the Proposed New Methodology for A/R: Baseline and Monitoring (CDM-AR-NM)

1. These guidelines seek to assist project participants in completing the following documents:

- Project Design Document for A/R (CDM-AR-PDD);
- Proposed New Methodology: Baseline and Monitoring for A/R (CDM-AR-NM).

2. The CDM-AR-PDD and CDM-AR-NM were developed by the clean development mechanism (CDM) Executive Board in conformity with the relevant modalities and procedures for the Project Design Document for CDM afforestation and reforestation project activities under the CDM as defined in Appendix B "Project Design Document" to the modalities and procedures for afforestation and reforestation project activities under the CDM (hereafter referred as "CDM A/R modalities and procedures", see decision 19/CP.9 and its annex contained in document FCCC/CP/2003/6/Add.2).

3. If project participants wish to submit an afforestation or reforestation (hereafter referred as A/R) project activity for validation and registration, they shall submit a fully completed CDM-AR-PDD.

4. If project participants wish to propose new baseline and monitoring methodologies for A/R they shall complete and submit the CDM-AR-NM and a draft CDM-AR-PDD with only sections A-E filled.

5. The CDM-AR-PDD and CDM-AR-NM may be obtained electronically from the UNFCCC CDM web site (http://unfccc.int/cdm), by e-mail (cdm-info@unfccc.int) or in printed format from the UNFCCC secretariat (Fax: +49-228-815-1999).

6. Terms, which are underlined with a broken line in the CDM-AR-PDD and the CDM-AR-NM, are explained in the "Glossary of CDM Terms", available on the CDM UNFCCC website. It is recommended that before or during the completion of the forms that project participants consult the most recent version of the "Glossary of CDM Terms".

7. Project participants should also consult the section "Guidance – clarifications" available on the UNFCCC CDM web site (http://unfccc.int/cdm) or available from the UNFCCC secretariat by e-mail (cdm-info@unfccc.int) or in print via fax (+49-228-815 1999).

8. The Executive Board may revise the CDM-AR-PDD and the CDM-AR-NM, if necessary.

9. Revisions come into effect, once adopted by the Executive Board, bearing in mind the provisions below.

10. Revisions to the CDM-AR-PDD do not affect A/R project activities:

(a) Already validated, or already submitted to the OE for validation prior to the adoption of the revised CDM-AR-PDD;

(b) Submitted to the OEs within a month of the adoption of the revised CDM-AR-PDD;

(c) The Executive Board will not accept documentation using previous versions of the CDM-AR-PDD six months after the adoption of the new version.

11. Revisions to the CDM-AR-NM do not affect new baseline and monitoring methodologies:

(a) Submitted to the OEs prior to the adoption of the revised CDM-AR-NM;

(b) Submitted to the OEs within a month of the adoption of the revised CDM-AR-NM;

(c) The Executive Board will not accept documentation using previous versions of the CDM-AR-NM three months after the adoption of the new versions.

12. In accordance with the modalities and procedures for a CDM ("hereafter referred as CDM modalities and procedures", see decision 17/CP.7 and its annex contained in document FCCC/CP/2001/13/Add.2), the working language of the Board is English. The CDM-AR-PDD and the CDM-AR-NM shall therefore be completed and submitted in English language to the Executive Board. However, the CDM-AR-PDD and CDM-AR-NM are available on the UNFCCC CDM web site for consultation in all six official languages of the United Nations.

13. The CDM-AR-PDD and CDM-AR-NM templates shall not be altered, that is, shall be completed using the same font without modifying its format, font, headings or logo.

14. Tables and their columns shall not be modified or deleted, rows may however be added, as needed.

15. The CDM-AR-PDD and CDM-AR-NM shall include in section A.1 the version number and the date of the document.

16. If sections of the CDM-AR-PDD and CDM-AR-NM are not applicable, it shall be explicitly stated that the section is left blank on purpose.

17. The CDM-AR-PDD and CDM-AR-NM are not applicable to CDM project activities. The CDM-PDD documentation project activities is available on the UNFCCC CDM web site.

PART II

A. Information note for Project Design Document for afforestation and reforestation project activities (CDM-AR-PDD)

1. The CDM-AR-PDD presents information on the essential technical and organizational aspects of the afforestation or reforestation (A/R) project activity and is a key input into the validation, registration, and verification of the project as required under the Kyoto Protocol to the UNFCCC. The relevant modalities and procedures are detailed in decision 17/CP.7 contained in document FCCC/CP2001/13/Add.2 and decision 19/CP.9 contained in document FCCC/CP/2003/6/Add.2).

2. The CDM-AR-PDD contains information on the proposed A/R CDM project activity, the approved baseline methodology applied to the proposed A/R CDM project activity, and the approved monitoring methodology applied to the project. It discusses and justifies the choice of baseline methodology and the applied monitoring concept, including monitoring data and calculation methods.

3. Project participants should submit the completed version of the CDM-AR-PDD, together with attachments if necessary, to an accredited designated operational entity for validation. The designated operational entity then examines the adequacy of the information provided in the CDM-AR-PDD, especially whether it satisfies the relevant modalities and procedures concerning the proposed A/R CDM project activity. Based on this examination, the designated operational entity makes a decision regarding validation of the project.

4. Bearing in mind paragraph 6 of the CDM modalities and procedures[1], project participants shall submit documentation that contains confidential /proprietary information in two versions:

- One marked up version where all confidential/proprietary parts shall be made illegible by the project participants (e.g. by covering those parts with black ink) so that this can be made publicly available.
- A second version containing all information which shall be treated as strictly confidential by all handling this documentation (DOEs/AEs, Board members and alternates, panel/committee and working group members, external experts requested to consider such documents in support of work for the Board, and the secretariat).

[1] Applied mutatis mutandis in the CDM A/R modalities and procedures

B. Specific guidelines for completing the Project Design Document for afforestation and reforestation project activities (CDM-AR-PDD)

CONTENTS
PROJECT DESIGN DOCUMENT FOR AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES (CDM-AR-PDD)

SECTION A. General description of the proposed A/R CDM project activity:

A.1. Title of the proposed A/R CDM project activity:

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Please indicate
- The title of the A/R CDM project activity
- The version number of the document
- The date of the document.

A.2. Description of the proposed A/R CDM project activity:

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Please include in the description:
- The purpose of the proposed A/R CDM project activity;
- Explain how the proposed project activity is undertaken (e.g. what exact measures are undertaken, what is their impact within and beyond the project boundary, list plant species used and state if they belong to the categories of Invasive Alien Species (IAS) or Genetically Modified Organisms (GMO), etc.);
- The view of the project participants on the contribution of the proposed A/R CDM project activity to sustainable development (max. one page).

A.3. Project participants:

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Please list project participants and Party(ies) involved and provide contact information in Annex 1. Information shall be indicated using the following tabular format.

Name of Party involved (*) ((host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Indicate if the Party involved wishes to be considered as a project participant (Yes/No)
Name A (host)	• Private entity A • Public entity A …	No
Name B	• None	Yes
Name C	• None	No
…	• …	…

(*) In accordance with the CDM A/R modalities and procedures, at the time of making the CDM-AR-PDD public at the stage of validation, a Party involved may or may not have provided its approval. At the time of requesting registration, the approval by the Party(ies) involved is required.

Note: When the CDM-AR-PDD is prepared to support a proposed new baseline and monitoring methodology (form CDM-AR-NM), at least the host Party(ies) and any known project participant (e.g. those proposing a new methodology) shall be identified.

A.4. Technical description of the A/R CDM project activity:

A.4.1. Location of the proposed A/R CDM project activity:

A.4.1.1. Host Party(ies):

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A.4.1.2. Region/State/Province etc.:

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A.4.1.3. City/Town/Community etc:

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A.4.1.4. Detailed geographic delineation of the project boundary, including information allowing the unique identification(s) of the proposed A/R CDM project activity:

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The "project boundary" geographically delineates the A/R CDM project activity under the control of the project participants.

