




**Validation report form for post-registration changes for
CDM project activities
(Version 02.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia Reference number: 9199
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	03.0
Completion date of the validation report on PRCs	02/04/2018
Type(s) of PRCs	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines <input type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan <input checked="" type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools <input type="checkbox"/> Changes to the project design <input checked="" type="checkbox"/> Changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	03.0
Project participants	Bosques de la Primavera S.A
Host Party	Colombia
Applied methodologies and standardized baselines	AR-AM0004 ver. 4 - Reforestation or afforestation of land currently under agricultural use
Mandatory sectoral scopes linked to the applied methodology	14: Afforestation and reforestation
Conditional sectoral scopes linked to the applied methodologies	-
Name and UNFCCC reference number of the DOE	AENOR INTERNACIONAL S.A.U Reference number: E-0021

Name, position and signature of the approver of the validation report on PRCs	Irene Carrascón Climate Change Manager 
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SECTION A. Executive summary

During the verification process AENOR INTERNACIONAL S.A.U (AENOR) has performed the first verification of the emission reduction of the project “CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia” (Registration Ref. N° 9199) from 02/06/2005 to 16/02/2016.

The project is based on changing the use of land from extensive cattle ranching to sustainable forest production systems, restoring natural forest cover, and creating a landscape of biological and productive corridors that produce financial, social and environmental services for the region.

The project considers the carbon credits as an incentive for investments in new commercial forest plantations and restoration of natural forests in the remote High Orinoco region of Colombia, in the Municipality of La Primavera, Department of Vichada, Colombia.

Some changes to the project design and changes to the monitoring plan were identified by the audit team. Accordingly, the scope of the present validation report is to address these post registration changes and assess their validity.

AENOR validated that proposed changes comply with the relevant requirements of the CDM PS version 01.0, i.e, that in accordance with paragraphs 229 and 230 the project participant has identified and documented any actual or proposed changes to the operation, implementation and/or monitoring of the registered CDM project activity. The project participant has prepared a revised PDD (in both track-change and clean versions) that reflects the actual or proposed changes, using the valid version of the applicable PDD form. The project participant has provided a summary of the changes, including the reasons for the changes and any additional information relating to the changes to the PDD.

In addition, the PP has described the nature and extent of the proposed changes and extent of the non-conforming monitoring in a revised PDD and the proposed alternative monitoring for the project activity as well as any other complementary information required according to the PS v 01.0.

It is important to highlight that AENOR submitted to the CDM team on 28/11/2017 the following query on how to categorize the changes:

“The monitoring report form for CDM project activities version 6 addresses the following options for the post registration changes in its section B.2:

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies or standardized baselines

B.2.2. Corrections

B.2.3. Changes to the start date of the crediting period

B.2.4. Inclusion of monitoring plan

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

B.2.6. Changes to project design

However, the validation report form for the post registration changes of the CDM project activities version 02.0 addresses in its cover page:

- *Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines*
- *Corrections*
- *Changes to the start date of the crediting period*
- *Inclusion of a monitoring plan*

- Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools
- Changes to the project design
- Changes specific to afforestation and reforestation project activities

My query is the following:

If applicable PRCs are “changes specific to afforestation and reforestation project activities”, how should they be identified in the Monitoring report considering the mentioned bullets from B.2.1 to B.2.6?

The query was answered on 6 December 2017 and this was the reply:

Dear Mr. Fuentes Pérez,

Thank you for the query. We appreciate you flagging the inconsistency between the forms. We will review all relevant forms and may revise the relevant documents/forms as appropriate.

With regard to your specific question, if applicable PRCs are “changes specific to afforestation and reforestation project activities”, please categorize the PRCs as one of the PRC types listed (bullets B.2.1 to B.2.6) in the “CDM-MR-FORM - Monitoring report form for CDM project activity (version 06.0) and describe the PRCs in those sections.

Thank you.

CDM Team
UNFCCC secretariat

Therefore, those changes identified as “Changes specific to afforestation and reforestation project activities” in this PRC validation report were identified under bullet B.2.6 in the monitoring report form, i.e, changes to the project design.

Furthermore, AENOR, as it is demonstrated below has verified through the on-site visit and the evidence provided that the Project has correctly monitored all the parameters according to the new revised PDD, applied methodology and tools. This has been done in a conservative and accurate way, without a reduction of the level of the accuracy of the monitoring compared with the revised PDD, then, the GHG removals is not being over-estimated as a result of the permanent changes.

According to the paragraph 248 of the PS version 01.0, the project participant has selected the option b), i.e, the PRC is carried out under the issuance track.

SECTION B. Validation team, technical reviewer and approver

The list of involved personnel and the qualification status are summarised in the tables below.

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader, verifier and	IR	García Rosell	Manuel	AENOR Peru	Yes	Yes	Yes	Yes

	technical expert until 7 June 2017 ¹								
2.	Team Leader, verifier and technical expert from 7 June 2017	IR	Fuentes Pérez	José Luis	AENOR	Yes			Yes
3.	Verifier	IR	Medrano Gutiérrez	Alfonso	AENOR	Yes			Yes
4.	Verifier	IR	García Madero	Mercedes	AENOR	Yes			Yes

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Arribas Alonso	Luis Javier	AENOR
2.	Technical expert	IR	Torres Gonzalez	Asier	AENOR
3	Approver	IR	Carrascón	Irene	AENOR

SECTION C. Means of validation

C.1. Desk/document review

The scope of the desk review process is to assess all changes from the project activity as described in the revised project design document, including their negative impact on the estimates of the emissions reductions, the level of accuracy of the monitoring activity, the additionality and scale of the project and the applicability and application of approved methodologies.

The following documents were reviewed as part of the scope of the activity:

- Registered PDD
- Revised PDD version 03.0 dated on 15/01/2018
- Reforestation or afforestation of land currently under agricultural use, AR-AM0004, Version 04
- CDM Validation and Verification Standard for project activities, version 01.0
- Clean Development Mechanism Project Cycle Procedure for project activities, version 01.0
- Clean Development Mechanism Project Standard for project activities, version 01.0
- "Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design document" version 02.0.
- AR-TOOL 14 v 04.2 "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities."
- Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board.

