

VERIFICATION REPORT FOR THE MADRE DE DIOS AMAZON REDD PROJECT



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Summary:

This report describes the verification audit of the Madre de Dios REDD Project ("the project"), a Reduced Emissions from Deforestation and Degradation (REDD) project located in the region of Madre de Dios, Peru, that was conducted by SCS. The purpose of the verification audit was to assess the conformance of the project with the verification criteria. The verification audit was performed through a combination of document review, interviews with relevant personnel and on-site inspections. The project complies with all of the verification criteria, and the assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria.

Table of Contents

1	Introduction	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of assurance	5
1.4	Summary Description of the Project	5
2	Validation Process, Findings and Conclusion	6
2.1	Validation Process	6
2.2	Validation Findings.....	6
2.2.1	Gap Validation.....	6
2.2.2	Methodology Deviations.....	6
2.2.3	Project Description Deviations	7
2.2.4	New Project Activity Instances.....	8
2.3	Validation Conclusion.....	8
3	Verification Process	9
3.1	Method and Criteria.....	9
3.2	Document Review	9
3.3	Interviews	10
3.4	Site Inspections.....	11
3.5	Resolution of Any Material Discrepancy	11
4	Verification Findings.....	12
4.1	Project Implementation Status	12
4.2	Accuracy of GHG Emission Reduction or Removal Calculations	12
4.3	Quality of Evidence to Determine GHG Emission Reductions or Removals	17

4.4	Management and Operational System	17
5	Verification conclusion	17
	Appendix A: Verification Findings	19
	Appendix B: Non-Permanence Risk Assessment.....	36
	Appendix C: Market Leakage Assessment.....	43

1 INTRODUCTION

1.1 Objective

The purpose of the verification audit activity was to conduct an independent assessment of the Madre de Dios Amazon REDD Project (“the project”) to determine whether the quantification of GHG emission reductions for the project during the period 1 January 2009 through 31 December 2012 (“the monitoring period”) complies with the verification criteria, as set out in the guidance documents listed in Section 1.2 of this report.

1.2 Scope and Criteria

In accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined as follows:

- The project and its baseline scenarios;
- The physical infrastructure, activities, technologies and processes of the project;
- The GHG sources, sinks and/or reservoirs that are applicable to the project;
- The types of GHGs that are applicable to the project; and
- The reporting period, as discussed in Section 5 of this report.

In accordance with Section 5.3.1 of the VCS Standard, the criteria for verification was the VCS Version 3, including the following documents:

- VCS Program Guide
- VCS Standard
- VCS AFOLU Requirements
- VCS Non-Permanence Risk Tool

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document.

The assessment was also performed against the relevant versions of the framework document and modules of the VM0007 methodology, as indicated in Section 2.1 of the validated project description, as well as the requirements of the validated project description itself.

1.3 Level of assurance

In accordance with Section 5.3.1 of the VCS Standard, the level of assurance of this report is reasonable.

1.4 Summary Description of the Project

The project is located in the region of Madre de Dios, in Peru, and is aimed at reducing emissions related to unplanned deforestation.

2 VALIDATION PROCESS, FINDINGS AND CONCLUSION

2.1 Validation Process

The process for validation of the methodology and project description deviations described below was identical to, and occurred concurrently with, the verification process described in Section 3.1 below.

2.2 Validation Findings

2.2.1 Gap Validation

2.2.2 Methodology Deviations

No methodology deviations were noted at validation. The following deviations to the methodology were noted at verification.

Methodology deviation 01

Equation 13 of the M-MON module requires that the length of skid trails in stratum i in time t be multiplied by a “skid trail emissions factor” to determine the emissions from skid trails in stratum i at time t . A deviation from this approach was applied for PCAs 8 and 9 in the Maderacre concession and PCAs 8-10 in the Maderyja concession, as the length and width of the skid trails in the above PCAs had not been measured. It was indicated to the audit team during on-site activities that it was not feasible to perform measurements of these skid trails because, as of the release of Version 2.0 of the M-MON module (released in 23 November 2011), sufficient time had passed since construction of the skid trails to make measurements difficult. The audit team can attest that it can be difficult to accurately establish the boundaries of skid trails some time after harvest, due to vegetative growth. As a work-around to this situation, a ratio estimator was applied, using the known skid trail emissions from PCAs 10 and 11 of Maderyja (where measurements were undertaken) to predict skid trail emissions for the remaining PCAs using harvested volume as the predictor variable. The approach undertaken was determined by the audit team to be theoretically sound and competently carried out. While it would not be appropriate to engage in such a deviation during every monitoring period, the discrepancy is a deviation to the criteria and procedures for monitoring and is unlikely to impact the conservativeness of the quantification of GHG emission reductions in this monitoring period. It is the hope and expectation of the audit team that all monitoring tasks required by the M-MON module will be fully carried out in future monitoring periods, to ensure ongoing conformance to the VCS rules.

Methodology deviation 02

Section 5.1 of the M-MON module requires that “A change in source data may only occur if the images based on interpretation of the new data overlap the images based on interpretation of the old data by at least 1 year and they cross calibrate to acceptable levels based on commonly used methods in the remote sensing community.” The project does not conform to the temporal aspect of this requirement, which appears to require that images from two different points of time be available from the “new” and “old” sources, and that the temporal overlap between the different sets of images be at least one year. However, the audit team was provided with a Landsat TM 5 image from July 2010 to observe in comparison with the ResourceSat-1 imagery from July and September 2012. As minimal LU/LC change occurred between the dates of acquisition of the Landsat and ResourceSat-1 images, the cross-calibration between the images produced by the two sources was readily observed. Therefore, this

deviation is appropriate as a deviation to the criteria and procedures for monitoring, as there is no possibility that it could impact the conservativeness of the quantification of GHG emission reductions.

Methodology deviation 03

For the quantification of uncertainty in emissions from construction of skid trails, logging decks and logging roads, the M-MON module requires that “The uncertainty in carbon stocks estimates and resulting emissions must be included in the estimation of with-project scenario uncertainty calculations performed using the module X-UNC (VMD0017) during each verification event unless indisputably conservative estimates are used”. The uncertainty in carbon stock estimates was not included in the estimation of with-project scenario uncertainty calculations.

For the quantification of uncertainty in skid trail emissions, the audit team agrees that the uncertainty in carbon stock estimates does not have to be included, as discussed in Section 4.2 below. However, for quantification of uncertainty in emission from creation of logging decks and logging roads, sufficient evidence was not provided to the audit team to demonstrate that indisputably conservative estimates of carbon stock have been used. However, the total percent uncertainty calculated by the audit team (using statistically sound calculations and fully accounting for the uncertainty in the carbon stock estimates employed in logging deck and logging road emissions) was far less than 15%, as was the uncertainty reported by project personnel. Therefore, no deduction for uncertainty was required on the basis of either uncertainty calculation. On this basis, the deviation, which applies to the criteria and procedures for monitoring, can be considered to have no impact conservativeness of the quantification of GHG emission reductions, and is therefore considered appropriate with respect to the present monitoring period. It is noted that such a discrepancy with respect to the requirements of the methodology may prove to be a material discrepancy in a future monitoring period.

2.2.3 Project Description Deviations

The following deviations to the project description were noted at verification. None of the deviations described below were considered by the audit team to impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Project description deviation 01

On page 199 of the project description, the monitoring plan states that “Landsat type satellite images are used”. However, for monitoring of deforestation during the monitoring period, imagery from the sensor ResourceSat-1 was used in place of imagery from any of the Landsat satellites. The M-MON module allows for such a change in sensors, stating that “If remotely sensed data have become available from new and higher resolution sources (e.g. from a different sensor system) during this period then it is possible to change the source of the remotely sensed data... A change in source data may only occur if the images based on interpretation of the new data overlap the images based on interpretation of the old data by at least 1 year and they cross calibrate to acceptable levels based on commonly used methods in the remote sensing community” (Section 5.1). As indicated to the audit team, ResourceSat-1 provides a 25-meter pixel size, and is therefore a higher-resolution source than Landsat (which provides a 30-meter pixel size). Furthermore, use of a sensor other than Landsat 5 and Landsat 7, which were used for the remote sensing tasks required during the baseline assessment (see page 363 of the validated project description), is justified on the basis that Landsat 5 was decommissioned in early 2013 (as confirmed through review of <http://landsat.gsfc.nasa.gov/about/landsat5.html>, accessed 6 May 2013) and Landsat 7

is currently in SLC-off mode, thus impacting the usability of data from this sensor (<http://landsat.gsfc.nasa.gov/about/landsat7.html>; accessed 6 May 2013). In addition, the audit team was able to confirm that appropriate procedures were undertaken to ensure good overlap between the two image sources. Finally, the audit team was provided with a Landsat TM 5 image for comparison to the ResourceSat-1 imagery. The Landsat image covered the area where the most deforestation had been observed in the leakage belt, directly to the east of the project area, and the correspondence between the Landsat imagery and ResourceSat-1 imagery in the deforested areas was readily apparent. In addition, the forested status of the adjacent section of the project area was consistently apparent across image sources. Given that the remote sensing of deforestation was undertaken manually (through methods confirmed as sound by the validation and verification audit teams, respectively) for both the baseline analysis and project monitoring, evidence of visual similarity constituted appropriate evidence of the required cross-calibration. However, it should be noted that the Landsat TM 5 image did not overlap the ResourceSat-1 images by at least a year, as described under “methodology deviation 02” in Section 2.2.2 above.