The A/R CDM project activity may contain more than one discrete area of land. If an A/R CDM project activity contains more than one discrete area of land:
- Each discrete area of land should have a unique geographical identification;
- The boundary should be defined for each discrete area and should not include the areas in between these discrete areas of land.

A.4.1.5. Description of the present environmental conditions of the area planned for the proposed A/R CDM project activity, including a brief description of climate, hydrology, soils, ecosystems (including land use):

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The description could also include other features that may be useful for assessing the applicability of the selected baseline and monitoring methodology to the proposed A/R CDM project activity.

A.4.1.6. Description of the presence, if any, of rare or endangered species and their habitats:

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A.4.2. Species and varieties selected for the proposed A/R CDM project activity:

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A.4.3. Description of legal title to the land, current land tenure and rights to tCERs / lCERs issued for the proposed A/R CDM project activity:

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A.4.4. Technology to be employed by the proposed A/R CDM project activity:

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This section should include a description of the environmentally safe and sustainable /renewable technologies and know-how which will be employed by the project, specifying, if any, those to be transferred to the host Party(ies) as well as other technical information that may be used to assess the applicability of the selected baseline and monitoring methodology to the proposed A/R CDM project activity.

A.4.5. Approach for addressing non-permanence:

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In accordance with paragraph 38 and section K of the CDM A/R modalities and procedures, please specify which of the following approaches to address non-permanence has been selected:
- Issuance of tCERs
- Issuance of lCERs

A.4.6. Estimated amount of net anthropogenic GHG removals by sinks over the chosen crediting period:

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Summary of results obtained in Sections C.5., D.1. and D.2.

Year	Estimation of baseline net GHG removals by sinks (tonnes of CO_2 e)	Estimation of actual net GHG removals by sinks (tonnes of CO_2 e)	Estimation of leakage (tonnes of CO_2 e)	Estimation of net anthropogenic GHG removals by sinks (tonnes of CO_2 e)
Year A				
Year B				
Year C				
Year …				
Total (tonnes of CO_2 e)				

A.4.7. Public funding of the proposed A/R CDM project activity:

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In case public funding from Parties included in Annex I is involved, please provide in Annex 2 information on sources of public funding for the project activity from Parties included in Annex I which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties.
Note: When the CDM-AR-PDD is filled in support of a proposed new methodology (form CDM-AR-NM), it is to be indicated whether public funding from Parties included in Annex I is likely to be involved indicating the Party(ies) to the extent possible.

SECTION B. Duration of the project activity / crediting period

B.1 Starting date of the proposed A/R CDM project activity and of the crediting period:

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The starting date of a A/R CDM project activity is the date on which the implementation or real action of an A/R CDM project activity begins, resulting in actual net GHG removals by sinks. Please justify the starting date and provide any relevant documentation. Note that crediting period starts at the starting date of the project activity.
Please note that the Board, at its twenty-first meeting, clarified that provisions of paragraphs 12 and 13 of decision 3/CMP.1 do not apply to CDM afforestation and reforestation project activities. A CDM afforestation and reforestation project activity starting after 1 January 2000 can also be validated and registered after 31 December 2005 as long as the first verification of the project activity occurs after the date of registration of this project activity. Given that the crediting period starts at the same date as the starting date of the project activity, the projects starting 2000 onwards can accrue tCERs/lCERs as of the starting date.

B. 2. Expected operational lifetime of the proposed A/R CDM project activity:

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Please state the expected operational lifetime of the proposed A/R CDM project activity in years and months as appropriate.

B.3 Choice of crediting period and related information:

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Please state whether the proposed A/R CDM project activity will use a renewable or a fixed crediting period and complete B.3.1 or B3.2 accordingly. B.3.1 and B.3.2 are mutually exclusive – please select only one of them.

B.3.1. Renewable crediting period, if selected:

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Each crediting period shall be a maximum of twenty (20) years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable.

Please state whether the renewable crediting period is selected. If yes, please state the length of the crediting period in years and months.

B.3.2. Fixed crediting period, if selected:

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The fixed crediting period shall be at most thirty (30) years. Please state whether the fixed crediting period is selected. If yes, please state the length of the crediting period in years and months.

SECTION C. Application of an approved baseline and monitoring methodology

Where project participants wish to propose a new baseline and monitoring methodology, please complete the form "Proposed New Methodology for A/R: Baseline and Monitoring"(CDM-AR-NM) in accordance with the procedures for submission and consideration of proposed new methodologies (see Part III of these Guidelines).

C.1. Assessment of the eligibility of land:

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Please apply the latest approved version of the "procedure to define the eligibility of lands for afforestation and reforestation project activities".

C.2. Title and reference of the approved baseline and monitoring methodology applied to the proposed A/R CDM project activity:

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Please refer to the UNFCCC CDM web site for the title and reference list as well as the details of selected approved baseline and monitoring methodologies[2].

Please indicate
- The approved AR methodology and the version of the methodology that is used (e.g. "Version 02 of AR-AM0001");
- Any methodologies or tools which the approved methodology draws upon and their version (e.g. "Version 01 of the tool for demonstration and assessment of additionality").

Note: The selected approved baseline and monitoring methodology becomes an integral part of the AR-CDM-PDD. There is no need to repeat the methodology in the CDM-AR-PDD. Please refer to the methodology via name and number of sections, number of equations, number of tables, etc.

The selected approved baseline and monitoring methodology is an integral part of the PDD.

C.3. Assessment of the applicability of the selected approved methodology to the proposed A/R CDM project activity and justification of the choice of the methodology:

[2] If new baseline and monitoring methodologies are proposed, please complete the form for "Proposed New Baseline and Monitoring Methodologies for A/R (CDM-AR-NM) .

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Use this section to show that the proposed AR CDM project activity meets each of the applicability conditions of the selected methodology.

In addition:

- If the applicability conditions of the selected methodology do not explicitly ensure that carbon stocks in carbon pools, which are not considered in the methodology, will not decrease as a result of the project activity, show and justify that neglecting these carbon pools is appropriate and conservative for the proposed AR project activity;
- If the applicability conditions of the selected methodology do not explicitly ensure that sources of GHG emissions, which are not considered in the methodology, will not increase as a result of the project activity, show and justify that neglecting these emission sources is appropriate because they are not significant. (For example, explain that only small quantities of fertilizer are used.);
- Justify that the characteristics of the project (i.e. the specific way of site preparation, species composition of planted trees, displacement of certain types pre-project activities) match appropriately with the approaches in the selected approved methodology in terms of availability of data, models/approaches used to estimate changes of carbon stocks.

Justify and document the rationales and assumptions in a transparent manner. Explain which documentation has been used to support the justification and provide the references to the documentation or include the documentation as a separate annex.

C.4. Description of strata identified using the *ex ante* stratification:

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Describe results of application of the *ex ante* stratification procedure as provided in Section II.3. of the **selected approved methodology**. Do not copy Section II.3. to the PDD.

C.5. Identification of the baseline scenario:

C.5.1. Description of the application of the procedure to identify the most plausible baseline scenario (separately for each stratum defined in C.4., if procedures differ among strata):

>>

Describe how Section II.4. of the **selected approved methodology** is applied in order to identify the **baseline scenario**. Where the procedure involves several steps, describe how each step is applied and transparently document the outcome of each step. Explain and justify key assumptions and rationales. Provide relevant documentation or references. Illustrate in a transparent manner all data used to determine baseline scenarios (variables, parameters, data sources, etc), preferably in a table form.

You may wish to refer to information provided in Section A of this document. Do not copy the information from Section A here.