¹ The 7 June 2017 AENOR informed to the PP about changes in the verification team due to Manuel Garcia Rosell left AENOR.

- The applied monitoring methodology, paying close attention to the formulas defined from the AR TOOL 14.
- The influence of data management and the quality assurance and quality control system on the generation and reporting of emission reductions.

A complete list of all documents reviewed is attached in Appendix 3 of this report.

C.2. On site inspection

Duration of on-site inspection: 06/03/2017 to 10/03/2017				
No.	Activity performed on-site	Site location	Date	Team member
1.	Confirmation of the on-site visit planning. Technical description of the project activity. Clarifications related to monitoring procedures. Implementation schedule of project activity. Organizational structure. Changes respect from the registered Project Design Document.	Bosques La Primavera Headquarter	6/3/2017	Manuel García Rosell
2.	Status of project implementation and changes in the project implementation or operation in relation to the revised PDD; Confirmation of the control of the project boundary. Organisational provisions for the establishment and operation of the Project and responsibilities of the different entities involved. Project boundary monitoring: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures. Election of randomly selected 2 inventory sampling plots which were re-measured by the project entity under observation of AENOR.	Nucleus: Organización La Primavera	7/3/2017	Manuel García Rosell
3.	A review of information flows for generating, aggregating and reporting the monitoring parameters; Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the revised PDD; A cross check between information provided in the monitoring report and logbooks, inventories, purchase	Nucleus: Las Guacamayas, Los Cábulos, Padres Montfortianos and Bosques de la Orinoquia	08/03/2017	Manuel García Rosell

	<p>records or similar data sources;</p> <p>A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of monitoring plan.</p> <p>Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>Monitoring of carbon stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>The assumptions used for determining the net anthropogenic GHG removals by sinks; Confirmation that the quality control and quality assurance procedures were in Place.</p> <p>The verification team visited 7 plots in these nucleus to check that the operational and data collection procedures were implemented in accordance with the monitoring plan of the revised PDD and verified the information flows for generating, aggregating and reporting the monitoring parameters. Furthermore, the monitoring equipment was checked in order to confirm that the monitoring practices followed the requirements of the revised PDD and the applicable methodology. Furthermore, AENOR performed a consistency check in order to verify the consistency of the previous measurement and the re-measurement, and to verify the correctness of the reported stand growth.</p>			
4.	<p>A review of information flows for generating, aggregating and reporting the monitoring parameters; Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the revised PDD;</p>	Nucleus: Bosques de la primavera	09/03/2017	Manuel García Rosell

	<p>A cross check between information provided in the monitoring report and logbooks, inventories, purchase records or similar data sources;</p> <p>A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of monitoring plan.</p> <p>Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>Monitoring of carbon stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>The assumptions used for determining the net anthropogenic GHG removals by sinks;</p> <p>The verification team visited 3 plots in this nucleus to check that the operational and data collection procedures were implemented in accordance with the monitoring plan of the revised PDD and verified the information flows for generating, aggregating and reporting the monitoring parameters. Furthermore, the monitoring equipment was checked in order to confirm that the monitoring practices followed the requirements of the revised PDD and the applicable methodology. Furthermore, AENOR performed a consistency check in order to verify the consistency of the previous measurement and the re-measurement, and to verify the correctness of the reported stand growth.</p> <p>Confirmation that the quality control and quality assurance procedures were in Place.</p>			
5.	Final meeting: Summary of main issues detected	Headquarter Bosques La Primavera	10/03/2017	Manuel García

				Rosell.
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Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Sierra	Andres	Consultant	6/3/2017 to 10/3/2017	<p>A cross check between information provided in the monitoring report and logbooks, inventories, purchase records or similar data sources;</p> <p>A check of the monitoring equipment including maintenance performance and observations of monitoring practices against the requirements of monitoring plan.</p> <p>Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>Monitoring of carbon stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p>	Manuel García Rosell
2.	Camacho	Diana	CDM Coordinator	6-10/3/2017	<p>Status of project implementation and changes in the project implementation or operation in relation to the revised PDD;</p> <p>Confirmation of the control of the project boundary.</p>	Manuel García Rosell
3.	Rivera	Jesus	Legal Represent	6-10/3/2017	Status of project implementation and changes in the project implementation or operation in relation to the revised PDD;	Manuel García Rosell

					Confirmation of the control of the project boundary.	
4.	Rivera	María	Commercial and Logistic Manager	7/3/2017	Status of project implementation and changes in the project implementation or operation in relation to the revised PDD; Confirmation of the control of the project boundary.	Manuel García Rosell
5.	Rodriguez	Antonio	Field Coordinator . Bosque La Primavera	6 and 10 March 2017	A cross check between information provided in the monitoring report and logbooks, inventories, purchase records or similar data sources; A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of monitoring plan. Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures; Monitoring of carbon stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures.	Manuel García Rosell
6.	Arias	Jaime	CONIF – PROGRAM A Certificado de Incentivos Forestales - CIF.	7/3/2017	Records from CONIF inspections (eligibility and maintenance). Contracts.	Manuel García Rosell
7.	Fernando Gómez	Luis	Technical Manager. Bosques La	7/3/2017	A cross check between information provided in the monitoring report and	Manuel García Rosell