Project description deviation 02

In pages 199-200 of the project description, the monitoring plan describes a procedure for supervised classification that involves an initial classification using the “maximum likelihood” methods, which is later quality-controlled and corrected through visual observation. As demonstrated to the audit team, this procedure was not followed. Instead, the classification was manually produced using the “visual interpretation” method. While this constitutes a deviation to the monitoring plan, it is more consistent with the procedure used for the baseline analysis, as described in page 365 of the project description. Therefore, it conforms more exactly to the M-MON module, which states that “In general, the same source of remotely sensed data and data analysis techniques must be used within the period for which the baseline is fixed” (Section 5.1). Through review of the document “Reducing greenhouse gas emissions from deforestation and degradation in developing countries: a sourcebook of methods and procedures for monitoring, measuring and reporting, GOFC-GOLD Report version COP13-2” (http://www.gofc-gold.uni-jena.de/redd/sourcebook/Sourcebook_Version_June_2008_COP13.pdf; accessed 22 April 2013), which the M-MON module references as providing mandatory guidance regarding the remote sensing task, the visual interpretation method is considered a valid method. On the basis of the above, the deviation to the project description was considered to be justified by the audit team.

2.2.4 New Project Activity Instances

2.3 Validation Conclusion

The methodology deviations described in Section 2.2.2 above conform to Section 3.5.1 of the VCS Standard. The project description deviations described in Section 2.2.3 above conform to Section 3.6.1 of the VCS Standard. Proceeding on the assumption that all other aspects of the project were confirmed at validation to conform to the VCS rules, the audit team can attest that the project remains compliant with the VCS rules.

3 VERIFICATION PROCESS

3.1 Method and Criteria

The verification was performed through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 3.2 through 3.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 3.5, findings were issued to ensure that the project was in full conformance to all requirements.

Prior to the site inspections documented in Section 3.4 below, a sampling plan was assembled that highlighted the areas of highest risk of material error. These included the reported wood volumes and the reported measurements of skid trails, logging roads and logging decks. A verification plan was constructed that took the sampling plan into account.

3.2 Document Review

The monitoring report and supporting documentation were carefully reviewed for conformance to the verification criteria.

In addition to the monitoring report, the following written documents (e.g., reports, memos, land deeds and titles) were reviewed to ensure conformance of the project to the VCS rules and the methodology:

Document (Date Created)	Date Reviewed
Forest Stewardship Council (FSC) certificate issued to Maderera Río Acre S.A.C. ("Maderacre") with a period of validity from 26 January 2007 to 25 January 2012 (Certificate Registration Code SW-FM/COC-002176)	April 2013
FSC certificate issued to Maderacre with a period of validity from 26 January 2012 to 25 January 2017 (Certificate Registration Code SW-FM/COC-002176)	April 2013
Audit report for FSC 2012 annual audit of Maderacre (dated 7 December 2012)	April 2013
Approved concession contract for Maderacre (last signature 31 May 2006)	April 2013
"Annotacion de Inscripcion" for Maderacre (6 May 2006)	April 2013
Management plan for Maderacre (November 2011)	April 2013
Forest Stewardship Council (FSC) certificate issued to Maderera Río Yaverija S.A.C. ("Maderyja") with a period of validity from 26 January 2007 to 25 January 2012 (Certificate Registration Code SW-FM/COC-002175)	April 2013
FSC certificate issued to Maderyja with a period of validity from 15 February 2012 to 14 February 2017 (Certificate Registration Code SW- FM/COC-002175)	April 2013
Audit report for FSC 2012 annual audit of Maderyja (dated 12 December 2012)	April 2013
Approved concession contract for Maderyja (last signature 1 June 2006)	April 2013

Document (Date Created)	Date Reviewed
"Annotacion de Inscripcion" for Maderyja (6 May 2006)	April 2013
Management plan for Maderyja (September 2011)	April 2013

3.3 Interviews

Interviews constituted an important component of the audit process. The following personnel associated with the project proponent and/or implementing partner were interviewed. The phrase "throughout audit" under "Date Interviewed" indicates that the individual in question was interviewed on multiple occasions throughout the audit process.

Individual	Affiliation	Date Interviewed
Tatiana Lapeyre Zárate	-	21 and 23 April 2013
Lizardo Fachín Malaverri	Instituto de Investigaciones de la Amazonía Peruana	21 April 2013
Nelson Kroll Kohel	Maderacre	23-24 April 2013
Samuel Parra Rengifo	Maderacre	23-24 April 2013
José Luis Canchaya Toledo	Maderacre	23 April 2013
Israel Franco Cisneros	Maderyja	23 April 2013
Milagros Jauregui Robladillo	Maderacre	23-24 April 2013
Pierina Gonzales Jara	Maderacre	23-24 April 2013
Maritza Ureta Porras	Maderyja	23 April 2013
Reynaldo Pacheco	Maderacre	24 April 2013

The following personnel not associated with the project proponent and/or implementing partner were interviewed.

Individual	Affiliation	Date Interviewed
William Arauz	Forestry Technical Administration of the Province of Tahuamanu	25 April 2013

3.4 Site Inspections

The objectives of the on-site inspections performed were to:

- Select samples of data from on-the-ground measurements for verification in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 5.1.3 of the VCS Standard;
- Perform a risk-based review of the project area and project activities to ensure that the project conformed to the requirements of the VCS rules and the methodology throughout the monitoring period; and
- Ensure that monitoring was conducted in accordance with the requirements of the validated monitoring plan, the methodology employed and the VCS rules.

In fulfilment of the above objectives, the audit team performed an on-site inspection of the project area on the dates 21-25 April 2013. The main activities undertaken by the audit team were as follows:

- Interviewed project personnel (see Section 2.3 of this report) to gather information regarding the monitoring procedures and project implementation;
- Interviewed project personnel to confirm the appropriateness of the non-permanence risk score claimed for the project (see Appendix B for further details);
- Conducted appropriate cross-checks to confirm the validity of the data used to quantify the parameters required to be monitored by the methodology;
- Conducted a field review of measurement systems employed to determine the area of skid trails, logging decks and logging roads, as required by the methodology;
- Toured Parcela de Corta Anual (PCA) 11 of the Maderacre concession to observe the forest management systems employed as part of the project activity.

3.5 Resolution of Any Material Discrepancy

Any potential or actual material discrepancies identified during the assessment process were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

Non-Conformity Report (NCR): An NCR signified a material discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement.

New Information Request (NIR): An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement.

Opportunity for Improvement (OFI): An OFI indicated an area that should be monitored or ideally, improved upon. OFI's were considered to be an indication of something that could become a non-

conformity if not given proper attention, and were sometimes issued in the case that a non-material discrepancy was identified. OFIs were considered to be closed upon issuance.

All findings issued by the audit team during the verification process have been closed. In accordance with Section 5.3.6 of the VCS Standard, all findings issued during the verification process, and the impetus for their closure, are described in Appendix A of this report.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Section 4 of M-MON requires, as an applicability condition, that “If emissions from logging are not omitted as *de minimis*, logging may only take place within forest management areas that possess and maintain a Forest Stewardship Council (FSC) certificate for the years when the selective logging occurs”.

The audit team confirmed the following through review of the FSC Certificate Database website (<http://info.fsc.org/>; accessed 9 April 2013):

- FSC certificate SW-FM/COC-002175, issued to Maderyja, was first issued 26 January 2007 and last issued 3 April 2013 (with an expiration date of 14 February 2017)
- FSC certificate SW-FM/COC-002176, issued to Maderacre, was first issued 26 January 2007 and last issued 26 January 2012 (with an expiration date of 25 January 2017)

The audit team confirmed, through review of the above certificates (see Section 3.3 above), that the certificate for Maderacre was valid throughout the monitoring period and the certificate for Maderyja was valid for the part of the monitoring period in which timber was extracted from the Maderyja concession (the certification for Maderyja appears to have lapsed for the period 26 January 2012 to 14 February 2012, but no harvest activities occurred on the Maderyja concession in 2012). The audit team also confirmed, through review of the areas described in audit reports for Maderacre and Maderyja (see Section 3.3 above) that the area within the geographic scope of each certificate corresponded to the area of the respective concession, and thus management activities on the entire project area were within the scope of an FSC certificate for the duration of the monitoring period.

The audit team visited PCA 11 of the Maderacre concession and observed the forest management practices of the project activity. The audit team also confirmed, with personnel from the Forestry Technical Administration of the Province of Tahuamanu (see Section 3.2 above), that the project activity is not known to have resulted in any instances of non-compliance during the monitoring period.

On the basis of observations made during the site visit, the audit team has no reason to doubt the assertions made in Section 2.1 of the monitoring report.

4.2 Accuracy of GHG Emission Reduction or Removal Calculations

The M-MON module requires that several parameters be monitored for quantification of project emissions. The observations of the audit team with respect to the quantification of each parameter are as follows. Unless noted below, each parameter is quantified in a manner that complies with the methodology and is sufficiently accurate to meet the materiality threshold required by the VCS rules.