C.5.2. Description of the identified baseline scenario (separately for each stratum defined in Section C.4.):

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Describe the most plausible baseline scenario for each stratum, as resulting from the application of the procedures to identify the baseline scenario. Show that the baseline scenarios differ among strata identified in the stratification procedure. If baseline scenarios are similar between strata, consider a decrease in the number of strata and repeat the application of the procedure to identify the most plausible baseline scenario. Please take into account that stratification during monitoring may be different from the *ex ante* stratification for the purpose provided here.

C.6. Assessment and demonstration of additionality:

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Describe the application of the procedure to assess and demonstrate additionality according to the selected approved baseline and monitoring methodology. Where the procedure involves several steps, describe how each step is applied and transparently document the outcome of each step. Explain and justify key assumptions and rationales. Provide relevant documentation or references. Illustrate in a transparent manner all data used to determine baseline scenarios (variables, parameters, data sources, etc), preferably in a table form.

Compare the baseline scenario as identified above against the project scenario. Use (refer to) information provided e.g. in section A. Show that the project scenario could not happen in absence of the A/R CDM project activity.

If the starting date of the project activity is before the date of validation, provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on (preferably official, legal and/or other corporate) documentation that was available at, or prior to, the start of the project activity.

C.7. Estimation of the *ex ante* baseline net GHG removals by sinks:

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Calculate the *ex ante* baseline net GHG removals by sinks for the chosen crediting period using the approach provided in the selected approved baseline and monitoring methodology. Use a stepwise approach and name components being calculated. List numerical values and sources of all data used in the above calculation (use table provided below).

Data used for calculation of the *ex ante* baseline net GHG removals by sinks shall be archived for 2 years following the end of the (last) crediting period.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[3]	Data variable	Data unit	Value applied	Comment

Under comment, include at least: measured (m), estimated (e) or default (d)[4].

[3] Please provide ID number for cross-referencing in the PDD.

[4] Please provide full reference to data source.

All data shall be archived in electronic and paper form. Use ID numbers for reference.

Please present final results of your calculations using the following tabular format.

Year	Annual estimation of baseline net anthropogenic GHG removals by sinks in tonnes of CO_2 e
Year A	
Year B	
Year C	
Year …	
Total estimated baseline net GHG removals by sinks (tonnes of CO2 e)	
Total number of crediting years	
Annual average over the crediting period of estimated baseline net GHG removals by sinks (tonnes of CO2 e)	

C.8. Date of completion of the baseline study and the name of person(s)/entity(ies) determining the baseline:

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SECTION D. Estimation of *ex ante* actual net GHG removals by sinks, leakage and estimated amount of net anthropogenic GHG removals by sinks over the chosen crediting period

D.1. Estimate of the *ex ante* actual net GHG removals by sinks:

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The actual net GHG removals by sinks is the sum of verifiable changes in carbon stocks, minus the increase in emissions of the GHGs measured in units of CO_2 equivalent by the sources that are increased as an attributable result of the implementation of the proposed A/R CDM project activity within the project boundary.

Calculate the *ex ante* actual net GHG removals by sinks for the chosen crediting period using the approach provided in the selected approved baseline and monitoring methodology (annually, for each gas, pool, source, in units of CO_2 equivalent). Use a stepwise approach and name components being calculated. List numerical values and sources of all data used in the above calculation. Refer to, but do not copy, pieces of the selected approved methodology, unless necessary.

D.2. Estimate of the *ex ante* leakage:

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Leakage is defined as: the increase of anthropogenic emissions by sources of GHG which occurs outside the project boundary, and that is measurable and attributable to the proposed A/R CDM project activity.

Calculate the *ex ante* leakage for the chosen crediting period using the approach provided in the selected approved baseline and monitoring methodology (annually, for each gas, pool, source, in units of CO_2 equivalent). Use a stepwise approach and name components being calculated. List numerical values and sources of all data used in the above calculation. Refer to, but do not copy, pieces of the selected approved methodology, unless necessary.

SECTION E. Monitoring plan

E.1. Monitoring of the project implementation:

E.1.1. Monitoring of the project boundary:

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Please list data which shall be collected during monitoring of the project boundary. If applicable, refer to data dealt with in other sections of the monitoring plan. Please state if not applicable.

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[5]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[6]	Recording frequency	Number of data points / Other measure of number of collected data	Comment

If any measurements do not follow typical practices described in forest mensuration or forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

E.1.2. Monitoring of forest establishment:

[5] Please provide ID number for cross-referencing in the PDD.

[6] Please provide full reference to data source.

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Please list data which shall be collected during monitoring of forest establishment. If applicable, refer to data dealt with in other sections of the monitoring plan. Please state if not applicable.

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[7]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[8]	Recording frequency	Number of data points / Other measure of number of collected data	Comment

E.1.3. Monitoring of forest management:

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Please list data which shall be collected during monitoring of forest management. If applicable, refer to data dealt with in other sections of the monitoring plan. Please state if not applicable.

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.

[7] Please provide ID number for cross-referencing in the PDD.

[8] Please provide full reference to data source.

Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[9]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[10]	Recording frequency	Number of sample plots at which the data will be monitored / Other measure of number of collected data	Comment

E.2. Sampling design and stratification:

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Describe results of application of the stratification procedure as provided in Section III.2. of the selected approved methodology. Do not copy and paste the abovementioned section.
If stratification as required in this section is identical to that provided in Section **C.4**. of the PDD, it is sufficient to refer to it.
Calculate number of samples and propose their distribution (by each stratum) over the A/R CDM project area.

E.3. Monitoring of the baseline net GHG removals by sinks :

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Please state if monitoring of the baseline net GHG removals by sinks is required by the selected approved baseline and monitoring methodology. If not, skip sections E.3.1 and E.3.2.

[9] Please provide ID number for cross-referencing in the PDD.

[10] Please provide full reference to data source.

E.3.1. Monitoring of the baseline net GHG removals by sinks (before start of the project), if required:

>>

If the selected approved baseline and monitoring methodology requires monitoring of the baseline net GHG removals by sinks before the project is started, describe application of procedure for selection of sample plots and list all data which will be collected or used for this purpose (use table provided below). Refer to, but do not copy, pieces of the selected approved methodology, unless necessary.
Please state if not applicable.

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[11]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[12]	Recording frequency	Number of sample plots at which the data will be monitored	Comment

E.3.2. Monitoring of the *ex post* baseline net GHG removals by sinks (after start of the project), if required:

>>

If the selected approved baseline and monitoring methodology requires monitoring of the baseline net GHG removals by sinks after the project is started, describe application of the procedure for selection of sample plots and list all data which will be collected or used for this purpose (use table provided below). Refer to, but do not copy, pieces of the selected approved methodology, unless necessary.
Please state if not applicable.

[11] Please provide ID number for cross-referencing in the PDD.

[12] Please provide full reference to data source.

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[13]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[14]	Recording frequency	Number of sample plots at which the data will be monitored	Comment

E.4. Monitoring of the actual net GHG removals by sinks:

E.4.1. Data to be collected in order to monitor the verifiable changes in carbon stock in the carbon pools within the project boundary resulting from the proposed A/R CDM project activity:

>>

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

[13] Please provide ID number for cross-referencing in the PDD.

[14] Please provide full reference to data source.

ID number[15]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[16]	Recording frequency	Number of sample plots at which the data will be monitored	Comment

If the monitored data are already presented in one of the tables above, please provide only information on: ID number, Data variable, Data unit (unless other details are different). Under Comment, please provide reference to the relevant table containing full information about the data.

E.4.2. Data to be collected in order to monitor the GHG emissions by the sources, measured in units of CO_2 equivalent, that are increased as a result of the implementation of the proposed A/R CDM project activity within the project boundary:

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Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[17]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[18]	Recording frequency	Number of sample plots at which the data will be monitored	Comment

[15] Please provide ID number for cross-referencing in the PDD.