			Primavera		<p>logbooks, inventories, purchase records or similar data sources;</p> <p>A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of monitoring plan.</p> <p>Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>Monitoring of carbon stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures.</p>	
8.	Sanchez Cabrera	Arbey	La Primavera Municipality	7/3/2017	Legal requirements	Manuel García Rosell
9.	Castaño Valencia	Davis	Coordinator Las Guacamayas	8/3/2017	<p>A cross check between information provided in the monitoring report and logbooks, inventories, purchase records or similar data sources;</p> <p>A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of monitoring plan.</p> <p>Monitoring of forest establishment and forest management: standard operating procedures in place, information flows from data collection to archiving and QA/QC measures;</p> <p>Monitoring of carbon</p>	Manuel García Rosell

					stocks: stratification, foreseen sampling plan, standard operating procedures in place, information flows from data collection to archiving and QA/QC measures.	
10.	Orlando Coronado	Héctor	Contractor Padre Montfortianos	8/3/2017	Records of forestry activities carried out in plantations. Management of plantations.	Manuel García Rosell
11.	Garrido Paredes	Julio Domingo	Contractor Bosques de la Orinoquia	8/3/2017	Records of forestry activities carried out in plantations. Management of plantations	Manuel García Rosell
12.	Chavez	John Javier	Manager School: Gabriela Mistral. Vichada	8/3/2017	Training activities and others	Manuel García Rosell
13.	Enciso	Marlon	University Professional CORPORINOQUIA	8/3/2017	Fulfilment with legal requirements, environment	Manuel García Rosell
14.	Alarcon	Doris	University Professional CORPORINOQUIA	8/3/2017	Fulfilment with legal requirements, environment	Manuel García Rosell
15.	Guarnizo	Juan Esteban	GIS Specialist	9/3/2017	Project boundary and monitoring of parameters.	Manuel García Rosell

C.3. Sampling approach

Appendix 3 states the main documents checked during the verification process.

AENOR paid close attention to the review of the final version of the monitoring report for the present verification event, the calculation of the net anthropogenic GHG removals, the forest inventory raw data, the implementation of the Standard Operating Procedures (SOP) for carrying out the forest inventory, the revised PDD, the validation report and the applicable approved methodology AR-AM0004 (version 04).

AENOR also assessed other documentation related to the project design, the forest establishment and the forest management. AENOR verified a complete GIS package in order to confirm the project implementation and project boundary. The title of lands and right of use for the plots randomly selected were requested to the PP. Likewise, the verification team reproduced with the monitoring crews the application of the procedures and protocols developed to measure the field parameters.

During the desk review, AENOR verified all parameters in section D of the monitoring report and reproduced all calculations of the spreadsheet calculation. AENOR verified equations and values fixed ex ante in the sheet “starting values” of the spreadsheet. Likewise, AENOR verified the correctness of equations applied in the different sheets: OLP MED 02; BO MED 02; BP MED 02;

PM MED 02; RG MED 02 and RC MED 02 of the spreadsheet calculation (Annex_4_Carbon_Balance_AR_V04_01_2018) for the different nucleus and strata. Information above is consistent with the revised PDD.

Regarding data collected during the forest inventory and applied in calculations for this verification event, AENOR performed a consistency check in order to verify the consistency of the previous measurement and the re-measurement of data collected during the inventories in the visited plots to verify the correctness of the reported stand growth.

Moreover, AENOR verified that the operational and data collection procedures were implemented in accordance with the monitoring plan of the revised PDD and verified the information flows for generating, aggregating and reporting the monitoring parameters. Furthermore, the monitoring equipment were checked in order to confirm that the monitoring practices followed the requirements of the revised PDD and the applicable methodology. Quality assurance and quality control procedures have been applied in accordance with the monitoring plan of the revised PDD.

Regarding the sampling approaches during the on-site visit, the verification team followed the Forest Stewardship Council standard on sampling which determines the number of plots to be verified considering the formula $x = 0.8 * (y)^{1/2}$

Where:

x=sample size for verification.

y= total no. of sample plots of the project.

By applying the above formula the sample size for the site visit is: $11 = 0.8 * (192)^{1/2}$

A sample of 12 plots was finally selected by AENOR, one more of required. 12 sample plots have been selected considering time and accessibility of plots during the site visit as the project area is quite large, the forest areas are spread in many small patches and the infrastructure is sometimes difficult. Nevertheless, AENOR selected plots covering all nucleus and the ex-post strata considered by the project. In the field, re-measurements were undertaken. The verification team observed the field team in measuring DBH, Height and the use of GPS. Further, tree species determination was checked. The measurements were all within an acceptable margin considering human error. The verification team can conclude that measurements followed best forest practice.

C.4. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form			
Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines			
Corrections			
Changes to the start date of the crediting period			
Inclusion of a monitoring plan			
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools			
Changes to the project design			
Changes specific to afforestation and reforestation project activities			
Others (please specify)			
Total	-	-	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	During the desk review process, AENOR checked the compliance of the revised
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	<p>PDD (both in tracked-changes and clean version) with the valid version of the applicable PDD form and the Instructions for filling out the PDD form.</p> <p>The project participant has used the latest version of the PDD form for the revised PDD according to the new regulatory documents. All sections, titles, tables have been revised and crosschecked against the Instructions for filling out the PDD and they were correct.</p>
Findings	No finding has been detected regarding the use of the new form.
Conclusion	<p>The proposed revised PDD has adopted the Project Design Document Form for Afforestation or Reforestation CDM Project of Activities (CDM-AR-PDD-FORM) Version 10.0, hence a later version of the PDD form as the registered PDD was carried out in the F-CDM-AR-PDD version 06.0.</p> <p>Once both versions were compared, it is AENOR opinion that the information included in the new form is materially the same as the information in the registered PDD. The changes that are the subject of the request for approval have been highlighted.</p>

D.2. Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.3. Corrections

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.4. Changes to the start date of the crediting period

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.5. Inclusion of a monitoring plan