Parameter/ Module	Verification Findings
Degradation PRA Results (M-MON)	As required by the M-MON module, this parameter was determined on the basis of a participatory rural appraisal (PRA) that was conducted. The audit team confirmed the appropriate conduct of the PRA by reviewing the PRA report and interviewing project personnel who were responsible for carrying out the PRA. The results of the PRA (which indicated very low potential for degradation within the project boundary) are consistent with the audit team's understanding of the general lack of dependence exhibited by neighboring communities with respect to forest resources in the project area (see the audit team's findings regarding the "Community Engagement" sub-category in Appendix B for a more detailed treatment of this topic).
$A_{DefPA,u,i,t}$ (M-MON)	This parameter was quantified using two scenes from the ResourceSat-1 sensor. The audit team viewed the website from which the scenes were downloaded and confirmed that the selected scenes were entirely free of cloud cover. The procedures used for geometric and radiometric correction of the remotely sensed data were reviewed by the audit team and determined to conform to good remote sensing practice, as well as the monitoring plan. The audit team then confirmed that monitoring of deforestation within the selected scenes was implemented in accordance with the monitoring plan, with the exception of the project description deviations discussed in Section 2.2.3 above. The monitoring was undertaken by a qualified expert, and the audit team was able to confirm, through visual observation of the ResourceSat-1 scenes, that no deforestation occurred within the project area during the monitoring period.
$A_{DefLB,u,i,t}$ (M-MON)	This parameter was quantified using the same remotely sensed data, and the same analytical techniques, described above. The audit team confirmed, through visual review of the land classification polygons in comparison to the ResourceSat-1 data, that the classification procedures used to determine the quantity of area of land-cover change in the leakage belt were appropriate, replicable and justified. The audit team also observed the replication calculation of the quantity of area deforested per post-deforestation land use reported within the leakage belt, and the calculated values were very close to those reported for the project.
$A_{ROADi,t}$ (M-MON)	This parameter was quantified using written records of all primary and secondary logging roads that were created within the project area. The audit team confirmed the values reported for this parameter by confirming the correctness of the procedures employed to calculate said values. In addition, the audit team confirmed, based on a random sample of records that were pulled from across all PCAs (management units) for which roads were built during the monitoring period, that the process used to enter data from field sheets into digital format was without material error. Finally, the audit team confirmed the appropriateness of the measurement protocols employed through review of one instance where road width was measured in PCA 11. This review provided the audit team with assurance that measurements were taken in a competent manner and that, where the potential for professional judgment existed, measurements were taken in a manner that was unlikely to result in the overestimation of GHG emission reductions.*

Parameter/ Module	Verification Findings
	As the information on logging decks was initially summarized at the level of the PCA rather than the stratum, an analysis had to be done to determine the area of logging decks for each stratum. The audit team reviewed this analysis and found it to be appropriate and justifiable.
A _{DECKSi,t} (M-MON)	This parameter was quantified using written records of all logging decks that were created within the project area. The audit team confirmed the values reported for this parameter by confirming the correctness of the procedures employed to calculate said values. In addition, the audit team confirmed, based on a random sample of records that were pulled from across all PCAs (management units) in which logging decks were built during the monitoring period, that the process used to enter data from field sheets into digital format was without material error. Finally, the audit team confirmed the appropriateness of the measurement protocols employed through review of one instance where a logging deck was measured in PCA 11. This review provided the audit team with assurance that measurements were taken in a competent manner and that, where the potential for professional judgment existed, measurements were taken in a manner that was unlikely to result in the overestimation of GHG emission reductions.* As the information on logging decks was initially summarized at the level of the PCA rather than the stratum, an analysis had to be done to determine the area of logging decks for each stratum. The audit team reviewed this analysis and found it to be appropriate and justifiable.
L _{SKID,i,t} (M-MON)	The audit team was able to trace the quantification of this parameter from the final values as included in the emissions calculation workbook, to a workbook containing the specific values for each skid trail (via cross-checks on all records), and finally (via cross-checks on a sample of records) to the datasheets that were used to record measurements in the field. No discrepancies were detected in this review. Finally, the audit team confirmed the appropriateness of the measurement protocols employed through review of one instance where the length of a skid trail was measured in PCA 11. This review provided the audit team with assurance that measurements were taken in a competent manner and that, where the potential for professional judgment existed, measurements were taken in a manner that was unlikely to result in the overestimation of GHG emission reductions.*
W _{SKID} (M-MON)	The audit team was able to trace the quantification of this parameter from the final values as included in the emissions calculation workbook, to a workbook containing the specific values for each skid trail (via cross-checks on all records), and finally (via cross-checks on a sample of records) to the datasheets that were used to record measurements in the field. No discrepancies were detected in this review. Finally, the audit team confirmed the appropriateness of the measurement protocols employed through review of one instance where the length of a skid trail was measured in PCA 11. This review provided the audit team with assurance that measurements were taken in a competent manner and that, where the potential for professional judgment existed,

Parameter/ Module	Verification Findings
	measurements were taken in a manner that was unlikely to result in the overestimation of GHG emission reductions.*
V _{EXT,i,t} (M-MON)	The audit team confirmed the quantification of the values reported for this parameter at the stratum level by cross-checking a sample of log records present in an Excel workbook against the original datasheets that were used to record the measured volume for each log. Only one discrepancy, which appeared to be a transcription error, was noted of all the records reviewed. In addition the audit team requested that project personnel sum harvest volumes by PCA under the observation of the audit team. The summed volumes matched the values that were reported in the GHG emission workbook. It should be noted that the volume for one PCA (PCA 8 in the Maderyja concession) was cross-checked against official records from the Forestry Technical Administration of the Province of Tahuamanu. While the volumes matched exactly for two species, for three species there was a discrepancy. The discrepancy summed to approximately 4% of the total volume reported by the Forestry Technical Administration for PCA 8. In discussions, project personnel indicated that the Forestry Technical Administration does not have sufficient personnel to tabulate of the volume information that is submitted to them in hard copy, and that therefore their summaries contain incomplete information. This assertion is supported by the following facts: • Where a discrepancy existed, the volumes reported by Maderyja were always higher than the volumes reported by the Forestry Technical Administration. This indicates the potential for systematic omissions on the part of the government dataset. • The government officer whom the audit team interviewed admitted that personnel availability had been insufficient, as of late April 2013, to tabulate information that had been submitted to the Forestry Technical Administration subsequent to the completion of harvest activities in 2012. • The accuracy of the data control systems of Maderacre and Maderyja, with respect to volume information, had been previously confirmed through the process described above. On the basis of the above statements, the audit team determined that the project's reported volumes were more likely than those of the Forestry Technical Administration to be without material error.
A _{DisPA,q,i,t} (M-MON)	It was indicated to the audit team that the quantity of area subject to natural disturbances in the project area was monitored through visual observation of the remotely sensed data. The audit team was able to confirm, through visual observation of the same data, that no natural disturbances had occurred in the project area prior to the

Parameter/ Module	Verification Findings
	date of acquisition of the remotely sensed imagery.
$A_{burn,q,i,t}$ (M-MON)	The comments made directly above also apply to this parameter. It was clear to the audit team, through visual observation of the remotely sensed imagery, that no fires had burned in the project area prior to the date of acquisition of the remotely sensed imagery.
D_j (M-MON)	The audit team confirmed that the sourcing of wood density values complies with the relevant criteria of Section 4.5.6 of the VCS Standard, as referenced by Section 4.1.7(1) via Section 3.1.5. The sources for the wood density values applied were recognized, credible sources that were either reviewed for publication by an appropriately qualified peer review group or were published by government agencies. The sources were appropriate to the geographic scope of the project, being specific either to the Madre de Dios region or the country of Peru.
C_{LB} (LK-ASU)	As required by the LK-ASU module, the weighted average value for C_{LB} has been re-calculated for the present monitoring period, using information on the quantity of forest remaining in each stratum at the end of the monitoring period. The audit team reviewed the use of information from the remote sensing process (see the description of parameter $A_{DefLB,u,i,t}$ above) to calculate the value for C_{LB} . While some small discrepancies in the values used for this calculation, the audit team confirmed that they were quantitatively immaterial.
Uncertainty p,i (X-UNC)	For the quantification of uncertainty in emissions from construction of skid trails, logging decks and logging roads, the M-MON module requires that “The uncertainty in carbon stocks estimates and resulting emissions must be included in the estimation of with-project scenario uncertainty calculations performed using the module X-UNC (VMD0017) during each verification event unless indisputably conservative estimates are used”. For emissions from skid trails, parameter $C_{BSL,i}$ was used in place of parameter $C_{dest,i}$ (i.e., the assumption was made that the average per-hectare quantity of CO₂-equivalent destroyed in skid trail creation was equal to the average per-hectare baseline pre-deforestation CO₂-equivalent in aboveground biomass). In the judgment of the audit team, the value for parameter $C_{BSL,i}$ is an indisputably conservative estimate for $C_{dest,i}$, as the understanding of the audit team (as obtained through interviews with project personnel and confirmed through observations of the project area) is that skid trails were typically constructed so as to go around existing trees rather than require their death. Therefore, the quantification of uncertainty in skid trail emissions was calculated, using standard simple random sampling equations and procedures for uncertainty propagation, as the uncertainty in the sampled values of parameter $\Delta CSKID_{i,t}$. Uncertainty in other sources was not accounted for. This methodology deviation, and its implications, are discussed under the heading “methodology deviation 03” in Section

Parameter/ Module	Verification Findings
	2.2.2 above.
*A further note regarding parameters for which information was cross-checked in the field: While the original measurement of skid trails, logging decks and logging roads was undertaken soon after completion of harvest activities, the verification assessment was undertaken approximately six months later, with sufficient time elapsing in the intervening period to allow for a substantial degree of vegetative growth. This vegetation served to interfere with assessment of the quality of the initial measurements, as the boundaries of infrastructural artifacts (e.g., logging roads), which should have been perfectly clear at the time of initial measurement, became unclear as those artifacts became over-grown. Where uncertainty existed, during the verification assessment, as to the margin of a given skid trail, logging deck or logging road, the benefit of the doubt was given to the entity that performed the initial measurements.	

All other parameters were available at validation, and have been appropriately referenced in the calculation of GHG emission reductions. The audit team thoroughly reviewed the various workbooks used to report the GHG emission reduction calculations and confirmed the absence of any material discrepancies. While some discrepancies were encountered during this review, they amounted to an error of far less than 1% of the GHG emission reductions claimed for the monitoring period, and thus were considered immaterial.

4.3 Quality of Evidence to Determine GHG Emission Reductions or Removals

The evidence used to determine GHG emission reductions for the monitoring period was of high quality. A series of workbooks, which contained the high-level calculations for determination of project emissions, leakage emissions and the calculation of GHG emission reductions, was exceptionally well-organized. Supporting evidence (as described in Section 4.2 above), including remotely sensed imagery, data sheets and reports, was made fully available to the audit team. All of the evidence required by the methodology was found to be present during the audit team's review.

4.4 Management and Operational System

The management and operational system undertaken for the project was found to be relatively sound, with good communication clearly evident between the different parties involved in the project. As documented in Appendix A below, some minor breakdowns in the quality control systems employed for the project were noted. In addition, an error was noted in one volume record. However, no material non-conformities currently exist for the monitoring period in question. In summary, room for improvement exists in the management and operational system employed by the project, but the system currently in place was found to be of sufficient quality as to provide the audit team with a reasonable level of assurance as to the reported GHG emission reductions.

5 VERIFICATION CONCLUSION

The project conforms to the verification criteria for projects and their GHG emission reductions set out in the VCS rules. The audit team asserts no qualifications or limitations with respect to the statement above.

The project has been implemented in accordance with the project description and subsequently validated variations.

The audit team has been able to confirm, with a reasonable level of assurance, that the quantity of GHG emission reductions set out below has been quantified in accordance with the VCS rules. As documented in Appendix B, the audit team can also confirm that the non-permanence risk score of 10% has been quantified in accordance with the VCS rules.

Reporting period: From 01-January-2009 to 31-December-2012.

Verified GHG emission reductions or removals in the above reporting period:

GHG Emission Reductions or Removals	tCO ₂ e
Baseline Emissions	4,958,227.99
Project Emissions	460,725.00
Leakage	1,144.16
Net GHG emission reductions or removals (C_{REDD,t})	4,496,358.83
Confidence-deduction-adjusted net GHG emission reductions or removals (Adjusted_C_{REDD,t})	4,496,358.83

Because the monitoring period has multiple calendar years, and because the monitoring report has not specified the breakdown of GHG emission reductions by vintage, the GHG emission reductions, as stated above, have not been broken down by vintage. For purposes of consistency with the monitoring report, the values above have been specified to a precision of 0.01 tCO₂e or 0.01 buffer credit.

APPENDIX A: VERIFICATION FINDINGS

NCR 2012.1 dated 05/07/2013

Standard Reference: VCS Standard V3.3, Section 3.16.6(3)

Document Reference: VCS Monitoring Report v3 2.pdf, Section 3.2; Cp Estimations in MDD.xlsx

Finding: The VCS Standard requires that the monitoring report must contain "The data and parameters (both available at validation and monitored)." In description of parameter C(BB_tree_dest,i), the monitoring report states that the value used for hilly forest is "497.76 TCO₂/ha". This is not consistent with the value that was applied for this parameter in worksheet "Carbon Stocks" of workbook "Cp Estimations in MDD.xlsx".

Client Response: The value used for Hilly Forest in C(BB_tree-dest-i) is 97.76 T CO₂/ha. and these is the number employed in the calculations. The number 497.76 TCO₂/ha stated in the Monitoring Report is a typo, made inadvertently at the moment of transferring the data to the charts in order to present them. This has been modified (page 63) in the new version of the Monitoring Report that will be submitted to the auditor.

Auditor Response: The corresponding table in the revised monitoring report ("VCS Monitoring Report v3 2.doc") contains a value for hilly forest that is consistent with that used for monitoring. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.2 dated 05/07/2013

Standard Reference: VCS Standard V3.3, Section 3.16.6(3)

Document Reference: VCS Monitoring Report v3 2.pdf, Section 3.2; Cp Estimations in MDD.xlsx

Finding: The VCS Standard requires that the monitoring report must contain "The data and parameters (both available at validation and monitored)." In description of parameter L(sk), the monitoring report provides the following values for the total length of skid trails in each stratum: "Hilly forest: 460 465.55 m; Terrace forest: 157 722.12 m; Bamboo: 154,281.98 m". This is not consistent with the values reported in worksheet "CLR - Skid Trail" of workbook "Cp Estimations in MDD.xlsx", which indicate that skid trail emissions only occurred in the "hilly forest" stratum.

Client Response: The monitoring report presents the values of Lsk in the following types of forests: 460, 462.55 m. in Hilly Forest; 157,722.12 m in Terrace Forest; 154,281.98 m. in Bamboo. These are data estimated from two plots PCA10 and PCA11, which are composed by hilly forests. Other PCAs correspond to other types of forests, where harvesting also occurred.

In the cell E56 from Clk Skid trail, it can be observed that the total extracted volume from PCA 8 has been

considered: 7862.75m3 (CLG Extracted Timber), incorporating the extracted volume from Bamboo and Terrace Forest. The same procedure has been followed in cells E57 with 6613.67 m3 and E 58 with 9350.42m3. The emissions from the wood extracted from the other types of forests has been also estimated. Cells B36, 37 and 38 should therefore have mentioned the three types of forest. This modification has been incorporated in the corresponding Excel file, making the estimations per strata. Said Excel file (Cp Estimations in MDD modified) will be submitted to the auditor.

Auditor Response: The response provided appropriately clarifies the rationale for assigning all skid trail emissions to the "hilly forest" stratum, even though such emissions also took place in the other strata. In addition, a note within the "CP Estimations" workbook states that "It was assumed that all skid trails were installed in Bosque de Colinas given that base data (from Maderacre) was collected from that particular stratum." This assumption appears to the audit team to be reasonable. Therefore, this finding will be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.3 dated 05/07/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.2.1

Document Reference: MDDARP VCS NonPermRisk.pdf

Finding: The AFOLU Non-Permanence Risk Tool indicates that a score of 2 should be applied for item (b) of the project management sub-category in the event that "Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50% of stocks on which GHG credits have previously been issued." This score has been applied by the risk report. However, GHG credits have not previously been issued on the carbon stocks within the project area, and therefore the risk item is not applicable to the project.

Client Response: The requested modification has been already done in the Non Permanent Risk Report. Please, see the attached document: MDDARP VCS NonPermRisk 10may.doc

Auditor Response: As indicated in document "MDDARP VCS NonPermRisk 10may.docx", the risk report has been revised to reflect the fact that no GHG credits have previously been issued to the project. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.4 dated 05/07/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.2.2(2)

Document Reference: MDDARP VCS NonPermRisk.pdf; MDDREDDProject Cash Flow.xlsx

Finding: The AFOLU Non-Permanence Risk Tool indicates that "The cash flow breakeven point is the year in which the cumulative cash flow is positive (ie, cash flow in exceeds cash flow out) and stays positive." In the event that the project cash flow breakeven point is 4 years or less from the current risk assessment, a score of 0 is required for items (a)-(d) of the Financial Viability sub-category. Review of the project's financial model with project personnel has confirmed that the project cash flow breakeven point is expected to be 4 years or less from the time of the current risk assessment (April 2013). Therefore, the claim that "project economic cash flow breakeven point is 6 years from the current risk assessment" is incorrect, and the score of 1 for items (a)-(d) has been inappropriately applied.

Client Response: The requested modification has been already done in the Non Permanent Risk Report. Please, see the attached document: MDDARP VCS NonPermRisk 10may.doc

Auditor Response: As indicated in document "MDDARP VCS NonPermRisk 10may.docx", the risk report has been revised to reflect the fact that the projected cash flow breakeven point is less than four years from the time of the current assessment. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.5 dated 05/07/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.2.2(4)

Document Reference: MDDARP VCS NonPermRisk.pdf

Finding: The AFOLU Non-Permanence Risk Tool indicates that "Projects may demonstrate that funding has been secured through, for example, financial statements, bank records, executed commodity purchase agreements, executed emission reduction purchase agreements, or other signed contractual agreements."

During on-site audit activities, the audit team received evidence that at least 80% of the funding needed to cover the total cash out before the project reaches breakeven was available to Maderera Río Acre S.A.C. as of 31 December 2012. However, the audit team did not receive evidence that at least 80% of the funding needed was secured by the project. Please provide evidence that at least 80% of the funding needed will be made available to the project.

Client Response: The requested modification has been already done in the Non Permanent Risk Report. Please, see the attached document: MDDARP VCS NonPermRisk 10may.doc and the attached document Letter.pdf

Auditor Response: The audit team reviewed the letter, referred to in the Client Response, which is signed by senior management representatives of Maderacre SAC and Maderyja SAC. The text of the letter has been translated into English via Google Translate as follows: "Through this, Maderacre SAC and Maderyja SAC, partners of the Madre de Dios Amazon REDD Project, say they have the necessary funds (equity and credit lines available) to fund 100% of the costs of the project to the validation and

verification by VCS, bringing the project to reach the breaking point (breakeven)". The information provided, in combination with evidence previously presented to the audit team, is sufficient to confirm that at least 80% of the funding needed before the project reaches breakeven has been secured by the project. Therefore, the information request has been satisfied.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.6 dated 05/07/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.2.2(5)

Document Reference: MDDARP VCS NonPermRisk.pdf

Finding: The AFOLU Non-Permanence Risk Tool indicates that "Callable financial resources are those not included in secured funding, but that are readily available to the project. The availability of such resources may be indicated through letters of credit, revolving credit lines or other financial backing, as evidenced by signed agreements and which demonstrate the project's ability to access funding as needed."

During on-site activities, it was indicated to the audit team that callable financial resources have been made available to the project in the past. However, it is not clear to the audit team that callable financial resources are now readily available to the project. Please provide evidence that, as of the date of the risk report (April 2013), the project had available callable financial resources equaling at least 50% of total cash out before the project reaches breakeven.

Client Response: The requested modification has been already done in the Non Permanent Risk Report. Please, see the attached document: MDDARP VCS NonPermRisk 10may.doc

Auditor Response: It should be noted that no modification was requested by this finding, which was a New Information Request. However, in review of the risk report as in the Client Response, no modification to the relevant section was noted. Furthermore, no additional evidence was provided to the audit team to support the assertion that, that, as of the date of the risk report (April 2013), the project had available callable financial resources equaling at least 50% of total cash out before the project reaches breakeven. Therefore, the finding remains open.

Client Response 2: The requested modification has been included in the document: "MDDARP VCS NonPermRisk 15may.doc".

Auditor Response 2: As the updated risk report indicates that the mitigation item is "not applicable", and as the mitigation risk score of -2 is no longer being claimed, this finding is no longer relevant and will be withdrawn.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.7 dated 05/07/2013

Standard Reference: VCS Standard V3.3, Section 3.6

Document Reference: Validated Project Description, page 199; VCS Monitoring Report v3 2.pdf

Finding: The monitoring plan within the validated project description states that "The monitoring reports must detail the relationship between the acquired images and the use of an "Images Acquisition Form" that includes the following information: Path, Row, Date, Year, Source and Code." The monitoring report does not contain the required information. Please either update the monitoring report so as to contain the required information, or provide a justification for why the discrepancy with respect to the requirement of the monitoring plan should be allowed as a project description deviation in accordance with Section 3.6 of the VCS Standard.

Client Response: The satellite images were acquired in the server of images of the INPE, which has an already established form in order to make the requests online (<http://www.dgi.inpe.br/CDSR/>). The orbit/point, date, year and percentage of cloud cover (less than 10%) were considered.

The satellite images used were geop306r084_20120901.img and geop307r084_20120720.img where the path 306 and 307, the row 084 for both images and the dates correspond to September 1st and July 20th, 2012. The above mentioned information is detailed in the attached report: [reporte_img_satelite.pdf](#).

This has been modified in the new version of the Monitoring Report (page 74) that will be submitted to the auditor.

Auditor Response: The monitoring report entitled "VCS Monitoring Report v3 2.doc" has been revised to contain the required information. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

OFI 2012.8 dated 05/07/2013

Standard Reference: M-MON V2.0, Section 5.2.1; LK-ASU V1.0, Section 2, Step 3(b)

Document Reference: Leakage Estimations in MDD.xlsx

Finding: During on-site audit activities, project personnel were unable to replicate the quantification of values for parameter A(DefLB,u,i,t), as reported in cells J4:J28 of worksheet "ΔCp,defLB,i,t" of workbook "Leakage Estimations in MDD.xlsx". The values calculated under the observation of the audit team during on-site audit activities were slightly different. Thus, a discrepancy most likely exists in the reported values for parameter A(DefLB,u,i,t).

The discrepancy is not material, as the quantity of monitored deforestation in the leakage belt during the reporting period is far less than the quantity of baseline deforestation in the leakage belt during the

monitoring period, and therefore, LK-ASU requires that the net greenhouse gas emissions within the leakage belt must be quantified as 0 in any case. However, as the quantification of parameter A(DefLB,u,i,t) in future monitoring periods will likely relate to the quantification of parameter A(DefLB,u,i,t) in the present monitoring period, an opportunity exists to ensure the correctness of the quantification of parameter A(DefLB,u,i,t) for the present monitoring period. Failure to ensure the correctness of the quantification of parameter A(DefLB,u,i,t) for the present monitoring period may result in a material non-conformity in the reporting of leakage emissions in a future reporting period.

Client Response: [While no direct response was provided, it is noted that corrections were made to the reported values for parameter A(DefLB,u,i,t).]

Auditor Response: Responses to Opportunities for Improvement are not mandatory.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.9 dated 05/07/2013

Standard Reference: M-MON V2.0, Section 5.1

Document Reference: Validated Project Description, page 363

Finding: The M-MON module requires that "In general, the same source of remotely sensed data and data analysis techniques must be used within the period for which the baseline is fixed. If remotely sensed data have become available from new and higher resolution sources (e.g. from a different sensor system) during this period then it is possible to change the source of the remotely sensed data. Equally if the same source is no longer available (e.g. due to satellites or sensors going out of service) an alternate source may be used. A change in source data may only occur if the images based on interpretation of the new data overlap the images based on interpretation of the old data by at least 1 year and they cross calibrate to acceptable levels based on commonly used methods in the remote sensing community."

During on-site audit activities, it was indicated to the audit team that remotely sensed data from the ResourceSat-1 sensor was used for carrying out the procedures detailed in Section 5 of the M-MON module. Since the validated project description states that "Satellite images used for the analysis and modeling of deforestation were Landsat 5 and Landsat 7", the use of the ResourceSat-1 data constitutes a change in source data. However, evidence was not provided during the on-site audit activities that the images based on interpretation of the ResourceSat-1 data are available which overlap the images based on interpretation of the Landsat 5 and Landsat 7 data by at least one year, and that they cross-calibrate to acceptable levels based on commonly used methods in the remote sensing community. Please provide evidence of this.

Client Response: The baseline for the visual interpretation of "forest" and "non forest" was done using satellite images from the Landsat satellite, which has 30 meters of spatial resolution and a scale between 1:100,000 and 1:80,000. Said interpretation was done employing elements of visual interpretation such as texture, colour, shade, spatial pattern, shapes, among others.

The lack of availability of the images from the Landsat satellite for the year 2013 was the reason why it

was necessary to employ similar images as ResourceSat-1 which has 25 meters of spatial resolution. The same methodology was employed for visual interpretation, but this time also taking into account the different types of land use for the areas corresponding to "non forest".

The satellite images from the Landsat sensor that correspond to the year 2010 were taken as reference in order to make the geometric correction of the ResourceSat-1 images. The terrestrial control points were considered with special emphasis in the "non changing" spaces in a period of time of two years such as; roads, populated centers, among others, which present distinguishable geometric characteristics at both dates.

The above mentioned information is detailed in the attached report: [reporte_img_satelite.pdf](#).

Auditor Response: The information provided within the Client Response documents, as indicated to the audit team during the site visit, that the ResourceSat-1 images were geo-referenced to the Landsat imagery from 2010, thus ensuring that good overlap between the two sets of imagery. In addition to the information referenced in the Client Response, the audit team was provided with two documents, "observaciones_auditoria_resumen-NIR9 Spanish.docx" (and the English-language translation "observaciones_auditoria_resumen-NIR9.docx") and "inpe_web_site.docx", which provided further evidence that the image based on interpretation of a Landsat TM 5 image (with path 3 and row 68, acquired 30 July 2010) would certainly cross-calibrate with the image based on interpretation of the ResourceSat-1 images that were used for project monitoring. The Landsat image covers the area where the most deforestation has been observed in the leakage belt, directly to the east of the project area, and the correspondence between the Landsat imagery and ResourceSat-1 imagery in the deforested areas was readily apparent. In addition, the forested status of the adjacent section of the project area was consistently apparent across image sources. Given that the remote sensing of deforestation was undertaken manually (through methods confirmed as sound by the validation and verification audit teams, respectively) for both the baseline analysis and project monitoring, evidence of visual similarity constitutes evidence of the required cross-calibration.

However, it should be noted that the Landsat image was acquired more than one year prior to the ResourceSat-1 imagery, and therefore a methodology deviation to the requirement that "the images based on interpretation of the new data overlap the images based on interpretation of the old data by at least 1 year" may be necessary. This deviation, and its implications, will be described in full in the verification report.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.10 dated 05/07/2013

Standard Reference: LK-ASU V1.0, page 11

Document Reference: Leakage Estimations in MDD.xlsx

Finding: In the parameter table for parameter C(LB), the LK-ASU module requires that "As forests in the

leakage belt are deforested, the area weighted average must be recalculated at each monitoring period." Review of the calculations used to produce the value 408.97, as indicated in cell C37 of worksheet "ΔCLK-AS,unplanned" of workbook "Leakage Estimations in MDD.xlsx", indicates that the value for parameter C(LB) has not been recalculated at the present monitoring period.

Client Response: The value 408 T CO₂/ha (weighted average) has been modified, with the new value of hectares per type of forest, after considering deforestation in leakage. The new value is 409.89 T CO₂/ ha , can be observed in the worksheet ACLK-ASU-OLB (2) from the Excel file: Leakage estimation in MDD modified which will be submitted to the auditor.

The new chart is attached: New Chart NCR 10.doc

Auditor Response: As indicated in the Client Response section, the document "Leakage Estimations in MDD modified.xlsx" includes a revised value for C(LB) that is based on updated data. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.11 dated 05/07/2013

Standard Reference: VCS Standard, Sections 3.1.5, 4.1.7(1) and 4.5.6

Document Reference: Cp Estimations in MDD.xlsx

Finding: Section 3.1.5 of the VCS Standard requires that "Where projects apply methodologies that permit the project proponent its own choice of third party default factor or standard to ascertain GHG emission data and any supporting data for establishing baseline scenarios and demonstrating additionality, such default factor or standard shall meet with the requirements set out in Section 4.1.7(1)." Section 4.1.7(1) requires that "Where the methodology uses third party default factors and/or standards, such default factors and standards shall meet with the requirements for data set out in Section 4.5.6, mutatis mutandis." Section 4.5.6 of the VCS Standard provides nine different requirements. Of these requirements, the following are relevant for factors collected from secondary sources:

"2) Data collected from secondary sources shall be available from a recognized, credible source and must be reviewed for publication by an appropriately qualified, independent organization or appropriate peer review group, or be published by a government agency.

7) Data shall be appropriate to the methodology's geographic scope and the project activities applicable under it."

Please provide evidence that each of the wood density factors provided in columns K through M of worksheet "CLG - Extracted Timber" of workbook "Cp Estimations in MDD.xlsx" complies with the above requirements. Alternatively, please provide evidence that the factors fell within the scope of the review as part of the validation audit and that, therefore, the factors do not need to be assessed as part of this

verification audit.

Client Response: The official source for each of the densities employed has been incorporated.

The chart containing the bibliographic references as well as the values of density employed for the calculation is attached: "Sources of Density employed for the calculations". This same chart has been included in the corresponding excel file that will be submitted to the auditor.

Auditor Response: The audit team was provided with workbook ("Cp Estimations in MDD modified.xlsx") containing a revised suite of wood density values, along with evidence that all values were sourced from one of the following:

- The website of the Instituto Nacional de Innovación Agraria (INIA) of the Ministerio de Agricultura of the Republica del Peru
- The document "Comendio de Informacion tecnica de 32 especies forestales", Volumes I and II, published by the Confederación Peruana de la Madera
- The article "Propiedades físico - mecánico y características anatómicas de la especie Crepidospermum goudotianum (Tul.) Triana & Planch. (Palo Bastón) -proveniente del Tahuamanu - Madre de Dios", accessed through <http://www.monografias.com/trabajos78/propiedades-caracteristicas-anatomicas-crepidospermum-goudotianum/propiedades-caracteristicas-anatomicas-crepidospermum-goudotianum.shtml>

It is clear that all three sources comply with criteria (7), as all are specific to the country of Peru and/or the Madre de Dios region. In addition, it is clear that the first source (INIA) complies with criterion (2), as it is published by a recognized, credible source that is also a government agency.

It appears that the second source is a recognized, credible source. However, it is not clear that the publication "Comendio de Informacion tecnica de 32 especies forestales" has been reviewed for publication by an appropriately qualified, independent organization or appropriate peer review group, or that it has been published by a government agency. Please provide evidence of this.

In addition, it is unclear that the third source is a recognized, credible source, as it was obtained from a commercial website. It is unclear that the third source has been reviewed for publication by an appropriately qualified, independent organization or appropriate peer review group, or that it has been published by a government agency. Please provide evidence of this.

Client Response 2: The second source: "Compendio de Información técnica de 32 especies forestales", Volumes I and II, published by the "Confederación Peruana de la Madera", is endorsed by and published by "Cites Madera - Centro de Innovación tecnológica de la madera" from the Ministry of Production, which is the Ministry that belongs to the Peruvian Government and is in charge of the Peruvian industry issues. This can be confirmed in the official link (gob.pe) that belongs to the Ministry of Production http://www.citemadera.gob.pe/pdata.php?m_id=41&p_id=48, as well as in the cover page and in its presentation.

With respect to the species "Palo Bastón", the degree thesis work "Propiedades físico - mecánico y características anatómicas de la especie *Crepidospermum goudotianum* (Tul.) Triana & Planch.

(Palo Bastón) -proveniente del Tahuamanu - Madre de Dios" has been endorsed by the School of Engineers of the National Amazonic University of Madre de Dios, that belongs to Ministry of Education (<http://www2.minedu.gob.pe/dcu/upubli.htm>) of the Peruvian State . All degree thesis works are approved by a qualified peer review group of academic professors belonging to this University which depends of the Peruvian State. Said work thesis was carried out by Leif Armando Portal Cahuana, current responsible of the xylotheque or "wood library", as can be seen in the University website:

<http://portada.unamad.edu.pe/docentes/docentesfacultaddeingenieria/item/73-leif-armando-portal-cahuana.html>

Auditor Response 2: Review of the websites referenced in the Client Response section, both accessed 15 May 2013, has allowed the audit team to confirm the following:

- The publication "Comendio de Informacion tecnica de 32 especies forestales" is published by the Peruvian "Ministerio de la Produccion", which is a government agency
- The manuscript "Propiedades físico - mecánico y características anatómicas de la especie *Crepidospermum goudotianum* (Tul.) Triana & Planch. (Palo Bastón) -proveniente del Tahuamanu - Madre de Dios" is a Master's degree thesis (the audit team agrees that such theses are typically subject to a rigorous peer review prior to approval)

Therefore, the information request has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

OFI 2012.12 dated 05/07/2013

Standard Reference: M-MON V2.0, Equation 13

Document Reference: Cp Estimations in MDD.xlsx

Finding: The approach taken to calculate skid trail emissions for the skid trails in PCAs 8 and 9 in the Maderacre concession, and PCAs 8-10 in the Maderyja concession, is a deviation from the requirements of Equation 13 of the M-MON module. The deviation was necessitated by the failure to collect information on skid trail length and width for the PCAs in question. While this deviation is considered by the audit team to comply with Section 3.5.1 of the VCS Standard, an opportunity exists to strengthen ongoing compliance to the requirements of the VCS rules by ensuring that all monitoring tasks are appropriately carried out in future monitoring periods. Failure to ensure that all monitoring tasks are carried out may result in a future instance of non-conformance to the VCS rules.

Client Response: [No response was provided or required.]

Auditor Response: Responses to Opportunities for Improvement are not mandatory.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.13 dated 05/07/2013

Standard Reference: X-UNC V2.0, Equation 7

Document Reference: Uncertainty Analysis MDD.xlsx

Finding: Equation 7 of the X-UNC module requires that the combined uncertainty in all pools be divided by the sum of emissions in the project area in the project scenario. Review of the calculation of the value in cell B9 of worksheet "Uncertainty ExPost" of workbook "Uncertainty Analysis MDD.xlsx" indicates that the reported uncertainty has only been divided by the sum of emissions from skid trail creation rather than the sum of all emissions in the project scenario.

Client Response: Emissions from logging road, logging deck and wood extraction have been incorporated. This modification can be observed in the Excel file Uncertainty Analysis MDD. Xlsx modified, which will be submitted to the auditor.

Auditor Response: Review of the document "Uncertainty Analysis MDD modified.xlsx" indicates that emissions from logging roads and logging decks have been incorporated in estimation of uncertainty in the project scenario. While the calculation procedure employed is not quite correct, review of the revised uncertainty calculations indicates that the total uncertainty (both as reported in workbook "Uncertainty Analysis MDD modified.xlsx" and as correctly calculated by the audit team) is below 15%. Therefore, any remaining discrepancies are irrelevant, as no uncertainty deduction is required in any case, and the finding can be closed.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.14 dated 05/07/2013

Standard Reference: M-MON V2.0, Section 5.2.2.2.2

Document Reference: Uncertainty Analysis MDD.xlsx

Finding: For the quantification of uncertainty in emissions from construction of skid trails, logging decks and logging roads, the M-MON module requires that "The uncertainty in carbon stocks estimates and resulting emissions must be included in the estimation of with-project scenario uncertainty calculations performed using the module X-UNC (VMD0017) during each verification event unless indisputably conservative estimates are used".

The uncertainty in carbon stock estimates was not included in the estimation of with-project scenario uncertainty calculations. Review of worksheet "Uncertainty ExPost" of workbook "Uncertainty Analysis MDD.xlsx" indicates that "Only the Skid Trails were sampled. For all other parameters, uncertainty was not considered because they were assessed at 100%."

For the quantification of uncertainty in skid trail emissions, the audit team agrees that the uncertainty in carbon stock estimates does not have to be included, as indisputably conservative estimates have been used. However, for quantification of uncertainty in emission from creation of logging decks and logging roads, it is not clear to the audit team that indisputably conservative estimates of carbon stock have been used. Please either include the uncertainty in carbon stock estimates in the reported uncertainty in logging decks and logging roads or provide evidence that indisputably conservative estimates of carbon stocks have been used for quantification of emissions from logging decks and logging roads.

Client Response: Uncertainty in the creation of Logging decks and Logging roads, has been considered as zero, since 100% of the data was taken in the area, this means that no samples were employed in order to get to know the area that received an impact. The data employed in equations 17 and 18 corresponding to T CO₂ /ha, have been obtained from the T CO₂/ha of each strata, corresponding to the data obtained during the development of the Baseline, and during its development uncertainty was incorporated in the calculations. The total uncertainty incorporates the uncertainty from the baseline and the uncertainty due to the project.

Therefore, it has been assumed that it is conservative since all the carbon pool / ha indicated in the baseline has been employed and no sample taking has occurred to get to know the total impacted area. Please, review the following formula, where the use of carbon stocks in pools per strata in the baseline is indicated.

$$\Delta C_{ROAD,i,t} = A_{ROAD,i,t} * C_{BSL,i} \quad (17)$$

Where

$\Delta C_{ROAD,i,t}$ Change in carbon stock resulting from logging road creation in stratum i at time t; t CO₂-e

$A_{ROAD,i,t}$ Area of roads in stratum i at time t; ha

$C_{BSL,i}$ Carbon stock in all pools in the baseline case in stratum i; t CO₂-e ha⁻¹

i 1, 2, 3 ... M strata

t 1, 2, 3 ... t years elapsed since the start of the project activity

$$\Delta C_{DECKS,i,t} = A_{DECKS,i,t} * C_{BSL,i} \quad (18)$$

Where

Δ CDECKS,*i,t* Change in carbon stock resulting from logging deck creation in stratum *i* at time *t*; *t* CO₂-e

ADECKS,*i,t* Area of logging decks in stratum *i* at time *t*; ha

CBSL,*i* Carbon stock in all pools in the baseline case in stratum *i*; *t* CO₂-e ha⁻¹

i 1, 2, 3 ... *M* strata

t 1, 2, 3 ... *t* years elapsed since the start of the project activity

Page 44 of the M-MON in the parameter CBSL indicates the carbon in all pools in the baseline, and this has already been accounted for in the baseline.

Auditor Response: As uncertainty in carbon stock estimates (i.e., in parameter C(BSL,*i*) for each stratum) causes uncertainty in values that are calculated based on the carbon stock estimates, the methodology requires that such uncertainty be incorporated in the calculation of total uncertainty in the project scenario. However, review of the revised uncertainty calculations indicates that the total uncertainty (both as reported in workbook "Uncertainty Analysis MDD modified.xlsx" and as correctly calculated by the audit team) is below 15%. Therefore, the discrepancy is deemed irrelevant, as no uncertainty deduction is required in any case, and the finding can be withdrawn.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.15 dated 05/14/2013

Standard Reference: M-MON V2.0, Section 5.2.1; LK-ASU V1.0, Section 2, Step 3(b)

Document Reference: Leakage Estimations in MDD.xlsx; Leakage Estimations in MDD modified.xlsx

Finding: As documented in OFI 2012.8, the audit team was unable to observe the successful replication of the procedures for quantification of the values within worksheet " Δ Cp,defLB,*i,t*" of workbook "Leakage Estimations in MDD.xlsx". In review of the same worksheet within the updated workbook "Leakage Estimations in MDD modified.xlsx", it has been noted that the values have been update to reflect values equivalent to those that were produced for the audit team during the site visit. Please provide the following information:

- A justification for the reporting of new values within worksheet " Δ Cp,defLB,*i,t*" of workbook "Leakage Estimations in MDD modified.xlsx"
- An explanation for any errors that were noted in the procedure for quantification of the values reported within worksheet " Δ Cp,defLB,*i,t*" of workbook "Leakage Estimations in MDD.xlsx"

Client Response: The new values in worksheet Δ Cp,defLB,*i,t*" of workbook "Leakage Estimations in MDD.xlsx", are due to an adjustment of the satellite image ResourceSat-1 2012 that the GIS team did,

after providing the data of deforested areas for the emissions calculations.

When georeferenciation was done for the 2012 satellite images (ResourceSat-1), it was found that part of the image, specifically the south zone, did not totally overlapped, that is to say, the overlapping was not perfect. For that motive, a verification was done, and the respective correction was made to it as well as to the shape that derives from the interpretation. This was the reason why the areas suffered a minor change, since the polygons were modified. As can be appreciated said modification was non significant, but it was considered to be adequate in order to be absolutely precise and accurate and since this will be the version that will be used in the future monitoring.

Auditor Response: The information provided within the Client Response section is adequate to justify the changes in the reported values within worksheet " $\Delta C_p, defLB, i, t$ " of the leakage quantification workbook. As indicated in the text of the finding, the revised values are very close to the values that were produced for the audit team during the site visit, and therefore the audit team has a reasonable level of assurance as to their accuracy. The information request has been satisfied.

Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.16 dated 05/14/2013

Standard Reference: NA

Document Reference: Cp Estimations in MDD modified.xlsx; Cp Estimations in MDD.xlsx

Finding: There is a difference between the values reported in cells E56:E58 of worksheet "CLR - Skid Trail" of workbook "Cp Estimations in MDD modified.xlsx" and the values reported in the same cells of the same worksheet of workbook "Cp Estimations in MDD.xlsx". While the values in workbook "Cp Estimations in MDD.xlsx" were the summed values of all timber harvested in the respective PCAs, the values in workbook "Cp Estimations in MDD modified.xlsx" appear to only include the summed values of timber harvested in the portions of the respective PCAs which fall into the "Bosque de Colina" stratum. Please explain the change in harvest values and justify the rationale for the change.

Client Response: In cells E56 and E 58, of worksheet "CLR - Skid Trail" of Excel workbook "Cp Estimations in MDD modified.xlsx" the harvest corresponding to Hilly Forest has been considered due to the fact that the ratios employed for the estimations of the carbon variations due to skid trail $-\Delta C_{SKID, i, t}$ (t CO₂-e) correspond to plots of this type of forest.

Auditor Response: The response that has been provided is sufficient to provide the audit team with an understanding of the rationale for the actions taken. Further issues regarding the approach undertaken are addressed in NCR 2012.19.

Closing Remarks: The Client's response adequately addresses the finding.

OFI 2012.17 dated 05/15/2013

Standard Reference: AFOLU Requirements V3.3, Sec. 3.7.3

Document Reference: MDDARP VCS NonPermRisk 15may.docx

Finding: Section 3.7.3 of the AFOLU Requirements requires that "the non-permanence risk report shall be prepared using the VCS Non-Permanence Risk Report Template..." The prevailing version of the VCS Non-Permanence Risk Report Template is Version 3.1, as determined through review of the Verified Carbon Standard website (<http://v-c-s.org/program-documents>; accessed 15 May 2013). While, for all practical purposes, the non-permanence risk report have been prepared using the prevailing versions of the required template, the implied version number of the templates on which the document is based, as indicated in the lower-left corner of each page, is Version 3.0. While the audit team does not consider this discrepancy to present a non-conformity to the VCS rules, many aspects of the use of templates in the VCS Program are open to interpretation, and it is possible that a different entity would note the above as a non-conformity to the VCS rules. Thus, an opportunity exists to strengthen conformance to the VCS rules.

Client Response: [No response was provided or required.]

Auditor Response: Responses to Opportunities for Improvement are not mandatory.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.18 dated 05/15/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.5.1

Document Reference: MDDARP VCS NonPermRisk 15may.docx

Finding: The AFOLU Non-Permanence Risk Tool requires that "The overall non-permanence risk rating shall be determined using Table 11, noting that the overall risk rating shall be rounded up to the nearest whole percentage." As indicated in the table in Section 4.1 of the risk report, the reported rating for the Internal Risk category is 8. This is not consistent with the risk rating that has been calculated for this category, as reported in Section 1 of the risk report. Therefore, the reported overall risk rating is not consistent with the rating that would be calculated by summing the ratings for the Internal Risk, External Risk and Natural Risk categories.

Client Response: The requested modification has been made in the document: MDDARP VCS NonPermRisk 15may revJL.doc submitted to the auditor.

Auditor Response: The audit team can confirm, through review of the revised risk report indicated in the Client Response, that both the risk rating for the Internal Risk category and the overall risk rating have been correctly reported. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.19 dated 05/15/2013

Standard Reference: VCS Standard V3.3, Section 3.5.1

Document Reference: Cp Estimations in MDD modified.xlsx

Finding: As documented in OFI 2012.12, a methodology deviation has been applied whereby skid trail emissions have been estimated for all PCAs other than PCA 10 and PCA 11 in Maderacre. In assessing potential methodology deviations, the audit team must ensure, as required by Section 3.5.1 of the VCS Standard, that such deviations do not "negatively impact the conservativeness of the quantification of GHG emission reductions or removals, except where they result in increased accuracy of such quantification." As stated in OFI 2012.12, the deviation, as presented to the audit team during the site visit, was determined by the audit team to conform to Section 3.5.1 of the VCS Standard. However, since that time, the approach has been modified such that only emissions from the "Bosque de Colina" stratum in each of PCAs are considered. This restriction in the scope of considered emissions has been caused by only including volume harvested from the "Bosque de Colina" stratum in the ratio estimator that is used to predict skid trail emissions from each PCA. Although skid trail emissions certainly occurred in portions of each PCA other than the "Bosque de Colina" stratum, skid trail emissions in other strata within each PCA are not accounted for. This procedure is likely to result in an underestimate of emissions in the project scenario, which would lead to a negative impact on the conservativeness of the quantification of GHG emission reductions, and therefore the audit team cannot accept the methodology deviation as currently presented.

Client Response: All harvested wood volumes have been incorporated in all strata in the ratio that is employed to estimate the skid trail emissions. This was done to avoid a subestimation in the emissions in the with project scenario and be conservative in the quantification of the GHG emissions reductions.

Auditor Response: The audit team can confirm, through review of the document "Cp Estimations in MDD modified skid trail.xlsx", that the procedure for quantification of skid trail emissions has been modified so as not to underestimate emissions in the project scenario. Therefore, the audit team can confirm that the deviation to the M-MON module is appropriate, and the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.20 dated 05/16/2013

Standard Reference: AFOLU Non-Permanence Risk Tool V3.2, Section 2.5.4

Document Reference: MDDARP VCS NonPermRisk 15may revJL.docx, Section 4.2; VCS Monitoring Report v3 2 160513.doc, Section 4.4

Finding: The AFOLU Non-Permanence Risk Tool requires that "To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (eg, an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS document Registration and Issuance Process." The calculation of the number of buffer credits, as reported in Section 4.2 of the risk report, is not consistent with the net change in the project's carbon stocks, as is reported in Section 4.4 of the monitoring report and as will be stated in the verification report.

Client Response: [The audit team received a response to this finding via email.]

Auditor Response: The updated risk report entitled "MDDARP VCS NonPermRisk 16may.docx" contains values for the number of buffer credits that are consistent with the monitoring report and, therefore, with the verification report that will be produced. Therefore, the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding.

APPENDIX B: NON-PERMANENCE RISK ASSESSMENT

In accordance with Section 3.7.3 of the AFOLU Requirements, the project's non-permanence risk report was assessed by the audit team. The non-permanence risk report upon which the risk analysis assessment was based is contained within the risk report, Version 1.0, dated 16 May 2013. The findings and conclusion regarding the non-permanence risk analysis undertaken for the project are summarized below for each risk category and factor. Unless noted otherwise, the audit team agrees with the conclusion stated in the non-permanence risk report.

The findings of the audit team regarding the risk scores applied for each factor are as follows.

Project Management		
Risk Factor	Verification Findings	Risk Rating
a)	This factor is not applicable, as GHG credits have not previously been issued.	NA
b)	This factor is not applicable, as GHG credits have not previously been issued.	NA
c)	The audit team was able to confirm, through interviews with project personnel and review of the control systems associated with the delivery of GHG information, that the management team includes individuals with significant experience in each of the skills required for effective project implementation. The management team appeared to be the audit team to be highly competent, with a wealth of experience in forest management, GHG accounting and social projects.	NA
d)	The base of operations for Maderacre and Maderyja are located near the town of Iñapari, and thus within a day's travel from the project area.	NA
e)	The audit team can affirm that the management team includes individuals that have already guided the project through successful validation of the project under the VCS Program.	-2
f)	The audit team agrees that an informal adaptive management planning procedure (some aspects of which are documented in the management plans and other documents) is in place with respect to the project activities. Examples of adaptive management in the planning process include the following: - The management plan for the concession operated by Maderacre has been updated more frequently than required by law. The updates have been made as required by new challenges and circumstances. - As documented in the management plans for the Maderacre and Maderyja concessions, permanent plots will be measured on an ongoing basis, and information from these plots will be used to adjust management strategies as needed. Through information collected from permanent plots, project personnel were able to confirm the validity of the estimate of growth	-2

	increment that had been assumed in management planning. As the growth increment was confirmed to be correct, it was not changed. However, the growth increment could have been changed on the basis of monitoring data if a discrepancy had been found. A plan is in place for reacting to unplanned deforestation and adjusting management strategies accordingly.	
Total Project Management (PM) [as applicable, (a + b + c + d + e + f)]		-4
Total may be less than zero.		

Financial Viability		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team was presented with a spreadsheet documenting the projected expenditures and revenue streams for the project. From review of the spreadsheet, the audit team was able to confirm that most of the necessary start-up investment has previously been made, such that the breakeven point should occur upon receipt of income from the sale of VCUs generated during the monitoring period for which verification services are being conducted. This point is projected to be within one year of the risk assessment (which was conducted in April and May 2013). The audit team can confirm, through a risk based review of the cost streams associated with the project, that the values within the spreadsheet are reflective of actual costs associated with project activities. The audit team can also confirm that the expected quantity of VCUs to be issued subsequent to the completion of verification activities is excess of the quantity needed to achieve breakeven, even with very conservative assumptions regarding the sale of VCUs.	0
b)		
c)		
d)		
e)	The audit team was provided with an official financial statement from Maderacre, which was signed by that company's accountant, indicating the quantity that the company held as of the end of 2012. The audit team confirmed that this value was equivalent to that presented in the "declaracion pago anual impuesto a la renta", which is the tax form that was filed with the government. This value is far greater than 100% of the quantity that will be needed to cover the total cash out before the project reaches breakeven. In addition, the audit team received an attestation, signed by senior management of Maderacre and Maderyja, which confirmed that all of the necessary funds will be made available to the project until it reaches breakeven.	0
f)		
g)		
h)		
i)	The audit team interviewed project personnel regarding the nature of the callable financial resources and learned that past funding has come from these sources, thus	-2

	providing an indication of the availability of future funding.	
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)]		0
Total may not be less than zero.		

Opportunity Cost		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team reviewed the calculation of the net present value (NPV) of project activities, which was calculated using the information provided in the spreadsheet described in relation to the Financial Viability sub-category. The audit team confirmed the appropriateness of the discount rate used for the analysis, as it was derived from a relevant source (the study “Las concesiones forestales en el Peru: como hacerlas sostenibles?” by Galarza et al., which was a study on the management of privately-operated forestry concessions in Peru). In addition, the audit team confirmed that expected net present value of cattle ranching was appropriately sourced from the study “Estrategias de conservación a lo largo de la Carretera Interoceánica en Madre de Dios, Peru. Un Análisis Económico Espacial. Conservación Estratégica. Serie Técnica 10, Marzo 2010”, which estimated the expected net present value of ranching activities within an eight-kilometer buffer of the Trans-Oceanic Highway. The \$50/ha value sourced from the study is thus conservative, as some of the project area is farther than eight kilometers from the Highway (and thus is less attractive for agricultural uses), and the net present value for cattle ranching is higher than the net present value for crop agriculture. Thus, the score reflected in the report reflects an analysis that errs on the side of conservatism (i.e., a higher net present value for the alternative land use).	0
b)		
c)		
d)		
e)		
f)		
g)	All project proponents are for-profit organizations.	NA
h)	This mitigation risk score has not been applied by the project and has therefore not been formally assessed in this risk assessment. However, it should be noted that, as described in discussion of the project longevity sub-category below, the audit team was presented with legal agreements to continue the management practices that protect the credited carbon stocks until 2046, the last year of the project crediting period.	NA
i)	The audit team was not presented with a legally binding agreement as required for the mitigation risk score.	NA
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g or h)]		0

Total may not be less than 0.	
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Project Longevity		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team can confirm that the concession contracts for Maderacre and Maderyja constitute a legal agreement to continue the management practice. Clause 16 of both agreements requires the concessionaire to perform surveillance activities, keep the concession free of occupancy and invasion and not allow any alteration of the concession's boundaries. Clause 3 of both concessions confirms that the concession documents are effective for 40 years, and therefore it is appropriate to consider this to be the project longevity. In addition, the regulatory framework of Peru requires that government-approved management practices be undertaken in the concessions.	10
b)		
Total Project Longevity (PL)		10
May not be less than zero		

The findings of the audit team regarding the risk scores applied for each factor are as follows.

Land Ownership and Resource Access/Use Rights		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team agrees that the ownership and resource access/use rights are held by different entities, as the concession contracts for Maderacre and Maderyja clarify that the concession areas (of which the project area is a subset) are owned by the government of Peru, with certain access/use rights granted to the companies Maderacre and Maderyja for their respective concessions.	2
b)		
c)	The audit team can confirm, through knowledge of norms governing land use in Peru, that the ownership of the concession areas by the Peruvian government is undisputed.	NA
d)	As evidence that "due process has been undertaken to discover any disputes over ownership and land/resource access/usage rights", as required by the AFOLU Non-Permanence Risk Tool, the audit team was provided with "Annotacion de Inscripcion" documents for both concessions. These documents are issued by the Superintendencia Nacional de Los Registros Publicos (the "Peruvian Public Register Office") and confirm that there are no concessions or	NA

	other land claims whose boundaries overlap the concession areas. The audit team can confirm, through knowledge of norms governing land use in Peru, that such documents represent the highest level of assurance regarding the absence of disputes or overlapping rights with respect to concession areas. Both “Annotacion de Inscripcion” documents were issued in 2006 and have the same terms as the concession contracts (40 years renewable).	
e)	Not applicable, as this is not a WRC project.	NA
f)	The audit team can confirm that the concession contracts for Maderacre and Maderyja constitute a legal agreement to continue the management practice. Clause 16 of both agreements requires the concessionaire to perform surveillance activities, keep the concession free of occupancy and invasion and not allow any alteration of the concession’s boundaries. The term for both contracts is 40 years renewable, and thus they will be in place for the same years as the project crediting period (i.e., until 2046). It appears that, so long as the projects are successful, there is an interest in renewing the contracts after 40 years.	-2
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e+ f)]		0
Total may not be less than zero.		

Community Engagement		
Risk Factor	Verification Findings	Risk Rating
a)	The audit team can confirm, through review of remotely sensed data indicating the absence of any land clearing, visits to the project area, and general knowledge of settlement patterns in the region, that there are no households within the project area.	0
b)	The audit team can confirm, through review of Participatory Rural Appraisal results and general knowledge of land use within the region, that there are no households within 20 km of the project area that could be considered reliant on the project area.	NA
c)	As there are no communities who derive livelihoods from the project area, this mitigation score is not applicable.	NA
Total Community Engagement (CE) [where applicable, (a+b+c)]		0

Total may be less than zero.	
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Political Risk		
Risk Factor	Verification Findings	Risk Rating
a)	Through an independent analysis of governance data for Peru from the years 2007-2011 (the last five years of available data at the time of the assessment), the audit team was able to confirm the calculation of the governance score indicated in the risk report.	2
b)		
c)		
d)		
e)		
f)	The Madre de Dios region of Peru is participating in the Governors' Climate and Forest Taskforce (GCF), as confirmed through review of the Governors' Climate and Forest Taskforce (GCF) website (http://www.gcftaskforce.org/ ; accessed 9 April 2013). Thus, at least one of the criteria necessary to claim the mitigation risk score has been met.	-2
Total Political (PC) [as applicable ((a, b, c, d or e) + f)]		0
Total may not be less than zero.		

The findings of the audit team regarding the risk scores applied for natural risk are as follows.

Natural Risk		
Risk Factor	Verification Findings	Risk Rating
F	The audit team can confirm, through expert knowledge of the region in which the project is located, that the risk of natural fires (i.e., fires for whom the ignition source is not humans) is not applicable to the project area. While lightning storms do exist in the Peruvian highlands, they are not common in the region in which the project is located.	0
PD	The audit team can confirm, through expert knowledge of the region in which the project is located, that the risk of pest and disease outbreaks is not applicable to the project area. As with most natural forests in tropical ecosystems, the project area has a diverse array of tree species, which serves to minimize the risk of any	0

	outbreaks. While pests (e.g., moths) have been a problem in some plantation areas in the past, the instances of enrichment planting within the project area will be dispersed throughout the project area so as to minimize the risk of pest outbreaks.	
W	The audit team can confirm, through expert knowledge of the region in which the project is located, that extreme weather events that would result significant impacts on carbon stocks do not occur in the project area. While strong wind events do occur, they do not typically knock trees down.	0
G	The audit team agrees that the risk of landslides in the project area is low. The audit team also agrees that the risk of other geological hazards is not applicable to the project area.	0
Total Natural Risk (as applicable, F + PD + W + G + ON)		0

In summary, the overall risk rating that was determined for the project, in accordance with the VCS Non-Permanence Risk Tool, is 10%. The audit team has concluded that the above risk rating is in conformance with the VCS rules.

Thus, the audit team can confirm that 449,750.30 buffer credits, as calculated using Equation 5 of the REDD-MF methodology framework Version 1.2, should be deposited into the AFOLU pooled buffer account.

APPENDIX C: MARKET LEAKAGE ASSESSMENT

In accordance with Section 3.6.4 of the AFOLU Requirements, the quantity of market leakage caused by the project was assessed at verification. The information upon which the market leakage assessment was based is contained within the validation report, Version 1.0, dated 20 September 2012. The market leakage assessment findings and conclusion are as follows.

Section 5, Step 2(e) of the REDD-MF methodology framework indicates that the selection of leakage sources is conducted ex ante and confirmed at validation. The REDD-MF methodology framework requires no monitoring to determine whether the selected leakage sources are still valid. Section 3.2.3 of the validation report states that "... LK ME Module has not been applied which is in conformance with the requirements set out in REDD MF for dealing with leakage." As the project design, as confirmed at validation, did not include market leakage as a leakage source, such a source does not need to be included at verification.

In summary, the total quantity of market leakage emissions is estimated to be 0 tCO_{2e} over the monitoring period. The audit team has concluded that the reporting of market leakage emissions is in conformance with the VCS rules and the methodology.