[16] Please provide full reference to data source.

[17] Please provide ID number for cross-referencing in the PDD.

[18] Please provide data source.

If the monitored data are already presented in one of the tables above, please provide only information on: ID number, Data variable, Data unit (unless other details are different). Under Comment, please provide reference to the relevant table containing full information about the data.

E.5. Leakage:

>>

Please state if monitoring of leakage is required by the selected approved baseline and monitoring methodology.

E.5.1. If applicable, please describe the data and information that will be collected in order to monitor leakage of the proposed A/R CDM project activity:

>>

Monitored data shall be archived for 2 years following the end of the (last) crediting period.
If any measurements do not follow typical practices described in forest mensuration of forest inventory manuals then describe them under comment.
Header of tables and titles of columns shall not be modified and columns shall not be deleted. Please add rows to the table below, as needed.

ID number[19]	Data variable	Data unit	Measured (m), calculated (c) estimated (e) or default (d)[20]	Recording frequency	Number of data points	Comment

If the monitored data are already presented in one of the tables above, please provide only information on: ID number, Data variable, Data unit (unless other details are different). Under Comment, please provide reference to the relevant table containing full information about the data.

[19] Please provide ID number for cross-referencing in the PDD.

[20] Please provide full reference to data source.

E.5.2. Please specify the procedures for the periodic review of implementation of activities and measures to minimize leakage:

>>

E.6. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored:

Data *(Indicate ID number)*	Uncertainty level of data (High/Medium/Low)	Explain QA/QC procedures planned for these data, or why such procedures are not necessary.

E.7. Please describe the operational and management structure(s) that the project operator will implement in order to monitor actual GHG removals by sinks and any leakage generated by the proposed A/R CDM project activity:

>>

E.8. Name of person(s)/entity(ies) applying the monitoring plan:

>>

Please provide contact information and indicate if the person/entity is also a project participant listed in Annex 1 of this document.

SECTION F. Environmental impacts of the proposed A/R CDM project activity:

F.1. Documentation on the analysis of the environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary of the proposed A/R CDM project activity:

>>

This analysis should include, where applicable, information on, inter alia, hydrology, soils, risk of fires, pests and diseases. Please attach the relevant documentation to the CDM-AR-PDD.

F.2. If any negative impact is considered significant by the project participants or the host Party, a statement that project participants have undertaken an environmental impact assessment, in accordance with the procedures required by the host Party, including conclusions and all references to support documentation:

>>

Please attach the documentation to the CDM-AR-PDD.

F.3. Description of planned monitoring and remedial measures to address significant impacts referred to in section F.2. above:

>>

SECTION G. Socio-economic impacts of the proposed A/R CDM project activity:

>>

G.1. Documentation on the analysis of the major socio-economic impacts, including impacts outside the project boundary of the proposed A/R CDM project activity:

>>

This analysis should include, where applicable, information on, inter alia, local communities, indigenous peoples, land tenure, local employment, food production, cultural and religious sites, and access to fuelwood and other forest products. Please attach the documentation to the CDM-AR-PDD.

G.2. If any negative impact is considered significant by the project participants or the host Party, a statement that project participants have undertaken a socio-economic impact assessment, in accordance with the procedures required by the host Party, including conclusions and all references to supporting documentation:

>>

Please attach the documentation to the CDM-AR-PDD.

G.3. Description of planned monitoring and remedial measures to address significant impacts referred to in section G.2 above:

>>

SECTION H. Stakeholders' comments:

H.1. Brief description of how comments by local stakeholders have been invited and compiled:

>>

Please describe the process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe an A/R CDM project activity in a manner which allows the local stakeholders to understand the proposed A/R CDM project activity, taking into account confidentiality provisions of the CDM modalities and procedures.

H.2. Summary of the comments received:

>>

Please identify stakeholders that have made comments and provide a summary of these comments.

H.3. Report on how due account was taken of any comments received:

>>

Please explain how due account have been taken of comments received from stakeholders.

Annex 1

CONTACT INFORMATION ON PARTICIPANTS IN THE PROPOSED A/R CDM PROJECT ACTIVITY

Organization:	
Street/P.O.Box:	
Building:	
City:	
State/Region:	
Postfix/ZIP:	
Country:	
Telephone:	
FAX:	
E-Mail:	
URL:	
Represented by:	
Title:	
Salutation:	
Last Name:	
Middle Name:	
First Name:	
Department:	
Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	

Annex 2

INFORMATION REGARDING PUBLIC FUNDING

Please provide information from Parties included in Annex I on sources of public funding for the proposed A/R CDM project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties.

Annex 3

BASELINE INFORMATION

Annex 3 shall provide any relevant information not included in Section C or in the selected approved baseline and monitoring methodologies. Please state if Annex 3 is left intentionally blank.

Annex 4

MONITORING PLAN

According to FCCC/KP/CMP/2005/8/Add.1, para 25:

Project participants shall include, as part of the project design document, a monitoring plan that provides for:

(a) The collection and archiving of all relevant data necessary for estimating or measuring the actual net greenhouse gas removals by sinks during the crediting period. The monitoring plan shall specify techniques and methods for sampling and measuring individual carbon pools and greenhouse gas emissions by sources included in the actual net greenhouse gas removals by sinks, that reflect commonly accepted principles and criteria concerning forest inventory;

(b) The collection and archiving of all relevant data necessary for determining the baseline net greenhouse gas removals by sinks during the crediting period. If the project uses control plots for determining the baseline, the monitoring plan shall specify techniques and methods for sampling and measuring individual carbon pools and greenhouse gas emissions by sources;

(c) The identification of all potential sources of, and the collection and archiving of data on, leakage during the crediting period;

(d) The collection and archiving of information relating to the planned monitoring and remedial measures referred to in paragraph 12 (c) M&P

(e) Collection of transparent and verifiable information to demonstrate that any choice made in paragraph 21 M&P does not increase the net anthropogenic greenhouse gas removals by sinks;

(f) Changes in circumstances within the project boundary that affect legal title to the land or rights of access to the carbon pools;

(g) Quality assurance and control procedures for the monitoring process;

(h) Procedures for the periodic calculation of the net anthropogenic greenhouse gas removals by sinks due to the afforestation or reforestation project activity and documentation of all steps involved in those calculations, and for the periodic review of implementation of activities and measures to minimize leakage.

A monitoring plan that meets the requirements as listed above shall include:
(i) Identification of data needs and data quality with regard to accuracy, comparability, completeness and validity.
(ii) Methodologies to be used for data collection and monitoring, including quality assurance and quality control provisions for monitoring, collecting, reporting, and assurance that verification does not coincide with peaks in carbon stocks.
(iii) In the case of a new monitoring methodology, a description of the methodology, including an assessment of strengths and weaknesses of the methodology and whether or not it has been applied successfully elsewhere
(iv) Collection of other information as required to comply with the requirements above.

Annex 4: Monitoring Plan shall provide any information requested above but not included in Section E: Monitoring Plan and the selected approved baseline and monitoring methodologies. Please state if Annex 4 is left intentionally blank.

- - - - -

PART III

A. Information note for Proposed New Methodology for afforestation and reforestation project activities (CDM-AR-NM)

1. A strong link between baseline and monitoring methodologies is to be provided. New baseline and monitoring methodologies shall be proposed and approved together.

2. The form "proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM) is to be used to propose a new baseline methodology and a new monitoring methodology. This form shall fully and completely describe the baseline and monitoring methodologies. The most recent version of this form may be obtained from the "forms" section of the UNFCCC CDM web site (http://unfccc.int/cdm) or from the UNFCCC secretariat by e-mail (cdm info@unfccc.int) or in print via fax (+49-228-815-1999).