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

Means of validation	<p>Change n°1: The inclusion in the monitoring plan of the estimation of the shrubs carbon stocks in the protected natural regeneration strata</p> <p>At validation stage, the monitoring plan was designed just for measuring and monitoring the trees in the protected natural regeneration strata, however, the natural regeneration is occurring very slow with bushy type conditions before becoming trees. Thus, the change here proposed is to include the monitoring of shrubs in the protected natural regeneration strata following the AR-TOOL 14 v 04.2.</p> <p>The equation used to estimate the biomass content in the shrubs is:</p> $C_{SHRUB,t} = \frac{44}{12} \times CF_s \times (1 + R_s) \times \sum_i A_{SHRUB,i} \times b_{SHRUB,i}$ <p>AENOR verified that this equation is consistent with equation 26 of the AR TOOL 14 where the parameters mean the following:</p> <p>$C_{SHRUB,t}$= Carbon stock in shrubs within the project boundary at a given point of time in year t; tCO₂-e</p> <p>CF_s = Carbon fraction of shrub biomass; t C (t.d.m.)⁻¹</p> <p>A default value of 0.47 is used unless transparent and verifiable information can be provided to justify a different value. The value used is 0.47</p> <p>R_s= Root-shoot ratio for shrubs; dimensionless.</p> <p>The default value of 0.40 is used unless transparent and verifiable information can be provided to justify a different value. The value used is 0.40</p> <p>$A_{SHRUB,i}$ = Area of shrub biomass estimation stratum i; ha</p> <p>$b_{SHRUB,i}$ = Shrub biomass per hectare in shrub biomass estimation stratum i; t d.m. ha⁻¹</p> $b_{SHRUB,i} = BDR_{sf} * b_{forest} * CC_{shrub,i}$ <p>BDR_{sf}= Ratio of shrub biomass per hectare in land having a shrub crown cover of 1.0 (i.e. 100 per cent) and the default above-ground biomass content per hectare in forest in the region/country where the A/R CDM project activity is located; dimensionless.</p> <p>A default value of 0.10 should be used unless transparent and verifiable information can be provided to justify a different value. The value used is 0.10.</p> <p>b_{FOREST}=Default above-ground biomass content in forest in the region/country where the A/R CDM project activity is located; t d.m. ha⁻¹.</p> <p>In this case, the PP provided a national source such as "The national forest inventory. The tropical humid forest in Colombia. Phillips, et al, IDEAM 2014." Where the value reported is 231,7 t d.m. ha⁻¹.</p> <p>$CC_{SHRUB,i}$= Crown cover of shrubs in shrub biomass estimation stratum i at the time of estimation, expressed as a fraction (e.g. 10 per cent crown cover implies $CC_{SHRUB,i} = 0.10$); dimensionless. This value will be estimated based on the increase in shaft size determined during each monitoring activity. The value used is 0.5 (default value defined by AR-AM Tool 14).</p> <p>AENOR verified during the site visit this situation in the regeneration area, a large area without trees but shrubs, then, the consideration of shrubs carbon stocks is realistic and a reasonable scenario of the current implementation of the project. To estimate the stocks, AENOR verified that equation/formulas and values of parameters above are included in the revised PDD and they are consistent with</p>
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approaches defined in the tool.

In this regard and as a consequence of the first issue identified in the "Request for Issuance Incomplete for the project" received, AENOR has strengthened the explanation regarding the applicability conditions of the AR-AM tool 14 v04.2 regarding the use of the default value 0.5.

The CDM Team requested the following:

"1: The DOE shall determine whether the changes to the registered monitoring plan described in the revised PDD are in compliance with the applied methodologies, standardized baselines and other applied standards or tools, and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. Please refer to VVS PA v1.0 paragraph 297.

In page 15 of validation report, the DOE has validated that a default value of 0.5 has been applied by the parameter CCshrub.i as per AR-AM Tool 14. However, as per AR-AM Tool 14 v04.2 page 22, the default value of 0.5 is applicable when the land is subjected to periodic cycles. The DOE is requested to further substantiate how the condition is met".

In order to validate the appropriateness of the default value 0.5 for the parameter CCshrub, AENOR checked that land was subjected to periodic cycles. The revised PDD states in several sections throughout the document that extensive cattle ranching has been the dominant model of land use based on regular anthropogenic burning of grasslands. This condition is mentioned in section A.1 "Purpose and general description of project activity", bullet c) "Soil use and management history" of the section A.5 "Environmental conditions" and section B.2 "Applicability of methodologies and standardized baselines" of the revised PDD. In these sections it indicates that it is a common practice for cattle ranchers to burn the pastures to promote grass sprout renewal and increase its acceptance in cattle grazing. This is a traditional practice carried out twice a year. In the bullet c) it states that these cyclical fires cause soil degradation affecting the gallery forests, decreasing their density and land cover. Section D also states similar explanations and images from Aa to Af in the revised PDD display the dynamics of the burnings in the baseline case (1988 – 2002) and the recovery of the areas subsequent to implementation of the project activity (2009), for each of the project nuclei

Moreover, during the site visit AENOR received the same input from the local stakeholders regarding cyclical fires in farms and their threat for ecosystems. This fact is also highlighted in the Development Plan of the La Primavera Municipality /25/. The document highlights that "periodic burning of paddocks and savannas by agricultural producers, due to the lack of environmental awareness and not control of these practices, occurs throughout the rural area of the municipality, this produces loss of flora and fauna and economic effects on production. The municipality considers this as an anthropic threat to the soil and surrounding areas including forests".

Another evidence that confirms how the burning process in the region of the Colombian Orinoquia is a cyclic process is the work developed by Armenteras et al (2011) cited by del Campo (2011). Where it shows how annually the Orinoquia is the region with the largest area of burned coverage with an annual presence. /26/

In conclusion, evidence gathered by the AENOR team during the onsite inspection from interviews with local stakeholders, explanations in the revised PDD (with same information that the registered PDD regarding the consideration of burnings as a periodic cycles) and evidence such as the Development Plan or the Armenteras research allow AENOR to confirm that land is subjected to periodic cycles and hence, the value CCshrub=0.5 is correct and applicable to the project activity.

Therefore, AENOR deems that this change to the registered monitoring plan described in the revised PDD is in compliance with the applicable methodology and the applied tool AR-AM tool 14 version 04.2 and do not reduce the level of

accuracy of the monitoring compared with the requirements contained in the registered monitoring plan.

In addition, AENOR validated that the change to the monitoring plan neither affect the applicability of the methodology, nor affect the additionality of the project and its scale. The shrub vegetation within the processes of biomass accumulation in the change of use of land (soils degraded to natural regeneration) is a good practice since represents significant contributions on deposits of carbon on the ground (IPCC 2003) and the applicable methodology allows considering the natural regeneration as a project activity.

AENOR validated that values in section B.6.2 are consistent with the tool. Default values were applied and when possible values from transparent and verifiable data sources such as the value for the parameter "bforest" gathered from a National source: National Forest Inventory. The tropical humid forest in Colombia. Phillips, et al, IDEAM 2014, then, AENOR deems that the GHG removals are not over estimated as a result of the permanent change.

AENOR has validated that parameters in section B.7.1 of the revised PDD were also updated appropriately to monitor this permanent change and the monitoring plan of the revised PDD was correctly updated, as well. Hence, AENOR confirms that information is consistent and complete.

Change nº2: The inclusion of monitoring for trees with a DBH (diameter at the breast height) less than that defined by the allometric equations for all species of the commercial stratum.

This procedure is applied when the defined allometric equations cannot be used due to the diameter at breast height is below the applicable diameter.

AENOR verified that this procedure is considered in the AR-TOOL 14 version 04.2 in its appendix 1 which states: "Where the number of saplings with diameter below the range of diameter applicable to the allometric equation is high, the mean biomass of the saplings in a sample plot can be estimated as follows: (1) Determine the diameter mid-way between the diameter of the smallest sapling existing and the smallest diameter allowed by the allometric equation. (2) Harvest from outside the plot area a few saplings having diameter close to the mid-way diameter and obtain the mean biomass per sapling and (3) Count all the saplings in the sample plot and multiply this number by the mean sapling biomass to obtain their contribution to the plot biomass".

The revised PDD included a new parameter "btree" to monitor the biomass of these saplings at every verification event harvesting from outside the plot area a few saplings with the required diameter and weighting to estimate the mean biomass per tree. The biomass is calculated in dry weight as the revised PDD states. The dry weight is determined at the laboratory or using literature information.

AENOR verified that this procedure is in compliance with the AR-TOOL 14 version 4.2 and does not impact the applicability conditions of the methodology nor affect the additionality of the project and its scale.

As the present PRC is by "issuance track" AENOR verified during the site visit the implementation of the procedure for calculating the biomass of the saplings considered in the monitoring period. AENOR verified records of weights, reproduced the calculations and checked the data sources to determine the dry weight to be applied to the mean biomass (fresh) as well as the conformance of the weight scale. At the first monitoring period, to calculate the dry weight literature sources are used. A value of 30% of the average fresh biomass is considered as dry biomass. The 30% is from the report by López, JT and Ramirez, O. 2014. Evaluation of the influence of fertilization in the nursery on the quality of the *Pinus oocarpa* Schiede plant and its initial development in plantation. Thesis.". At the first verification event, the monitoring of trees with lower DBH was only applied to *Pinus sp.*

	<p>A new scale is used at every verification event, then, providing the technical specifications and the conformance by the manufacturer.</p> <p>AENOR has validated that section B.7.1 has been updated appropriately to monitor this permanent change and the monitoring plan of the revised PDD was correctly updated, as well. Hence, AENOR confirms that information is consistent and complete.</p>
Findings	No findings requested
Conclusion	<p>AENOR has validated that the information included in the revised PDD complies with the requirements stated in the “<i>Instructions for completing the form CDM-AR-PDD-FORM version 10.0</i>”.</p> <p>AENOR has validated that there are two permanent changes (above commented) to the registered monitoring plan and that they comply with the CDM requirements provided in the Project Standard v 01.0 related to the permanent changes to the monitoring plan (paragraph 296,299 of the VVS 01.0).</p> <p>AENOR validated that the revised PDD describes the nature and extent of the non-conforming monitoring in the revised PDD and provide the alternative monitoring for the estimation of carbon content in the shrubs in the protected natural regeneration strata and for the estimation of trees with a DBH lower than required by the allometric equations. Likewise, the estimation of removals is not over-estimated as a result of the permanent changes.</p> <p>AENOR has validated that changes to the registered monitoring plan described in the revised PDD are in compliance with the applied methodology and the AR-TOOL14 v 04.2 and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan (paragraph 297,298 of the VVS 01.0)</p> <p>AENOR has validated that changes to the monitoring plan included in the revised PDD are consistent with the CDM requirements in the CDM Project Standard.</p> <p>AENOR confirms that transfer of information from the old form of the PDD registered to the new form under the issuance track is totally correct and materially the same as the information in the PDD registered as it has been also confirmed in section D.1 above.</p>
Quired	

D.7. Changes to the project design

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.8. Changes specific to afforestation and reforestation project activities

Means of validation	<p>The following types of changes were identified as specific for A/R project activities according to the “Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design document” version 02.0.</p> <p>However as commented above, in the executive summary section, these changes are identified under “changes to the project design” in section B.2.6 of the monitoring report and appendix 7 of the revised PDD to be consistent with the answer from the CDM Team to our query.</p> <p>The following specific changes were identified:</p> <ul style="list-style-type: none"> • Change in the distribution area. <p>At validation stage, the PDD was designed to establish three stand models: The commercial stand model with an area of 25,629 ha, an assisted natural regeneration stand model of 390 ha and a protected natural regeneration area of</p>
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3,000 ha.

However, the reality of the project implementation as AENOR verified during the site visit is that the project boundary presents some areas where the commercial plantations are not propitious to be developed due to soil constraints (low soil conditions). Accordingly, the commercial plantation area was reduced to 20,573.1 ha. This has directly increases the area to protected natural regeneration that increased from 3,000 ha to 8,056 ha. However, the area of the project boundary remains 29,019 ha.

AENOR verified that change in the distribution area is considered in bullet a) of the Guidelines on accounting of specified types of changes in A/R CDM projects activities from the description in registered project design documents v 02.0 Annex 24 EB 66.

AENOR validated by means of the on-site inspection, interviews with the project proponent, field coordinators and the desk review of the revised PDD and supporting documents (GIS package and TARAM spreadsheet calculation) that description of changes in the distribution area in the revised PDD accurately reflects the implementation, operation and monitoring of the project activity (**paragraph 312** of the VVS version 01.0).

AENOR confirms that change in the revised PDD is a complete and accurate reflection of the actual project information (**paragraph 313** VVS v01.0).

- Change in the stratification

The registered PDD considered three strata: Commercial tree stand model, Assisted Natural Regeneration strata and Protected Natural Regeneration strata.

However, during the monitoring activities, the sampled lots with the same species, age and handling, showed important differences in its development, due to the difference in quality of site, causing a wide range in its developments and hence variations in the content of biomass. Therefore, new sub stratification was created in the commercial strata but considering the content in biomass. The new sub-strata were identified as low, steady, middle and high.