3. The form "proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM) shall be accompanied by a "Project Design Document for A/R" (CDM-AR-PDD) with sections A-E completed, in order to demonstrate the application of the proposed new methodologies to a proposed A/R CDM project activity.

4. The form "proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM) shall be submitted to the Executive Board in accordance with "Procedures for submission and consideration of a proposed new A/R methodology". For the most recent version of the procedures, please refer to procedures page of the UNFCCC CDM web site (http://unfccc.int/cdm).

5. Each proposed new set of baseline and monitoring methodologies should use a separate form "proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM). "Proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM) forms for several new baseline and monitoring methodologies may be submitted together with the same CDM-AR-PDD for several components of a proposed project activity.

6. For additional guidance on aspects to be covered in the description of a new methodology, please refer to guidance and clarifications by the Executive Board on the "guidance – clarifications" section of the UNFCCC CDM website and the "CDM Glossary of Terms". Project participants are encouraged to use, as appropriate and to the extent possible, the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance (GPG) for Land Use, Land-Use Change and Forestry (LULUCF).

7. Project participants shall refrain from providing glossaries or using key terminology not used in the documents of the Conference of the Parties (COP) or the CDM glossary and refrain from rewriting the instructions on the forms.

8. The "methodology procedure" sections shall:

(a) Be completed in a fashion that can be readily used as an approved methodology. This requires use of appropriate format, tone, and level of specificity. Text shall be clear and succinct, well-written, and logically sequenced. It shall describe the procedures in a manner that is sufficiently explicit to enable the methodology to carried out by a methodology user, applied to projects unambiguously, and reproduced by a third party. It shall be possible for projects following the

methodology to be subjected to a validation and/or verification study. Methodology developers should review and be familiar with methodologies approved by the CDM Executive Board (please refer to the section on methodologies in the UNFCCC CDM web site).

(b) Be generally appropriate for the entire group of project activities that satisfy the specified applicability conditions. A new methodology should therefore stand independently from the specific project activity proposed in the draft CDM-AR-PDD with which the new methodology is being submitted. The methodology should not make direct reference to, or depend on characteristics of, the specific project activity being proposed in the draft CDM-AR-PDD. It should not refer to specific project activities or locations, project-specific conditions or project-specific parameters. This project-specific information should be described in the draft CDM-AR-PDD, however, it can be referred to in the explanation/justification section to help describe the methodology.

(c) Present methodology steps as one might present a recipe. In doing so, clearly state what the methodology user must do and what information must be presented in the resulting CDM-AR-PDD. It should include all algorithms, formulae, and step-by-step procedures needed to apply the methodology and validate the project activity, i.e. calculating baseline, project, and leakage emissions. The completed form shall provide stand-alone replicable methodologies, and avoid reference to any secondary documents other than EB-approved tools and methodologies.

(d) Indicate precisely what information the project proponent must report in the draft CDM-AR-PDD and/or in monitoring reports.

(e) Support important procedures and concepts with equations and diagrams. Non-essential information should be avoided.

(f) Refer by name and reference number to approved methodologies and tools if they are used – in whole or in part – in this methodology. Relevant sections can be cited specifically, but do not need to be repeated. Any proposed modifications and/or additions to approved tools and methodologies need to be clearly highlighted.

(g) Specify, for all formulae/algorithms and/or models:

- The variables used (e.g. species, tree density, growth rates.);
- The spatial resolution of data (e.g. local, regional, national, etc.);
- The vintage of data (relative to project crediting period);

(h) Use common formats for equations and terms and international system units (SI units).

(i) Specify, for the data sources and assumptions:

- Where the data are obtained (official statistics, expert judgement, proprietary data, IPCC GPG for LULUCF, commercial data and scientific literature, etc.);
- The assumptions used;

(j) Clearly specify data requirements and sources, as well as procedures to be followed if expected data are unavailable. For instance, the methodology could point to a preferred data source (e.g. national statistics for the past 5 years), and indicate a priority order for use of additional data (e.g. using longer time series) and/or fall back data sources to preferred sources (e.g. private, international statistics, etc.).

(k) Include instructions to assist in implementing the methodology in a conservative manner where logical or quantitative assumptions have to be made by the methodology user, particularly in cases of uncertainty.

9. The "explanation and justification" sections shall:

(a) Be used to assist the assessment by the AR WG and the Executive Board in reviewing the methodology. If the proposed methodology is approved these sections are removed from the final version.

(b) Provide the rationale for the procedures presented.

(c) If the procedure draws from an approved methodology or tool, provide reference of the same and clearly note any changes to them or elaborations of them. Justify why such changes have been made.

(d) Point out the key logical and quantitative assumptions, i.e., those assumptions to which the results of the baseline methodology are particularly sensitive to.

(e) Be clear about sources of uncertainty. Clearly point out which logical or quantitative assumptions have significant uncertainty associated with determining them. If the methodology makes a certain assumption in cases where there is uncertainty, explain why this assumption is appropriate.

(f) Explain how the methodology ensures conservativeness. Explain how the procedures and assumptions on which the procedures rely are conservative. In particular, explain how assumptions in the case of uncertainty are conservative.

10. General instructions for completing the baseline methodology section of the new methodology form (CDM-AR-NM):

(a) The baseline for an A/R CDM project activity is the scenario that reasonably represents the sum of the changes in carbon stocks in the carbon pools within the project boundary that would occur in the absence of the proposed A/R CDM project activity. A baseline shall cover all carbon pools within the project boundary, but project participants may choose not to account for one or more carbon pools if they provide transparent and verifiable information showing that the choice will not increase the expected net anthropogenic GHG removals by sinks. The general characteristics of a baseline are contained in paragraphs 20 to 22 of the CDM A/R modalities and procedures.

(b) When drafting a proposed new baseline methodology, project participants shall, in particular, follow the following steps:

(i) Choose and justify why one of the baseline approaches listed in paragraph 22 of the CDM A/R modalities and procedures is considered to be the most appropriate;

(ii) Elaborate a proposal for a new baseline methodology. A baseline methodology is an application of the selected baseline approach contained in paragraphs 22 (a) to (c) of the CDM A/R modalities and procedures to an individual A/R CDM project activity, reflecting aspects such as sector, technology and region. The Executive Board agreed that no methodology is to be excluded a priori so that

project participants have the opportunity to propose any methodology, which they consider appropriate. The project participant shall take into account guidance by the Board on aspects to be covered by a methodology (please see guidance and clarifications by the Executive Board on the "Guidance – clarifications" web page of the UNFCCC CDM web site);

(iii) Describe the proposed new methodology using the form for "Proposed New Methodology for A/R" (CDM-AR-NM) taking into account guidance given by the Executive Board as well as the information provided in the CDM-AR-PDD Glossary of Terms; and

(iv) Demonstrate the applicability of the proposed methodology, and, implicitly, that of the approach, to an A/R DM project activity by providing relevant information in sections A-E of a draft CDM-AR-PDD.

(c) In accordance with guidance provided by the Executive Board, the proposed new baseline methodology shall include a basis for determining the baseline scenario and, in particular:

(i) An explanation of how the baseline scenario is chosen, taking into account paragraph 20 (e) of the A/R modalities and procedures;

(ii) An underlying rationale for algorithm/formulae and/or model used in the baseline methodology;

(iii) An explanation of how, through the methodology, it is demonstrated that a proposed A/R CDM project activity is additional and, therefore, not the baseline scenario (section B.4 of the CDM-AR-PDD);

(iv) Delineation of the project boundary (with respect to carbon pools, gases and sources included, physical delineation, etc.);

11. General instructions for completing the monitoring methodology section of the new methodology form (CDM-AR-NM):

(a) Monitoring of an A/R CDM project activity refers to the collection and archiving of all relevant data necessary for determining the baseline net GHG removals by sinks, measuring actual net GHG removals by sinks within the project boundary of an A/R CDM project activity, leakage and applicability conditions, as applicable.