AENOR verified that change in the stratification is considered in bullet k) of the Guidelines on accounting of specified types of changes in A/R CDM projects activities from the description in registered project design documents v 02.0 Annex 24 EB 66.

AENOR checked, during the site visit, plots in all these new sub-strata to corroborate the real differences in the growths exit between the commercial strata initially defined. This approach was also confirmed with the interviews of field monitoring crews and the desk review of the revised PDD and supporting documents such as the forestry inventory database gathering during the monitoring activities of the PP and the re-measurements carried out during the AENOR site inspection. Based on these cross-checks, AENOR confirms that description of changes in the stratification of the project in the revised PDD accurately reflects the implementation, operation and monitoring of the project activity (**paragraph 312** of the VVS version 01.0).

AENOR confirms that change in the revised PDD is a complete and accurate reflection of the actual project information (**paragraph 313** VVS v01.0).

- Change due to the inclusion of *Pinus oocarpa*.

This change refers to the inclusion of this specie *Pinus oocarpa* on the commercial stand model. The inclusion of this specie is because of seeds were mixed with a lot of acquired seeds of *Pinus caribaea*. Both species are very similar and require the same environment conditions of adaptations. The project proponent just could identify the *Pinus oocarpa* in the adulthood. Considering that the current situation of

the project includes some areas of this specie, the PP decided to include it.

AENOR verified that change in the specie composition is considered in bullet b) of the Guidelines on accounting of specified types of changes in A/R CDM projects activities from the description in registered project design documents v 02.0 Annex 24 EB 66.

AENOR verified during the on-site inspection the presence of the *Pinus oocarpa* in some areas (104.6 ha according to the revised PDD) which was confirmed in the GIS package provided and interviews with PP, then, description of the change due to the inclusion of *Pinus oocarpa* in the revised PDD accurately reflects the implementation, operation and monitoring of the project activity (paragraph 312 of the VVS version 01.0).

AENOR confirms that change in the revised PDD is a complete and accurate reflection of the actual project information (**paragraph 313** VVS v01.0).

- Change in equations to estimate the volume or biomass species of commercial stratum.

The PP defined new equations to determine the biomass or volume content of the species. AENOR verified that selected equations were in compliance with the tools "Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A / R CDM project activities V01.0.1 " and "Demonstrating appropriateness of allometric equations for estimation of aboveground biomass in A / R CDM project Activities V.1 ". According to them "a species-specific or group-of-species-specific ... equation derived from trees growing in edapho-climatic conditions similar to those in the project area is considered appropriate, and hence can be used for ex post estimation of tree biomass, if at least one of the following conditions is satisfied:(a) The equation is used in the national forest inventory, or the national GHG inventory, of the host Party; (b) The equation has been used in commercial forestry sector of the host Party for ten years or more; (c) The equation was derived from a data set of at least 30 sample trees, and the value of coefficient of determination (R²) obtained was not less than 0.85". AENOR verified that equations were based on a data set of at least 30 sample trees and the coefficient of determination is in all cases >0.85 as required by the tools. Therefore, AENOR can conclude that this change does not result in a decrease in precision of the estimate of tree biomass as accepted by the 'Guidelines on accounting of specified types of changes in AR CDM project activities from the description in registered PDD' (version 02.0).

The equations used were allometric that related a dasometric variable with the total biomass of the tree; in cases where this equation was not available, volume equations were applied and the basic density method of the wood was taken to total biomass ". It should be noted that for the region there are no equations for the project species, but there are equations from official national sources. For pine species, equations developed in regions with similarity of conditions and management were sought as the tools request.

The equations were included in the revised PDD as well as the sources used that were provided to AENOR.

For *Pinus caribaea*:

$\ln(\text{Vol}) = -9.66 + 1.834 \cdot \ln(\text{DAP}) + 1.007 \ln(\text{ht})$. Source Salazar, 1985
 $\text{BA} = 0.887 + ((10486 \cdot (\text{DAP})^2.84) / (((\text{DAP})^2.84) + 376907))$. Source IPCC 2003

In this case, the PP considered two equations. The equation developed by Salazar, 1985 as it is specific for the specie *Pinus caribaea*:

$\ln(\text{Vol}) = -9.66 + 1.834 \cdot \ln(\text{DAP}) + 1.007 \ln(\text{ht})$

This equation complies with the conditions in the tools but it is applicable for a $\text{DAP} \geq 10$ cm. This fact is the reason to include the equation:

	<p>$BA=0.887+((10486*(DAP)^{2.84})/(((DAP)^{2.84})+376907))$.</p> <p>This latter equation is used for $DAP < 10$ cm and it is not specie-specific. It complies with the conditions of the tools, as well and, it is recommended by the IPCC /44/ for the genus <i>Pinus</i> sp.</p> <p>Therefore, the equation not specie-specific is used for $DAP < 10$ cm and although this equation could cover the whole range of DAP measured in the monitoring, the specific equation for <i>Pinus caribaea</i> is used for $DAP \geq 10$ cm for sake of accuracy and to follow the conditions in the tools.</p> <p>For <i>Pinus oocarpa</i>:</p> <p>$V(m^3) = ((0.442123) \times (DAP/100)^2 \times Ht) + 0.000178$. Source: Inderena, 1989. OIMT-CONIF-MINAMBIENTE, 1999.</p> <p>For <i>Acacia mangium</i>:</p> <p>$BA=0.204*(DAP)^{2.2801}$. Source: National Carbon Protocol Colombia. Yepes et al, IDEAM, 2011.</p> <p>For <i>Eucalyptus pellita</i> :</p> <p>$BA=1.22*(DAP)^2 \times Ht \times 0.01$. Source: National Carbon Protocol Colombia. Yepes et al, IDEAM, 2011.</p> <p>For <i>Tectona grandis</i>:</p> <p>$BA=0.131748*D^{2.406413}$. Source: Torres, D.A. 2004</p> <p>Where $DAP=DBH$=Diameter at breast height and $BA=ABG$=Above ground biomass.</p> <p>To convert the AGB to BGB (below ground biomass) a root shoot ratio of 0.27 (default value from IPCC is used). This value has not changed regarding the registered PDD. When volume equations are used the wood density is used. Values are also provided in the revised PDD with sources used.</p> <p>T. grandis: 0.55 (El Semillero, USDA 2006b., Peter 1993); A. mangium: 0.53 (El Semillero); E. pellita: 0.48 (CONIF); P. caribaea and P. oocarpa: 0.55 (USDA 2006a); Several species (ANR and PNR stand models): 0.58 (El Semillero, USDA 2006a, IPCC 2003). These values have not changed regarding registered PDD.</p> <p>AENOR verified that change in the specie composition is considered in bullet p) of the Guidelines on accounting of specified types of changes in A/R CDM projects activities from the description in registered project design documents v 02.0 Annex 24 EB 66.</p> <p>AENOR verified that information in the revised PDD is consistent with sources considered to gather the equations, then, the revised PDD accurately reflects the implementation, operation and monitoring of the project activity (paragraph 312 of the VVS version 01.0).</p> <p>AENOR confirms that change in the revised PDD is a complete and accurate reflection of the actual project information (paragraph 313 VVS v01.0).</p>
Findings	No findings reported
Conclusion	<p>AENOR confirms that these four specific changes for A/R project activities applied to the present project activity comply with the requirements in the CDM Project Standard version 01.0 (paragraph 311 VVS v01.0).</p> <p>AENOR confirms that these four specific changes for AR project activities do not impact the additionality of the project and its scale. The change do not impact or affect to the baseline identified at validation. The applicability conditions of the methodology are not impacted by all these four changes. In addition, these changes do not result in a decrease in precision of the estimate of biomass but an increase in the accuracy of reflecting the implementation, operation and monitoring</p>

SECTION E. Internal quality control

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review before submission to the CDM-EB. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the post registration changes. The technical review team has collectively all the competence required including the technical area(s).

SECTION F. Validation opinion

AENOR was contracted to perform the verification of the CDM project activity: "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia" (Registration Ref. No. 9199) for the monitoring period from 02/06/2005 to 16/02/2016, and during the verification process, some post-registration changes were identified.

AENOR has performed the validation of the proposed changes according to the approved methodology AR-AM0004 version 04 Reforestation or afforestation of land currently under agricultural use, the VVS (Version 01.0), the PS (version 01.0) and PCP (Version 01.0).

AENOR planned and performed its work to obtain the information and explanations considered necessary to provide sufficient evidence to give reasonable assurance that the level of accuracy of GHG emission reductions, prepared on the basis of the monitoring plan included in the revised PDD compared with registered monitoring plan of the project activity is not adversely affect. This assessment included:

- Collection of evidence supporting the reported data.
- Checking whether the provisions of the revised monitoring plan, were consistently and appropriately applied.

This revision improves the accuracy of information provided and consistency in the revised PDD and the monitoring plan.

Furthermore, AENOR confirms that:

- The transfer of information from the old form of the PDD registered (F-CDM-A/R-PDD version 06.0) to the new form under issuance track (CDM-AR-PDD FORM version 10.0) is totally correct and materially the same as the information in the PDD registered on 01/03/2013.
- The proposed revision points have been described, and an assessment has been provided to substantiate the reason for each of the proposed revision points of the revised PDD and monitoring plan, using objective evidences.
- The permanent changes proposed do not affect in any case to the correct fulfilment of the monitoring plan. Those changes are necessary to include more accurate information regarding the project implementation and operation of the activities and the monitoring plan of the registered PDD.
- The Project has correctly monitored all the parameters according to the new revised monitoring plan, applied methodology and tools in a conservative and accurate way and the changes occurred do not have impact on: the applicability and application of the applied methodology under which the project activity has been registered, the additionality of the project activity and the scale of the project activity.

For all the reasons stated above, AENOR is submitting a request for approval of the proposed changes by the issuance track as chosen by the project participants according to the paragraph 130 of the CDM Project Cycle Procedure version 01.0. AENOR is submitting the post registration changes for acceptance by the Board as part of the present request for issuance of CERs for the period 02/06/2005 to 16/02/2016.

The proposed changes affecting to the registered monitoring plan are in accordance with the approved methodologies applicable to the project activity and ensuring the conservativeness of the emission reductions calculation.

The proposed specific changes to AR project activities neither impact the applicability conditions of the methodology and Base line, nor impact the additionality and the scale of the project and the accuracy is not reduced.

Madrid, 2 April 2018

José Luis Fuentes Pérez
| Team Leader



Irene Carrascón
Authorised person



Appendix 1. Abbreviations

Abbreviations	Full texts
AENOR	AENOR INTERNACIONAL S.A.U
ARAM0004	Reforestation or afforestation of land currently under agricultural use
CAR	Corrective action request
CDM	Clean development mechanism
CDM-EB	CDM Executive Board
CER	Certified emission reduction
CL	Clarification request
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated national authority
DOE	Designated operational entity
ER	Emission reduction
FAR	Forward action request
GHG	Greenhouse gas(es)
MoV	Means of verification
MP	Monitoring Plan
MR	Monitoring report
PCP	Clean Development Mechanism Project Cycle Procedure for project activities (Version 01.0)
PDD	Project Design Document
PP	Project participants
PS	Clean Development Mechanism Project Standard for project activities (Version 01.0)
tC	Carbon tonnes
tCO ₂ eq	Carbon dioxide equivalent tonnes
UNFCCC	United Nations Framework Convention on Climate Change
VVS	CDM Validation and Verification Standard for project activities version 01.0

Appendix 2. Competence of team members and technical reviewers

Necessary skills and competences to undertake the verification are confirmed by the qualification certificate of all team involved in the process.

CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia".

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: Manuel García Rosell

CDM Team Leader: Yes

CDM Verifier: Yes

CDM Technical Reviewer: N/A

External Technical Expert: N/A

Technical areas related with the project activity:

TA 14.1. Afforestation/Reforestation

José Magro González

Authorised person



CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia".