(b) When drafting a proposed new monitoring methodology, project participants shall:

(i) Describe the proposed new methodology using the form "proposed new baseline and monitoring methodologies for A/R" (CDM-AR-NM) taking into account guidance given by the Executive Board as well as the information provided in the CDM-AR-PDD Glossary of Terms;

(ii) Demonstrate the applicability of the proposed monitoring methodology to an A/R CDM project activity by providing relevant information in sections A-E of a draft CDM-AR-PDD.

(c) The monitoring methodology needs to provide detailed information on how to establish the monitoring plan related to the collection and archiving of all relevant data needed to:

(i) Estimate or measure actual net GHG removals by sinks occurring within the project boundary,

(ii) Determine the baseline net GHG removals by sinks, and

(iii) Identify all potential sources of and estimate leakage for A/R CDM project activities;

(d) The monitoring methodology should reflect good monitoring practice appropriate to the type of A/R CDM project activity.

12. Project participants shall use the nomenclature for parameters and variables in the formulas, as found in approved AR methodologies, when submitting proposed new methodologies.

CLEAN DEVELOPMENT MECHANISM
PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES FOR A/R
(CDM-AR-NM) Version 02

CONTENTS

1. Monitoring of project implementation
2. Sampling design and stratification
3. Calculation of *ex post* baseline net GHG removals by sinks, if required
4. Data to be collected and archived for the estimation of baseline net GHG removals by sinks
5. Calculation of *ex post* actual net GHG removal by sinks
6. Data to be collected and archived for actual net GHG removals by sinks
7. Leakage
8. Data to be collected and archived for leakage
9. *Ex post* net anthropogenic GHG removal by sinks
10. Uncertainties and conservative approach
11. Other information

Section IV: Lists of variables, acronyms and references

1. List of variables used in equations
2. List of acronyms used in the methodologies
3. References

Section I. Summary and applicability of the baseline and monitoring methodologies

1. Methodology title (for baseline and monitoring) and history of submission

Methodology title:

>>

Methodology title:
Provide an unambiguous title for a proposed methodology. The title should reflect the project types to which the methodology is applicable. Do not use project-specific titles.
Please indicate the following:
- The title of the proposed methodology
- The version number of the document
- The date of the document

If this methodology is a based on a previous submission or an approved methodology, please state the relevant reference number (ARNMXXXX/AR-AMXXXX). Explain briefly the main differences and/or rationale for not using the approved methodology.

>>

2. Selected baseline approach for A/R CDM project activities

Choose one (delete others):

☐ Existing or historical, as applicable, changes in carbon stocks in the carbon pools within the project boundary;

☐ Changes in carbon stocks in the carbon pools within the project boundary from a land use that represents an economically attractive course of action, taking into account barriers to investment;

☐ Changes in carbon stocks in the pools within the project boundary from the most likely land use at the time the project starts.

Explanation/justification of choice:

>>

3. Applicability conditions

Methodology procedure:

>>

Methodology procedure:
Describe the project activity (for example: reforestation on degraded lands).

List any conditions which a proposed AR CDM project activity must satisfy in order for the methodology to be applicable (e.g. eligible species, sectoral circumstances, region, or historical use of the land areas). Applicability conditions must pertain to the type of proposed project activity and sector in which it takes place. They should not be conditions on a presumed baseline scenario (e.g., it is not appropriate for an

applicability condition to be "The land area would continue to be the same without the project activity" as this is not a condition on the project activity, but a result of baseline assessment.).

In some cases, compliance with an applicability condition, such as "the project activity is wood production or non-wood production such as rubber", is obvious, easily validated, and unlikely to change. In other cases however, compliance with an applicability condition may need to be monitored during the crediting period, and the consequences of non-compliance would need to be indicated in the methodology. For example, if an applicability conditions is "The project activity does not result in the displacement of more than 50% of the pre-project activities", the methodology should explain how the applicability condition can be satisfied (e.g. through monitoring of displacements), and how it will be reported.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

4. Selected carbon pools

Table A: Selected carbon pools

Carbon pools	Selected (answer with Yes or No)	Justification / Explanation of choice
Above ground		
Below ground		
Dead wood		
Litter		
Soil organic carbon		

Select the carbon pools that are considered in determining actual net GHG removals by sinks and baseline net GHG removals by sinks in the table above. Note that the same carbon pools should be considered in the actual net GHG removals by sinks and the baseline net GHG removals by sinks. Provide short explanations and justifications for the choice in the table.

5. Summary description of major baseline and monitoring methodological steps

Summary description:
Summarize the key elements of the proposed new methodology, per the sections below.
Include brief statements on each on how baseline and the monitoring address the following issues.

Baseline methodology:
i. Definition of the project boundary
ii. Stratification
iii. Choice of the baseline scenario
iv. *Ex ante* calculation of baseline net GHG removals by sinks
vi. Demonstration of additionality
vii. Calculation of *ex ante* actual net GHG removals by sinks
viii. Leakage emissions

Monitoring methodology:
i. Monitoring of the implementation of the project activity
ii. Stratification
iii. Calculation of *ex post* baseline net GHG removals by sinks, if required
vi. Calculation of *ex post* actual net GHG removal by sinks

In doing so, if relevant, note how this methodology builds on, complements, and/or provides an alternative to approved methodologies.

Please do not exceed one page. The detailed explanation of the methodology is to be provided in sections below.

a. Baseline methodology:

>>

b. Monitoring methodology:

>>

Section II. Baseline methodology description

1. Project boundary

Methodology procedure:

>>

Methodology procedure:

Definition: The project boundary shall geographically delineate and encompass all anthropogenic GHG emissions by sources and removals by sinks on lands under the control of the project participants that are significant and reasonably attributable to an A/R CDM project activity.

a. Describe the physical delineation of the project boundary (i.e. the project boundary shall include the land areas that are planned for A/R CDM project activities);
b. Identify all GHG emission sources in the project boundary, using the table below. Note that CO_2 emissions or removals resulting from changes in carbon stocks should not be included in this table (they are addressed in section I.4 above). Explain whether any emission sources are excluded in the calculation of actual net GHG removals by sinks, and if so, justify their exclusion. Use the table provided below.

Table B: Emissions sources included in or excluded from the project boundary [add/delete gases and sources as needed]

Sources	Gas	Included/ excluded	Justification / Explanation of choice
Use of fertilizers	CO_2		
	CH_4		
	N_2O		
Combustion of fossil fuels by vehicles	CO_2		
	CH_4		
	N_2O		

Explanation/justification of choice (only if space in the table is not sufficient).
Explain/justify differences in emission sources covered by baseline and project activity, if any:

>>

2. Stratification

Methodology procedure:

>>

Methodology procedure:
Describe how the stratification of land areas is to be undertaken for the *ex ante* estimation of net anthropogenic GHG removals by sinks. Use of remote sensing products is recommended. This may include the use of aerial photos, satellite imaginary, etc.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

3. Procedure for selection of the most plausible baseline scenario

Methodology procedure:

>>

Provide a systematic, step-by-step procedure for determining the most likely baseline scenario. This procedure should describe a process for identifying the options to be considered as plausible candidate baseline scenarios. It should clearly explain the logical and analytical steps that must be followed in ascertaining the most likely baseline scenario from among these candidates. It should clearly state what the methodology user must do and what information must be presented in the resulting CDM-AR-PDD in order to make a logical and well-substantiated case for the baseline scenario. Be specific and complete, so that the procedure can be carried out in an unambiguous way, replicated, and subjected to a validation study.

Ensure consistency between baseline scenario derived by this methodology and the procedure and formulae used to calculate the baseline net GHG removals by sinks (below). The baseline scenario determination procedure should indicate for which baseline scenarios the overall methodology is applicable. This situation would occur when baseline net GHG removals by sinks section (below) does not include algorithms and/or parameters relevant to this scenario. Explain why the proposed procedure for determining the baseline scenario is appropriate for the project type and applicability conditions.

Justify that the range of options to be considered as plausible baseline scenarios is sufficiently comprehensive. The options to be considered should not exclude plausible options that, if included, might result in the determination of a different baseline scenario.

Highlight the key logical assumptions and quantitative factors underlying the procedure for determining the baseline scenario. State clearly which assumptions and factors have significant uncertainty associated with them, and how such uncertainty is to be addressed.

Explain how national and/or sectoral policies and circumstances, if and as relevant, are taken into account by the methodology.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

4. Additionality

Methodology procedure:

>>

Provide a systematic step-by-step procedure for determining whether or not the project activity is, or is part of, the baseline scenario, and thereby determining whether the project activity is additional. The methodology should clearly state what the methodology user must do and what information must be presented in the resulting CDM-AR-PDD in order to make a logical and well-substantiated case for the project's additionality.

Ensure consistency between baseline scenario derived by this methodology and the procedure and formulae used to demonstrate additionality. Note, for many methodologies there will be a strong link between the baseline scenario and additionality sections. Present the procedures in each step in as much detail as needed, but avoid repetition that is not needed for reasons of clarity.

Justify why the proposed procedure is an appropriate procedure for establishing the project's additionality.

Highlight the key logical assumptions and quantitative factors underlying the procedure for demonstrating the project activity is additional. State clearly which assumptions and factors have significant uncertainty associated with them, and how such uncertainty is to be addressed.

If relevant, explain how national and/or sectoral policies and circumstances are taken into account by the methodology.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

5. Estimation of baseline net GHG removals by sinks

Methodology procedure:

>>

Baseline net GHG removals by sinks are defined as the sum of changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of an A/R CDM project activity.

Explain whether the methodology provides an *ex ante* estimation of baseline net GHG removals by sinks and also monitors baseline net GHG removals by sinks as part of the monitoring methodology or whether the methodology only estimates baseline net GHG removals by sinks *ex ante*.

Elaborate all the algorithms and formulae used to estimate, measure or calculate the baseline net GHG removals by sinks from the baseline scenario. Be specific and complete, so that the procedure can be carried out in an unambiguous way, replicated, and subjected to a validation and/or verification study:
- Use consistent variables, equation formats, subscripts, etc.
- Number all equations;
- Define all variables and parameters, with units indicated;
- Justify the conservativeness of the algorithms/procedures; to the extent possible, include methods to quantitatively account for uncertainty in key parameters.

Several parameters, coefficients, variables, etc. may be used in the calculation of the baseline net GHG removals by sinks.
a) Where values are provided in the methodology:
- Clearly indicate the precise references from which these values are taken (e.g. official statistics, IPCC Guidelines, commercial and scientific literature);
- Justify the conservativeness of the values provided.

b) Where values are to be provided by the project participant, clearly indicate how the values are to be selected and justified, for example, by explaining:
- The vintage of data that is suitable;
- What spatial level of data is suitable (local, regional, national, international);
- How conservativeness of the values is to be ensured.

Any parameters, coefficients, variables, etc. that are to be obtained through monitoring should be noted. The project participants shall ensure consistency between the baseline methodology and the monitoring methodology.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

6. *Ex ante* actual net GHG removals by sinks

Methodology procedure:

>>

Provide a consistent step-by-step procedure for the *ex ante* estimation of actual net GHG removals by sinks. Elaborate all algorithms and formulae required. In doing so:
- Use consistent variables, equation formats, subscripts, etc.
- Number all equations;
- Define all variables and parameters, with units indicated;
- Where default values are provided in the methodology: Clearly indicate the precise references from which these values are taken (e.g. official statistics, IPCC Guidelines, commercial and scientific literature);
- Where values are to be provided by the project participant, clearly indicate how the values are to be selected.

In doing so, differentiate between the following GHG emissions by sources and removals by sinks:
a. Verifiable changes in carbon stocks in the carbon pools.
b. GHG emissions by sources. This includes increases in GHG emissions by the sources within the project boundary as a result of the implementation of an A/R CDM project activity. For example:
   i) Calculation of GHG emissions from burning of fossil fuel

ii) Calculation of emissions from biomass burning
iii) Calculation of nitrous oxide emissions from nitrogen fertilization practices

(In identifying GHG emissions by sources from the project activity project participants shall consider guidance by the Board regarding pre-project emissions as contained in annex 15 of EB 21 report.)

c. Actual net GHG removals by sinks. This is the sum of verifiable changes in carbon stocks in the carbon pools, minus the increase in emissions by sources.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

7. Leakage

Methodology procedure:

>>

Leakage is defined as the increase in GHG emissions by sources which occurs outside the boundary of an AR CDM project activity which is measurable and attributable to the AR CDM project activity.

The Board clarified that the accounting of decreases of carbon pools outside the project boundary are to be considered as leakage and that, in particular:
(a) In the case of deforestation as land clearance outside the project boundary due to activity shifting, effects on all carbon pools shall be considered;
(b) In the case of fuelwood collection or similar activities outside the project boundary, only the gathered volume of wood that is non-renewable shall be considered as an emission by sources if forests are not significantly degraded due to this activity. The equation (Eq. 3.2.8) for fuelwood gathering as outlined in IPCC GPG (2003) could be applied in combination with household surveys or Participatory Rural Appraisal (PRA). In the case that forests are significantly degraded, accounting rule 1 applies. "Not significantly degraded" means, that the extracted volume results in emissions which are between 2% and 5 % of net actual GHG removals by sinks. If the extracted wood volume results in emissions which are below 2% of the net actual GHG removals by sinks, this type of leakage can be ignored.

In identifying leakage project participants shall consider guidance by the Board regarding pre-project emissions as contained in annex 15 of EB 21 report.

Identify possibly significant sources of leakage. List which sources of leakage can be neglected.

Elaborate all the algorithms and formulae used to estimate, measure or calculate leakage emissions. Be specific and complete, so that the procedure can be carried out in an unambiguous way, replicated, and subjected to a validation and/or verification study:
- Use consistent variables, equation formats, subscripts, etc.
- Number all equations;
- Define all variables and parameters, with units indicated;
- Justify the conservativeness of the algorithms/procedures; to the extent possible, include methods to quantitatively account for uncertainty in key parameters.

Several parameters, coefficients, variables, etc. may be used in the calculation of leakage.
a) Where values are provided in the methodology:
- Clearly indicate the precise references from which these values are taken (e.g. official statistics, IPCC Guidelines, commercial and scientific literature);
- Justify the conservativeness of the values provided.

b) Where values are to be provided by the project participant, clearly indicate how the values are to be selected and justified, for example, by explaining:
- What types of sources are suitable;
- The vintage of data that is suitable;
- What spatial level of data is suitable (local, regional, national, international);
- How conservativeness of the values is to be ensured.

Any parameters, coefficients, variables, etc. that are to be obtained through monitoring should be noted. The project participants shall ensure consistency within the baseline and monitoring methodology.

Justify that the procedure is consistent with standard technical procedures in the relevant sector. Provide references as necessary.

Justify the selection of sources of leakage that can be neglected.
Even if the calculation of the leakage is to be performed *ex post*, the procedure should include the calculation of an *ex ante* estimate.

Use the table provided below.

Table C: Emissions sources included in or excluded from leakage [add/delete gases and sources as needed]

Sources	Gas	Included/ excluded	Justification / Explanation of choice
Burning of biomass	CO_2		
	CH_4		
	N_2O		
Combustion of fossil fuels by vehicles	CO_2		
	CH_4		
	N_2O		

Explanation/justification (if methodology procedure is not self-explanatory):

>>

8. *Ex ante* net anthropogenic GHG removal by sinks

Methodology procedure:

>>

Net anthropogenic GHG removals by sinks is defined as the actual net GHG removals by sinks minus the baseline net GHG removals by sinks minus leakage.

Please provide for the formulae to calculate net anthropogenic GHG removals by sinks for project activities using tCERs and for those using lCERs. Please refer to the latest guidance by the Executive Board regarding these formulae.

9. Uncertainties and conservative approach

Methodology procedure:

>>

Explain how the methodology ensures that net anthropogenic GHG removals by sinks are estimated in conservative manner, taking into account the uncertainties of the methodology. In doing so you may assess and describe the uncertainties of the baseline methodology, in particular regarding:
a. The basis for determining the baseline scenario
b. Algorithms and formulae
c. Key assumptions
d. Data

Explanation/justification (if methodology procedure is not self-explanatory):

>>

10. Data needed for *ex ante* estimations

Provide information on each data or parameter needed to perform *ex ante* calculations in the table below.

Data / Parameter	Unit	Description	Vintage	Data sources and geographical scale

11. Other information

>>

Explanation of how the baseline methodology allows for the development of baselines in a transparent manner.

Provide any other information here.

Section III: Monitoring methodology description

1. Monitoring of project implementation

Methodology procedure:

>>

Methodology procedure:
Provide a procedure to clearly identify and document the implementation of the project on the land areas within the project boundary. This should include the following aspects:

a. The size and geographical location of the stands established as part of the project activity.
b. Any changes to the area of the individual strata.
c. Whether the stands are managed according to any previously established management plan.
d. Where relevant: whether the applicability conditions still apply to the project activity.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

2. Sampling design and stratification

Methodology procedure:

>>

Methodology procedure:
Describe how the sampling design is to be undertaken for the *ex post* calculation of actual net GHG removals by sinks and, in case the baseline is monitored, the baseline net GHG removals by sinks. The sampling design may, *inter alia*, include stratification, determination of number of plots, plot distribution, etc.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

3. Calculation of *ex post* baseline net GHG removals by sinks, if required

Methodology procedure:

>>

If the methodology requires the monitoring of the baseline, provide a consistent step-by-step procedure for the *ex post* estimation of the baseline net GHG removals by sinks. Elaborate all algorithms and formulae required. In doing so:
- Use consistent variables, equation formats, subscripts, etc.
- Number all equations;
- Define all variables and parameters, with units indicated;

a) Where values are provided in the methodology:
- Clearly indicate the precise references from which these values are taken (e.g. official statistics, IPCC Guidelines, commercial and scientific literature);
- Justify the conservativeness of the values provided.

b) Where values are to be provided by the project participant, clearly indicate how the values are to be selected and justified, for example, by explaining:
- The vintage of data that is suitable;
- What spatial level of data is suitable (local, regional, national, international);
- How conservativeness of the values is to be ensured.

Where appropriate describe any quality assurance and quality control procedures, if necessary stating tolerable deviations.

Explanation/justification (if methodology procedure is not self-explanatory):

>>

4. Data to be collected and archived for the estimation of baseline net GHG removals by sinks

Methodology procedure:

If the methodology requires the monitoring of the baseline, list all data that should be collected and archived for the estimation of baseline net GHG removals by sinks, using the table below.
Monitored data shall be archived for 2 years following the end of the crediting period. Please add rows to the table below, as needed.

ID number	Data Variable	Data Unit	Data source	Measured (m) calculated (c) estimated (e)	Recording frequency	Proportion of data monitored	Comment

5. Calculation of *ex post* actual net GHG removal by sinks

Methodology procedure:

>>

Methodology procedure:
Elaborate all the algorithms and formulae used to estimate, measure or calculate the removals and emissions from the project activity. Be specific and complete, so that the procedure can be carried out in an unambiguous way, replicated, and subjected to a validation and/or verification study:
- Use consistent variables, equation formats, subscripts, etc.;
- Number all equations;
- Define all variables, with units indicated;
- Justify the conservativeness of the algorithms/procedures; to the extent possible, include methods to quantitatively account for uncertainty in key parameters.

Several parameters, coefficients, variables, etc. may be used in the calculation of the baseline net GHG removals by sinks.
a) Where values are provided in the methodology:
- Clearly indicate the precise references from which these values are taken (e.g. official statistics, IPCC Guidelines, commercial and scientific literature);
- Justify the conservativeness of the values provided.

b) Where values are to be provided by the project participant, clearly indicate how the values are to be selected and justified, for example, by explaining:
- What types of sources are suitable;
- The vintage of data that is suitable;
- What spatial level of data is suitable (local, regional, national, international);
- How conservativeness of the values is to be ensured.

Ensure consistency within the baseline and monitoring methodology.

Differentiate between the following GHG emissions by sources and removals by sinks:
a. Verifiable changes in carbon stocks in the carbon pools.
b. GHG emissions by sources. This includes increases in GHG emissions by the sources within the project boundary as a result of the implementation of an A/R CDM project activity. For example:
    i) Calculation of GHG emissions from burning of fossil fuel

ii) Calculation of emissions from biomass burning
iii) Calculation of nitrous oxide emissions from nitrogen fertilization practices

c. Actual net GHG removals by sinks. This is the sum of verifiable changes in carbon stocks in the carbon pools, minus the increase in emissions by sources.

Where appropriate describe any quality assurance and quality control procedures, if necessary stating tolerable deviations.

6. Data to be collected and archived for *ex post* actual net GHG removals by sinks

Methodology procedure:
List all data that should be collected and archived for the estimation of actual net GHG removals by sinks, using the table below. Monitored data shall be archived for 2 years following the end of the crediting period. Please add rows to the table below, as needed.

ID number	Data Variable	Data unit	Data source	Measured (m) calculated (c) estimated (e)	Recording frequency	Proportion of data monitored	Comment

7. Leakage

Methodology procedure:
>>
Please refer to the guidance in section II.7 above.

Explanation/justification (if methodology procedure is not self-explanatory):
>>

8. Data to be collected and archived for leakage

List all data that should be collected and archived for the estimation of leakage emissions, using the table below. Monitored data shall be archived for 2 years following the end of the crediting period. Please add rows to the table below, as needed.

ID number	Data Variable	Data unit	Data source	Measured (m) Calculated (c) estimated (e)	Recording frequency	Proportion of data monitored	Comment

9. *Ex post* net anthropogenic GHG removal by sinks

Methodology procedure:

>>

Net anthropogenic GHG removals by sinks is defined as the actual net GHG removals by sinks minus the baseline net GHG removals by sinks minus leakage.

Please provide the formulae to calculate net anthropogenic GHG removals by sinks for project activities using tCERs and for those using lCERs.

Please refer to the latest guidance by the Executive Board regarding these formulae.

10. Uncertainties and conservative approach

Methodology procedure:

>>

Explain how the methodology ensures that net anthropogenic GHG removals by sinks are estimated in conservative manner, taking into account the uncertainties of the methodology. In doing so you may assess and describe the uncertainties of the baseline methodology, in particular regarding:
a. The basis for determining the baseline scenario
b. Algorithms and formulae
c. Key assumptions
d. Data

Explanation/justification (if methodology procedure is not self-explanatory):

>>

11. Other information

>>

Explanation of how the baseline methodology allows for the development of baselines in a transparent manner.

Provide any other information here.

Section IV: Lists of variables, acronyms and references

1. List of variables used in equations:

Variable	SI Unit	Description

2. List of acronyms used in the methodologies:

Acronym	Description

3. References:

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