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: José Luis Fuentes Pérez

CDM Team Leader: Yes

CDM Verifier: Yes

CDM Technical Reviewer: N/A

External Technical Expert: N/A

Technical areas related with the project activity:

TA 14.1. Afforestation/Reforestation

José Magro González

Authorised person



CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project “CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia”.

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction “Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities” IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: Mercedes García Madero

CDM Team Leader: N/A

CDM Verifier: Yes

CDM Technical Reviewer: N/A

External Technical Expert: N/A

Technical areas related with the project activity: N/A

José Magro González

Authorised person



CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia".

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: Alfonso Medrano

CDM Team Leader: N/A

CDM Verifier: Yes

CDM Technical Reviewer: N/A

External Technical Expert: N/A

Technical areas related with the project activity: N/A

José Magro González

Authorised person



CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia".

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: Luis Javier Arribas Alonso

CDM Team Leader: N/A

CDM Verifier: N/A

CDM Technical Reviewer: Yes

External Technical Expert: N/A

Technical areas related with the project activity: N/A

José Magro González

Authorised person



CERTIFICATE OF QUALIFICATION

Subject: Verification and Technical Review for the project "CDM Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia".

Madrid, 23/01/2018

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the verification process of the above mentioned project activity:

Name: Asier Torres González

CDM Team Leader: N/A

CDM Verifier: N/A

CDM Technical Reviewer: Yes

External Technical Expert: N/A

Technical areas related with the project activity:

14.1 Afforestation/Reforestation

José Magro González

Authorised person



Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1	PP	PDD registered	Version 02 12/12/2012	UNFCCC
2	PP	PDD revised	Version 03.0 15/01/2018	PP
3	UNFCCC	Selected methodology: Reforestation or afforestation of land currently under agricultural use, ARAM0004	Version 04	UNFCCC
4	UNFCCC	CDM Validation and Verification Standard for project activities.	Version 01.0	UNFCCC
5	UNFCCC	Clean Development Mechanism Project Cycle Procedure for project activities (Version 01.0).	Version 01.0	UNFCCC
6	UNFCCC	Clean Development Mechanism Project Standard for project activities (Version 01.0).	Version 01.0	UNFCCC
7	UNFCCC	Calculation of the number of sample plots for measurements within A/R CDM project activities.	Version 02.1.	UNFCCC
8	UNFCCC	"Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design document".	Version 02.0.	UNFCCC
9	UNFCCC	AR-TOOL 14: Estimation of Carbon stocks and change in carbon stocks of trees and shrubs in AR CDM project activities	Version 04.2	UNFCCC
9	PP	GIS package	-	PP
10	AENOR	Field audit annotations	-	AENOR
11	AENOR	Interviews with project proponent and other stakeholders	-	AENOR
12	PP	"Monitoring Plan, annex 2"	-	PP
13	PP	Sampling calculations	-	PP
14	PP	Records of weight small trees	-	PP
15	Manufacturer	Technical specifications and compliance by manufacturer of the scale.	-	PP
16	López, JT Ramirez, O. 2014	Report: Evaluation of the influence of fertilization in the nursery on the quality of the <i>Pinus oocarpa</i> and its initial development in plantation	-	PP
17	Salazar, R. 1985	Productividad del <i>Pinus caribaea</i> var. <i>hondurensis</i> Barr. Y Golf. En Turrialba, COSTA RICA. IPEF.	-	PP
18	IPCC 2003	Good Practice Guidance for Land Use, Land-Use Change and Forestry. Penman, J. Gytarsky, M., Hiraishi, T., Krug, T., Kruger, D., Pipatti, R., Buendia, L., Miwa, K., Ngara, T., Tanabe K., and Wagner F Editors.	-	IPCC

		Intergovernmental Panel on Climate Change.		
19	INDERENA	Posada F, 1989. "Compilación de tablas de volumen para árboles en pie. Instituto Nacional de los Recursos Naturales Renovables y del Ambiente" -INDERENA.	-	PP
20	OIMT-CONIF-MINAMBIENTE, 1999	Vélez, F., Ortiz R. 1999. "Estimador del crecimiento Forestal V.1. Organización Internacional de las Maderas Tropicales –OIMT, Corporación Nacional de Investigación y Fomento Forestal" –CONIF, Ministerio del Medio Ambiente de Colombia –MINAMBIENTE	-	PP
21	IDEAM	Yepes A.P., Navarrete D.A., Duque A.J., Phillips J.F., Cabrera K.R., Álvarez, E., García, M.C., Ordoñez, M.F. 2011. "Protocolo para la estimación nacional y subnacional de biomasa - carbono en Colombia. Instituto de Hidrología, Meteorología, y Estudios Ambientales". IDEAM- Bogotá D.C., Colombia.	-	PP
22	Torres, D.A 2004	Torres, D.A 2004. "Modelación del crecimiento y producción en volumen y biomasa de la teca. Trabajo de Grado de Ingeniería Forestal, Departamento de Ciencias Forestales, Facultad de Ciencias Agropecuarias, Universidad Nacional de Colombia, Medellín"	-	PP
23	PP	Annex_4_Carbon_Balance_AR_V04_01_2018"	-	PP
24	PP	Taram_CALCULATION-01_2018	-	PP
25	La Primavera	Development Plan of La Primavera Municipality: https://ceo.uniandes.edu.co/images/Documentos/Plan%20de%20Desarrollo%20La%20Primavera,%20Vichada%202016-2019.pdf	-	PP
26	Alvaro Del Campo	http://www.fire.uni-freiburg.de/GlobalNetworks/SouthAmerica/Incendios-de-la-Cobertura-Vegetal-en-Colombia-Tomo-I-2011.pdf	-	PP

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CLs from this validation

CL ID	xx	Section no.	Date: DD/MM/YYYY
Description of CL			
n/a			
Project participant response			Date: DD/MM/YYYY
Documentation provided by project participant			
DOE assessment			Date: DD/MM/YYYY

Table 2. CARs from this validation

CAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of CAR			
n/a			
Project participant response			Date: DD/MM/YYYY
Documentation provided by project participant			
DOE assessment			Date: DD/MM/YYYY

Table 3. FARs from this validation

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
n/a				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY