SECOND ASSESSMENT REPORT FOR THE "METHODOLOGY FOR SUSTAINABLE GRASSLAND MANAGEMENT (SGM)" AND "ESTIMATION OF LEAKAGE EMISSIONS FROM DISPLACEMENT OF GRAZING ACTIVITY DUE TO IMPLEMENTATION OF SUSTAINABLE GRASSLAND MANAGEMENT ACTIVITIES" METHODOLOGY ELEMENTS

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Methodology Element Title	Methodology for Sustainable Grassland Management (SGM) (Version 02) Estimation of Leakage Emissions from Displacement of Grazing Activity due to Implementation of Sustainable Grassland Management Activities (Version 1.0)

Version	[See above version numbers]	
Methodology Element Category	Methodology	X
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	Module	X
	Tool	
Sectoral Scope(s)	Sectoral scope 14 (AFOLU)	

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Summary:

This report describes the second assessment of the “Methodology for Sustainable Grassland Management (SGM)” and “Estimation of Leakage Emissions from Displacement of Grazing Activity due to Implementation of Sustainable Grassland Management Activities” methodology elements (“the methodology elements”), which were developed for the purpose of providing a methodological framework for the quantification and reporting of GHG emission reduction and removals attributable to implementation of sustainable grassland management activities. The purpose of the assessment is to assess the conformance of the methodology elements to the VCS rules and current best practices for quantification of GHG emission reductions and removals. The assessment was performed through a desk review of the methodology elements and other relevant documents. The conclusion of the assessment report is as stated in Section 5 below.

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1 INTRODUCTION

1.1 Objective

The purpose of the audit activity was to conduct a second assessment of the "Methodology for Sustainable Grassland Management (SGM)" and "Estimation of Leakage Emissions from Displacement of Grazing Activity due to Implementation of Sustainable Grassland Management Activities" methodology elements in accordance with the guidance documents listed in Section 1.2 of this report. Within this report, the "Methodology for Sustainable Grassland Management (SGM)" will be referred to as "the methodology", the "Estimation of Leakage Emissions from Displacement of Grazing Activity due to Implementation of Sustainable Grassland Management Activities" will be referred to as "the grazing displacement module" and the methodology elements will collectively be referred to as "the methodology elements". Due to its limited scope, the leakage module will only be discussed in the specific sections in which it is relevant.

1.2 Scope and Criteria

In accordance with the Methodology Approval Process, the scope of the assessment included the following:

- Applicability conditions: Assessment of whether the proposed methodology's applicability conditions are appropriate, adequate and in compliance with the VCS rules.
- Project boundary: Assessment of whether an appropriate and adequate approach is provided for the definition of the project's physical boundary and sources and types of GHGs included.
- Procedure for determining the baseline scenario: Assessment of whether the approach for determining the baseline scenario is appropriate, adequate and in compliance with the VCS rules.
- Procedure for demonstrating additionality: Assessment of whether the approach/tools for determining whether the project is additional are appropriate, adequate and in compliance with the VCS rules.
- Baseline emissions: Assessment of whether the approach for calculating baseline emissions is appropriate, adequate and in compliance with the VCS rules.
- Project emissions: Assessment of whether the approach for calculating project emissions is appropriate, adequate and in compliance with the VCS rules.
- Leakage: Assessment of whether the approach for calculating leakage is appropriate, adequate and in compliance with the VCS rules.
- Quantification of net GHG emission reductions and/or removals: Assessment of whether the approach for calculating the net GHG benefit of the project is appropriate, adequate and in compliance with the VCS rules.
- Monitoring: Assessment of whether the monitoring approach is appropriate, adequate and in compliance with the VCS rules.
- Data and parameters: Assessment of whether the specification for monitored and not monitored data and parameters is appropriate, adequate and in compliance with the VCS rules.

- Adherence to the project principles of the VCS Program: Assessment of whether the methodology adheres to the VCS Program principles set out in the VCS Standard.
- Relationship to approved or pending methodologies: Assessment of whether any existing methodology could reasonably be revised to serve the same purpose as the proposed methodology.

The proposed revision was assessed for conformance against the VCS Version 3, including the following documents:

- VCS Standard, Version 3.2
- Agriculture, Forestry and Other Land Use Projects (AFOLU) Requirements, Version 3.2
- Methodology Approval Process, Version 3.3
- Program Definitions, Version 3.2

It should be noted that, while the versions of the prevailing VCS Program documents at the time of this writing are different from the versions noted above, the first assessment report was submitted to the VCSA prior to 4 October 2012 (the date of release of the most recent VCS Program update), and thus the methodology elements did not need to comply with any new requirements in the 4 October 2012 VCS program update, in accordance with Section 8.4.2 of the Methodology Approval Process. Therefore, the methodology elements have been assessed against those versions of the VCS Program documents that prevailed at the time that the first assessment report was submitted to the VCSA. Unless otherwise noted, all references to the above VCS Program documents are to the version stated above.

1.3 Summary Description of the Methodology Element

The methodology element provides criteria and procedures for the quantification of emission reductions and removals attributable to project activities that implement improved grassland management techniques. The reader is directed to Section 2 of the methodology element for a more thorough summary.

2 ASSESSMENT APPROACH

2.1 Method and Criteria

The primary method used for this assessment was document review, as described in Section 2.2 below.

2.2 Document Review

The assessment activity included a detailed review of the methodology elements against the criteria of the guidance documents listed in Section 1.2 of this report. In addition, the methodology elements were assessed for logical coherence, internal consistency, completeness, and consistency with current best practices for quantification of emission reduction and removals.

2.3 Interviews

No interviews were conducted during the course of the assessment.

2.4 Use of VCS-Approved Expert

A VCS-approved expert was not used in the course of the assessment.

2.5 Resolution of Any Material Discrepancy

Potential 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 Reports (NCRs) were issued in response to material discrepancies in one or more methodology elements. A material discrepancy could be defined as one of the following:

- An instance of non-conformance to the guidance documents listed in Section 1.2 of this report;
- An instance where the language of the methodology element required clarification in order to avoid ambiguity;
- An instance where the proposed methodology lacked internal consistency; or
- An instance where formulae in the proposed revision were not consistent with mathematical convention.

An adequate response for each issued NCR, including evidence of corrective action, was required before an assessment opinion could be reached.

New Information Requests (NIRs) were issued to the client when more information was needed to determine whether a material discrepancy existed. Issuance of an NIR did not necessarily signify the presence of a material discrepancy. However, an adequate response to all issued NIRs was required before an assessment opinion could be reached.

Opportunities for Improvement (OFIs) were issued to the client when an opportunity for improvement in the proposed revision was identified. Such opportunities for improvement did not constitute material discrepancies. OFIs were considered resolved on issuance, and therefore a response to issued OFIs was not required before an assessment opinion could be reached.

All issued findings are described in Appendix A below.

2.6 Internal Quality Control

Internal quality control was maintained in accordance with SCS' quality control system.

As an important component of this system, a single workbook (the Findings Presentation Workbook) was used for the issuance, tracking and closure (if applicable) of all findings issued. In addition to containing all of the information on the findings, the Findings Presentation Workbook contains client responses to the findings (if applicable) and allows for multiple iterations of client and assessor responses. Finally, the Findings Presentation Workbook contains the assessor's comments at the closure of every finding. Therefore, the workbook provides a transparent record of the identification and resolution of material discrepancies identified throughout the assessment process.

In addition, all methodology assessments performed by SCS are required to undergo an internal technical review by an independent party who was not involved with the assessment activity. From review of the methodology element, the draft assessment report, and the assessment findings, as documented in Appendix A of this report, the technical reviewer determined that the assessment was conducted according to the VCS rules and that the decision of the assessment team was justified.

3 ASSESSMENT FINDINGS

3.1 Applicability Conditions

An assessment of how the applicability conditions of the methodology are appropriate, adequate and in compliance with the VCS rules follows.

Condition	Assessor comments
(a)	Appropriately limits project activities to those that are consistent with the description of the Improved Grassland Management sub-category, as set out in Section 4.2.2(2) of the AFOLU Requirements; the methodology contains a useful definition of “grassland” to support this condition
(b)	Necessary to ensure appropriate quantification of GHG emission reductions or removals, given that the methodology lacks specific provision for quantification of such reductions or removals on wetland/peatland soils
(c)	Determination that land is degraded at the start of the project activity, and that land would have continued to degrade in the baseline scenario, it fundamental to ensuring that procedures for quantifying baseline emissions, as discussed in Section 3.5 below, are conservative
(d)	Ensures that reductions of nitrous oxide and/or methane emissions are eligible for crediting under the VCS rules, in accordance with Section 4.3.5 of the AFOLU Requirements
(e)	Necessary to ensure that the procedures for quantification of GHG emission reductions are conservative, given that the methodology does not contain procedures to quantify emissions from these sources
(f)	This is an appropriate condition, as the methodology is not applicable to manure management projects (such projects being outside the scope of AFOLU project activities, as set out in the gray guidance text of Section 4.2.2 of the AFOLU Requirements)
(g)	Appropriately restricts applicability to project activities that fall within the scope of the Improved Grassland Management sub-category, as set out in Section 4.2.2(2) of the AFOLU Requirements (as that sub-category is applicable to projects that implement improved management of grasslands and not to projects that transition grasslands to a different land use)

Condition	Assessor comments
(h)	Mirrors the requirement of Section 3.1.5 of the AFOLU Requirements
(i)	Limits applicability to projects for which the procedures for quantifying carbon stock change in the soil pool will lead to a sufficiently accurate quantification of such, as further discussed in Section 3.6 below
(j)	Necessary to justify the exclusion of nitrous oxide emissions from leaching and runoff from the project boundary, as required by the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (Section 11.2.2.2 of that document states "For dryland regions, where precipitation is lower than evapotranspiration throughout most of the year and leaching is unlikely to occur, the default FracLEACH is zero")

The grazing displacement module requires, as an additional applicability condition, that "Displacement of livestock from the project area to wetlands is not permitted in this module." This is a reasonable condition, given that GHG emissions from livestock grazing in wetlands may well be substantially different from GHG emission from livestock grazing in forests, cropland and other land types.

In summary, the applicability conditions are appropriate, adequate and in compliance with the VCS rules.

3.2 Project Boundary

The procedures for the definition of the project's physical boundary and sources and types of GHGs included are appropriate, adequate and in compliance with the VCS rules. Further justification of conformance is provided in the following sub-sections.

3.2.1 GHG Sources

The procedures for determination of the GHG sources included in the project boundary conform to the VCS rules and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories ("the 2006 IPCC Guidelines"; as referenced through Section 4.5.1 of the AFOLU Requirements), as specifically discussed for each GHG source below.

Source		Gas	Included	Assessment comments
Baseline	Use of fertilizers	CO_2	No	Allowed by Section 4.3.5 of the AFOLU Requirements, considering applicability condition (c).
		CH_4	No	
		N_2O	Yes	
		Other	None	
	Use of N-fixing species	CO_2	No	Emissions in the baseline may always be conservatively excluded per Section 4.3.4 of the AFOLU Requirements
		CH_4	No	
		N_2O	No	
		Other	None	
	Burning of biomass	CO_2	No	Inclusion/exclusion is supported by Volume 4, Section 6.2.4 of the 2006 IPCC Guidelines, which states “CO2 emissions from biomass burning in Grassland Remaining Grassland are not reported since they are largely balanced by the CO2 that is reincorporated back into biomass via photosynthetic activity, within weeks to few years after burning. Non-CO2 emissions (particularly CO, CH4, N2O and NOx) that result from incomplete combustion of biomass in managed grassland should be reported, regardless of their nature (natural or anthropogenic fire).”
		CH_4	Yes	
		N_2O	Yes	
		Other	None	
	Manure deposition on grassland	CO_2	No	Per Volume 4, Section 10.1 of the 2006 IPCC Guidelines, emissions from carbon dioxide can be excluded but emissions from methane and nitrous oxide are important sources
		CH_4	Yes	
		N_2O	Yes	
		Other	None	
	Farming machine	CO_2	Yes	May be included, per Section 4.3.10 of the AFOLU Requirements, if energy-conserving practices are implemented;
		CH_4	No	

Source		Gas	Included	Assessment comments
		N_2O	No	however, emissions in the baseline may always be conservatively excluded per Section 4.3.4 of the AFOLU Requirements
		Other	None	
	Enteric fermentation	CO_2	No	Methane emissions from enteric fermentation may be included per Volume 4, Section 10.3 of the 2006 IPCC Guidelines
		CH_4	Yes	
		N_2O	No	
		Other	None	
	Use of fertilizers	CO_2	No	Must be included in the project scenario if included in the baseline, per the principle of consistency (as set out in Section 2.4.1 of the VCS Standard and referenced through Section 4.1.4 of the VCS Standard)
		CH_4	No	
		N_2O	Yes	
		Other	None	
	Use of N-fixing species	CO_2	No	Appropriate to include, per Volume 4, Section 11.2.2 of the 2006 IPCC Guidelines
		CH_4	No	
		N_2O	No	
		Other	None	
	Burning of biomass	CO_2	No	Inclusion/exclusion is supported by Volume 4, Section 6.2.4 of the 2006 IPCC Guidelines, which states “CO2 emissions from biomass burning in Grassland Remaining Grassland are not reported since they are largely balanced by the CO2 that is reincorporated back into biomass via photosynthetic activity, within weeks to few years after burning. Non-CO2 emissions (particularly CO, CH4, N2O and NOx) that result from incomplete combustion of biomass in managed grassland should be reported, regardless of their nature (natural or anthropogenic fire).”
		CH_4	Yes	
		N_2O	Yes	
		Other	None	
Project	Manure deposition on	CO_2	No	Per Volume 4, Section 10.1 of the 2006

Source		Gas	Included	Assessment comments
	grassland	CH_4	Yes	IPCC Guidelines, emissions from carbon dioxide can be excluded but emissions from methane and nitrous oxide are important sources
		N_2O	Yes	
		Other	None	
	Farming machine	CO_2	Yes	May be included, per Section 4.3.10 of the AFOLU Requirements, if energy-conserving practices are implemented; must be included (per the VCS principle of conservativeness, as set out in Section 2.4.1 of the VCS Standard and referenced through Section 4.1.4 of the VCS Standard) if emissions in project scenario are higher than those in baseline scenario
		CH_4	No	
		N_2O	No	
		Other	None	
	Enteric fermentation	CO_2	No	Methane emissions from enteric fermentation may be included per Volume 4, Section 10.3 of the 2006 IPCC Guidelines
		CH_4	Yes	
		N_2O	No	
		Other	None	

3.2.2 Carbon pools

The procedures for selection of carbon pools is consistent with the requirements of the VCS rules (specifically, Section 4.3.1 of the AFOLU Requirements), as justified below.

Carbon pools	Included?	Assessment comments
Above-ground woody biomass	Yes	Inclusion is consistent with the AFOLU Requirements, which states that "Carbon pool shall be included where project activities may significantly reduce the pool"
Above-ground non-woody biomass	No	The AFOLU Requirements indicates that this pool does not have to be included
Below-ground biomass	Optional	Considered optional by the AFOLU Requirements; the indication that the pool is "optional" constitutes criteria and procedures to set out when a project proponent may include the pool, as required by the AFOLU Requirements

Litter	No	The AFOLU Requirements indicates that this pool does not have to be included
Dead wood	No	The AFOLU Requirements indicates that this pool does not have to be included
Soil	Yes	Required for inclusion by the AFOLU Requirements
Wood products	No	The AFOLU Requirements permits the exclusion of this pool

3.2.3 Spatial boundaries

The methodology element contains some fairly standard requirements for delineation of the project area. These requirements are consistent with the VCS rules.

3.3 Procedure for Determining the Baseline Scenario

The procedure for determining the baseline scenario is fully consistent with the determination of additionality for a project activity, thus complying with applicability condition (b) of the VCS-approved "Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities" (see Section 3.11 below for further discussion of this tool). As required by Section 4.4.3 of the AFOLU Requirements, the criteria and procedures for identifying alternative baseline scenarios require the project proponent to take into account current and previous management activities. The methodology provides helpful guidance for determining whether potential land uses are "realistic and credible". Consistent with applicability condition (b) of the Tool, the methodology provides for a stepwise approach justifying the determination of the most plausible baseline scenario. The stepwise approach itself references the Tool, thus allowing the potential that the Tool may be cycled through multiple times in the event that the user of the Tool (for purposes of demonstrating additionality) elects to undertake barrier analysis. However, the approach of the methodology is fully consistent with the VCS rules and with the Tool. Thus, the procedure for determining the baseline scenario is appropriate, adequate and in compliance with the VCS rules.

3.4 Procedure for Demonstrating Additionality

The methodology references and requires the use of the VCS-approved "Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities". As discussed further, this tool has been appropriately referenced. Therefore, additionality has been adequately handled in accordance with Section 4.6.2(1) of the VCS Standard. Thus, the criteria and procedures for the demonstration of additionality are appropriate, adequate and in compliance with the VCS rules.

3.5 Baseline Emissions

As required by Section 4.5.1 of the AFOLU Requirements, the procedures to quantify GHG emissions or removals are guided by the 2006 IPCC Guidelines.

The audit team can confirm that the procedures for quantifying baseline emissions due to fertilizer use, in Equations 1-4, are consistent with Chapter 11, Volume 4 of the 2006 IPCC Guidelines. The assessment team agrees that, if applicability condition (i) is met, the exclusion of nitrous oxide emissions from leaching and runoff is consistent with the guidance of Section 11.2.2.2, Chapter 4 of the 2006 IPCC Guidelines.

The procedures for quantifying emissions due to biomass burning, in Equations 5-7, are consistent with Equation 2.27, Volume 4 of the 2006 IPCC Guidelines (as referenced through Section 6.2.4, Volume 4 of that document).

The procedure for quantifying emissions due to enteric fermentation, in Equation 8, is consistent with Equation 10.19, Volume 4 of the 2006 IPCC Guidelines, although with the use of different units. As a further refinement to this equation, Equation 8 includes an adjustment for the proportion of the year in which a given population of livestock is located within the project boundary—a useful improvement in the case of migratory livestock herding.

The procedures for quantifying emissions due to manure management are consistent with Chapter 10, Volume 4 of the 2006 IPCC Guidelines, although the outputs of the equations have different units (metric tonnes) than those in the 2006 IPCC Guidelines (gigagrams). In all cases, the procedures have the added sophistication of allowing adjustment for the proportion of the year in which a given population of livestock is located within the project boundary. The procedure for quantifying direct nitrous oxide emissions, in Equations 11 and 12, is consistent with Equation 10.25 of the 2006 IPCC Guidelines. The procedure for quantifying indirect nitrous oxide emissions, in Equation 14, is consistent with Equation 10.26 of the 2006 IPCC Guidelines. The procedure for quantifying methane emissions, in Equation 15, is consistent with Equation 10.22 of the 2006 IPCC Guidelines.

The procedure for quantifying emissions due to fossil fuel combustion, in Equation 16, is consistent with Equation 3.3.1, Volume 2 of the 2006 IPCC Guidelines, albeit with different units.

The procedures for quantifying carbon stock change in the above-ground and below-ground woody biomass pools, in Equations 17-19, are consistent with Section 6.2.1, Volume 4 of the 2006 IPCC Guidelines. As allowed by the 2006 IPCC Guidelines, the gain-loss method is used. The implementation of this method, in Equation 17, is consistent with Equation 2.7, Volume 4 of the 2006 IPCC Guidelines. The methodology makes use of the CDM-approved tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”. As discussed in Section 3.11 below, the tool is appropriately used by the methodology.

The assessment team agrees that, provided that applicability condition (b) has been met, it is conservative (as defined in Section 2.4.1 of the VCS Standard) to assume no carbon stock change in the soil pool in the baseline scenario. As discussed in Section 3.11 below, the methodology appropriately references the CDM-approved “Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities” for confirmation that land is degraded at the project start date and that land would have continued to degrade in the baseline scenario. This tool provides a very systematic approach for determination of whether land is degraded and/or degrading. If land can be assumed to have continued to degrade in the baseline scenario, this means that carbon stock changes in the soil pool in the baseline scenario would have been negative. In this case, the

assessment team agrees that the assumption that baseline soil carbon stock changes are zero will not lead to an overestimation of GHG emission reductions or removals.

All equations have been reviewed and found to be mathematically correct. The procedures for calculating baseline emissions are appropriate, adequate and in compliance with the VCS rules.

3.6 Project Emissions

As required by Section 4.5.1 of the AFOLU Requirements, the procedures to quantify GHG emissions or removals are guided by the 2006 IPCC Guidelines.

The procedure for quantifying emissions due to the use of nitrogen-fixing species, in Equation 26, is consistent with Equation 11.1, Volume 4 of the 2006 IPCC Guidelines (although this will not be immediately apparent through a side-by-side comparison). The assessment team agrees that the threshold value of 50% is appropriate, given the inherent lack of precision in quantification of net emissions from nitrogen-fixing species (which is anticipated to be caused by variation in the area cropped to nitrogen-fixing species, uncertainty in the exact area cropped to nitrogen-fixing species under both project and baseline conditions, and perhaps other factors).

The procedure for quantifying carbon stock changes in the soil pool are broadly consistent with recommendations for Tier 3 methods for quantification, as described in Section 6.3.3.1, Volume 4 of the 2006 IPCC Guidelines. In addition, this procedure conforms to Sections 4.5.6-4.5.8 of the AFOLU Requirements. In accordance with Section 4.5.6 of the AFOLU Requirements, the methodology allows for the use of model estimates (Option 1; Equations 43-44) or a measurement approach (Option 2; Equations 45-50).

For Option 1, appropriate criteria are included for selection of a biogeochemical model, both within Section 8.2.8 of the methodology and within applicability condition (i) of the methodology. These criteria effectively ensure that the selected model is valid for quantification of soil carbon stock changes in the project area. In addition, it is understood that such model will also be assessed, for individual projects, against the criteria of Section 4.5.6 of the VCS Standard Version 3.3 (or later versions), as required by Section 3.1.4 of the VCS Standard Version 3.3 (or later versions), so long as these criteria are not removed. The methodology includes requirements for parameterization of the model that conform to Section 4.5.8 of the AFOLU Requirements.

For Option 2, in accordance with Section 4.5.7 of the AFOLU Requirements, the methodology requires that appropriate protocols for soil sampling and quality control be used. The protocols suggested by the methodology provide appropriate guidance regarding the sampling tasks, but the methodology allows for the use of alternative protocols, provided they meet the criteria set out in the methodology. The methodology requires sufficient sampling density that statistically significant changes be detected at the 95% confidence level, as required by the AFOLU Requirements. Quantification of, and deduction for, uncertainty related to soil carbon stock estimates is discussed in Section 3.8 below.

All other procedures in Section 8.2 are consistent with the respective procedures in Section 8.1, which are themselves consistent with the 2006 IPCC Guidelines and the VCS rules (as discussed in Section 3.5 above).

All equations have been reviewed and found to be mathematically correct. The procedures for calculating project emissions are appropriate, adequate and in compliance with the VCS rules.

3.7 Leakage

The methodology contains appropriate procedures for quantifying emissions from market leakage and activity-shifting leakage. Although quantification of market leakage is not required by the AFOLU Requirements "in ALM projects involving cropland or grassland management activities" (see Section 4.6.11), the methodology has conservatively opted to require the use of VCS-approved module VMD0033 for accounting of market leakage. As described in Section 3.11 below, that module is appropriately used by the methodology.

The grazing displacement module is used by the methodology to quantify emissions from activity shifting leakage, in accordance with Section 4.6.12 of the AFOLU Requirements. As allowed for by Section 4.6.3 of the AFOLU Requirements, leakage emissions are determined indirectly. As is documented in Appendix A, this indirect measurement approach was justified by the methodology developer on the basis that the methodology is likely to be used in the context where grazing agents are migratory, thus leading to great difficulty in directly monitoring leakage emissions. The procedures of the grazing displacement module involve conducting a survey of grazing agents, preparation of a grazing displacement management plan, and procedures to quantify emissions attributable to activity shifting leakage. The grazing displacement module contains an appropriate procedure to determine whether soil carbon loss due to overgrazing may occur. The grazing displacement module contains separate procedures for quantifying emissions due to leakage to different land cover types. In each case, the quantification procedures are consistent with those for quantification of baseline carbon stock changes and emissions, as discussed in Section 3.5 above. One key difference is the addition of a procedure to "estimate leakage emissions due to loss of soil carbon" in identified and unidentified grasslands, as contained within Sections 7b(iii), and 10c(iii), respectively. These procedures are consistent with Equation 2.25, Volume 4 of the 2006 IPCC Guidelines. In addition, the grazing displacement module contains a procedure to estimation emissions from deforestation in identified and unidentified forestlands, as contained within Sections 8b(iii) and 12b(iii), respectively. These procedures are consistent with Equation 2.25, Volume 4 of the 2006 IPCC Guidelines, except that, rather than quantify carbon stock change for each year, the long-term equilibrium stock of the post-deforestation land used in a single calculation for all years after deforestation. The methodology contains appropriate and conservative procedures for measuring emission factors for carbon stock change in the areas to which grazing is displaced. The grazing displacement module conservatively assumes that, where the lands to which grazing will be displaced are unidentified and it cannot be justified that those lands will necessarily be grassland or cropland, they are assumed to be forestland (the land cover type with the highest carbon stocking). The calculations in the grazing displacement module have been reviewed and found by the assessment team to be correct.

It should be noted that the methodology and the grazing displacement module both use the placeholder reference number "VMD000XX" to refer to each other. While this situation is unconventional, it appears necessary at this time, as the reference number is assigned by the VCSA as a last step of the methodology approval process. Therefore, the situation is not out of conformance with the assessment criteria. It is suggested that care be taken to update the reference numbers of the methodology elements, prior to final publication by the VCSA, in all instances where those methodology elements refer to each other. A search of both methodology elements for "xx" should be effective in identifying all instances where a placeholder reference number has been used.

Therefore, the procedures for determining leakage are appropriate, adequate and in compliance with the VCS rules.

3.8 Quantification of Net GHG Emission Reductions and/or Removals

The methodology contains appropriate procedures for calculating the net GHG benefit of the project.

As required Section 4.1.4 of the VCS Standard, Section 8.2.9 of the methodology contains procedures to account for uncertainty. The assessment team agrees that, where indisputably conservative estimates are used, uncertainty need not be directly accounted for. Where soil carbon estimates are derived from model output, the methodology contains appropriate procedures to account for the uncertainty of the input to the soil model. The methodology also contains appropriate procedures to account for uncertainty in measured data by taking the parameter value as the upper or lower bound of the 95% confidence interval (depending on what is conservative in a given situation) around the mean.

As required by Sections 4.7.1 and 4.7.2 of the AFOLU Requirements, the methodology element contains a procedure for quantifying the net change in carbon stocks, which is used (in Equation 62) to determine the number of buffer credits withheld in the AFOLU pooled buffer account. The methodology contains a correct procedure, in Equation 61, for quantifying the number of VCUs to be issued.

In summary, the procedures for calculating the net GHG benefit of the project are appropriate, adequate and in compliance with the VCS rules.

3.9 Monitoring

The criteria for development of a monitoring plan are consistent with the requirements of Section 4.8.5 of the VCS Standard. The methodology contains appropriate guidance for each monitoring task. The timelines that are provided for various monitoring tasks are reasonable. The grazing displacement module contains adequate criteria for monitoring, including appropriate specification of the required periodicity for each monitoring task.

In summary, the monitoring procedures are appropriate, adequate and in compliance with the VCS rules.

3.10 Data and Parameters

The methodology elements appropriately segregate between data that must be monitored and data that need not be monitored. The methodology elements contain appropriate specification for monitored and not monitored data and parameters. In accordance with Section 4.8.1 of the VCS Standard, this specification includes sources of data and units of measurement. In accordance with Section 4.8.2 of the VCS Standard, this specification consistently references the IPCC and scientific peer-reviewed literature for a source of standards and factors. The specification is complete and, if duly carried out, will lead to reasonably accurate quantification of GHG emission reductions. For those parameters for which monitoring is not required, the methodology elements contain guidance that will ensure conservative quantification.

The specification for mass of synthetic fertilizer used, nitrogen content of fertilizer applied, population of grazing livestock, grazing days, average grazing hours per day, and fuel consumption is based on “documented management records averaged over the five year period prior to the project start date” or “a

conservative estimate of common practice in the region", in accordance with Section 4.5.9 of the AFOLU Requirements.

In summary, the specification for monitored and not monitored data and parameters is appropriate, adequate and in compliance with the VCS rules.

3.11 Use of Tools/Modules

The methodology references and requires the use of the VCS-approved "Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities". Section 1.1.2 of the Tool indicates that "Project proponents proposing new baseline methodologies may incorporate this tool in their proposal". The applicability conditions of the Tool (set out in Section 1.2 are consistent with the methodology, as applicability condition (a) is actually required of all AFOLU projects (in accordance with Section 3.1.2 of the AFOLU Requirements) and Section 6 of the methodology provides for a stepwise approach justifying the determination of the most plausible baseline scenario, thus conforming to applicability condition (b).

The methodology references and requires the use of the CDM-approved tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities". The tool contains generic guidance for measurement of carbon stocks in the above-ground and below-ground woody biomass pools that is appropriate to the project activities that are applicable to the methodology. The tool has no applicability conditions.

The methodology references and requires the use of the CDM-approved "Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities" for confirmation that land is degraded at the project start date and that land would have continued to degrade in the baseline scenario. The Tool is appropriately referenced. Provided that the user is not confused by the reference to "A/R CDM" activities, the Tool will fit seamlessly into the larger context of the methodology. In addition, as discussed in Section 3.5 above, the Tool is appropriate for the purpose for which it is referenced.

The methodology references and requires the use of the VCS-approved module VMD0033 to quantify emissions from market leakage. The tool provides generic guidance for market leakage accounting in AFOLU project activities, with no specific applicability conditions, and is therefore appropriate for use by the methodology. It should be noted that Step 9 of the VMD0033 module requires that "The methods and models used to complete this stage must be those defined in the modules associated with VCS methodology VM0021 Soil Carbon Quantification Methodology, for the relevant carbon pools". Thus, it appears that the VMD0033 module requires the use of the VMD0021 module (for soil carbon stock estimation) and the VMD0022 module (for carbon stock estimation in living biomass). These modules then require the use of other modules (for example, Section 5 of the VMD0021 module requires that "Soil sampling must always be conducted on a stratified basis, using the stratification procedures laid out in the module VMD0018...". It is not clear if the requirement to comply with additional modules of the VCS-approved methodology VM0021 was anticipated by the methodology developer, or if it is an unintended consequence of the use of the VMD0033 module. Regardless, the VMD0033 module is not inconsistent with the methodology, per se, and its usage by the methodology is not inconsistent with the VCS rules.

3.12 Adherence to the Project Principles of the VCS Program

The methodology element adheres to all of the VCS Program principles set out in the VCS Standard other than the principle of conservativeness, as described below for each principle.

The methodology element adheres to the principle of relevance by selecting the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the VCS program.

The methodology element adheres to the principle of completeness by including all relevant GHG emissions and removals, and including all relevant information to support criteria and procedures.

The methodology element adheres to the principle of consistency by enabling meaningful comparisons in GHG-related information.

The methodology element adheres to the principle of accuracy by reducing bias and uncertainties as far as is practical.

The methodology element adheres to the principle of transparency by disclosing sufficient and appropriate GHG-related information (i.e. providing sufficient and appropriate justification of procedures and criteria) to allow intended users to make decisions with reasonable confidence.

The methodology element adheres to the principle of conservativeness by using conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.

3.13 Relationship to Approved or Pending Methodologies

The procedure required by Section 5.2 of the Methodology Approval Process was undertaken to "demonstrate that no approved or pending methodology under the VCS Program or an approved GHG program could reasonably be revised to meet the objective of the proposed methodology". No approved or pending methodology for Improved Grassland Management project activities exists within the scope of the Clean Development Mechanism. As indicated by Section 5.2.1(1) of the Methodology Approval Process, the scope of the assessment may be limited to "all such methodologies that are available sixty days before the proposed methodology is submitted to the VCSA for public consultation". The assessment team has confirmed, via email contact with the VCSA, that the only available methodology for Improved Grassland Management projects, sixty days before the methodology was submitted to the VCSA for public consultation, was the VCS-approved methodology VM0017. The assessment team agrees that revision of the VM0017 methodology to meet the objective of the methodology elements, and to include enteric fermentation and manure as emissions sources, would require wide-spread modification to the VM0017 methodology. Therefore, it is the opinion of the assessment team that the VM0017 methodology could not reasonably be revised to meet the objective of the methodology elements.

3.14 Stakeholder Comments

The VCS webpage for the methodology element (http://www.v-c-s.org/methodologies/methodology-sustainable-grassland-management-sgm) indicates that the public comment period ran from 7 September 2011 until 6 October 2011. An explanation of whether and how the developer has taken due account of all comments received during the public stakeholder consultation, in the opinion of the first assessment

team, is contained within the first assessment report (Version 01, issued 30 July 2012). The further opinion of the second assessment team is stated below.

To quote from the first assessment report: "The methodology developers received stakeholder comments from Robert Seaton of Brinkman & Associates/The Earth Partners (TEP), Nicole R. Virgilio of The Nature Conservancy (TNC), Abhirup Sen of Emergent Ventures (EV), and Andrea Malmberg of The Savory Institute (TSI)."

First assessment comments	Second assessment comments
"TEP commented that the use of option 1 to estimate future SOC could lead to large errors when using a Tier 1 default value of 20 years, rather than more area specific transition periods, at the project level. While this may be true, the methodology authors point out that this is already part of VCS approved methodology VM0017."	The assessment team does not believe the fact that the procedure in question was previously approved as part of the methodology assessment process for VM0017 is relevant, per se. The methodology assessment process is not perfect, and it is possible that something was missed in the approval process for VM0017. This comment led to the issuance of NIR 2012.32, as documented in Appendix A. In response to that finding, the methodology was modified to such that a default transition time of 20 years, was no longer assumed, and the updated methodology provides the following options for determining the transition time: "The value of D may be chosen from published data from local or regional studies or the results of the validated biogeochemical model".
"TEP also commented that the soil sampling protocol included in the methodology does not account for soil processes that can affect SOC quantification measurements, like compaction, decompaction, erosion, deposition and possibly other soil changes that can occur. The methodology authors withdrew their initial soil sampling component of the methodology and now refer to a sampling protocol used by members of the European Union (Stolbovoy, et al., Soil sampling protocol to certify the changes of organic carbon stock in mineral soil of the European Union, ver. 2, 2007)."	The assessment team agrees that the changes made to the methodology have addressed this comment. The updated methodology contains additional requirements for measurement of soil carbon stocks.
"Additionally, TEP pointed out that the depths for soil sampling stated in the original methodology called for sampling to 20 cm, and that in many cases that depth is inadequate. TEP suggested the sampling depth should be determined on a case by case basis. Methodology authors agreed and	The assessment team agrees that the changes made to the methodology have addressed this comment.

changed the depth increment to 30 cm or greater, as determined by the PD."	
"In the original version of the methodology, applicability conditions included the term, "…in the same period," by which the authors meant, "…in the same year." TNC mentioned that the meaning of the original phrase was unclear. Subsequent drafts of the methodology eliminate the phrase."	The assessment team agrees that the changes made to the methodology have addressed this comment.
"TNC mentioned that it appeared that N from N fixing species was assumed to contribute to emissions while other sources of N were not similarly accounted. The methodology authors point out that all sources of N are accounted, in accordance with approved methodology VM0017."	Although the comment may be relevant from a programmatic perspective, the assessment team agrees that the comment is insignificant with respect to the assessment process. As required by the AFOLU Requirements, the 2006 IPCC Guidelines have been referenced for guidance on the quantification of emissions from nitrogen-fixing species. The guidance indicates that such emissions should be quantified in the manner set out in the methodology, as described in Section 3.6 above.
"TNC mentioned that the criteria for determining whether land is degrading are unclear (applicability conditions). The authors added a footnote, indicating the Tool for the identification of degraded and degrading lands for consideration in implementing A/R CDM project activities should be used."	The assessment team agrees that the changes made to the methodology have addressed this comment. The use of this Tool supplies the necessary criteria, as described in Section 3.5 above.
"TNC mentioned that "stratum" should be included in the list of definitions. The methodology authors added stratum to the definitions in response."	The assessment team agrees that the changes made to the methodology have addressed this comment.
"TNC mentioned the inadequacy of the original 20 cm sampling depth increment, and suggested 30 cm would be better. Methodology authors adopted the 30 cm minimum depth, and greater depths if deemed important."	The assessment team agrees that the changes made to the methodology have addressed this comment.
"TNC mentioned that grazing displacement leakage is poorly addressed, but the authors use the Tool for estimation of emissions due to the displacement of grazing to calculate this leakage. TNC's concerns appear to be with the tool, and not this methodology"	As the tool referred to in this comment is no longer referenced by the methodology, this comment is no longer relevant.

"Below ground biomass should be a required pool for consideration of emissions and reductions, because in grassland ecosystems, it is a major percentage of living biomass. The methodology authors include it as an optional pool. The methodology authors responded to this comment by pointing out that ignoring below ground biomass would be conservative."	Although the comment may be relevant from a programmatic perspective, the assessment team agrees that the comment is insignificant with respect to the assessment process, since the AFOLU Requirements permits making below-ground woody biomass an optional pool.
"EV commented that direction for determining leakage sources should be more general. No action was taken by the methodology developers because the comment lacked the specifics necessary for a relevant response."	The assessment team agrees that it is not clear how this comment should be addressed. If it is desired to make the methodology more general in the future, this can always be handled through a revision to the methodology. The assessment team agrees that the comment is insignificant.
"EV also commented that the basis for stratification was not well defined. The methodology authors added stratification procedures."	The assessment team agrees that the changes made to the methodology have addressed this comment.
"EV requested that the methodology authors state a position on the use of genetically modified organisms (GMOs), specifically grasses that might be designed to lower methane emissions, increase digestibility, etc. The methodology authors point out that VCS has no guidance regarding GMOs, and it is not required that the methodology account for benefits of GMOs."	The assessment team agrees that the comment is insignificant. A position on GMOs is outside the scope of the methodology, although it may be relevant at the programmatic level.
TSI pointed out that livestock management is just as important as the number of livestock on the land. The methodology authors point out that the methodology revolves around improved livestock management.	Although the comment may be relevant from a programmatic perspective, the assessment team agrees that the comment is insignificant with respect to the assessment process. As indicated in the gray guidance text in Section 4.2.2, manure management is excluded from sectoral scope 14 (AFOLU), and the commenter is clearly encouraging improved manure management.

At this time, it is the opinion of the assessment team that all comments received have been addressed, are insignificant, or are no longer relevant.

4 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Please see Appendix A for a record of the findings issued, responses by the methodology developer and the assessment team, and justification for the resolution of findings.

5 ASSESSMENT CONCLUSION

The assessment team concludes that the methodology elements are in full conformance with the assessment criteria. It is the recommendation of the assessment team that the VCSA approve the methodology element. However, it may be noted that, in accordance with Section 8.4.2 of the Methodology Approval Process, the methodology elements will need to be immediately placed on hold or withdrawn (as determined by the VCSA), upon approval by the VCSA, as the "new" VCS requirements were issued on 4 October 2012, and thus, the period of validity of the methodology elements has passed.

6 REPORT RECONCILIATION

No revisions to this report were required to reconcile with the first assessment report.

7 EVIDENCE OF FULFILMENT OF VVB ELIGIBILITY REQUIREMENTS

The following evidence of fulfilment of SCS' eligibility requirements is presented in accordance with Section 4.2 of the Methodology Approval Process.

SCS has completed ten project validations under sectoral scope 14 (AFOLU). A summary of the first ten project validations performed by SCS is as follows:

Project and Project ID	**Date validation report issued**	**Date project registered**	**Name of GHG program under which project registered**
INFAPRO Rehabilitation of logged-over dipterocarp forest in Sabah, Malaysia (672)	31-Aug-2011	2-Sep-2011	Verified Carbon Standard
Natural High Forest Rehabilitation Project on degraded land of Kibale National Park (673)	6-Sep-2011	6-Sep-2011	Verified Carbon Standard
Protection of a Tasmanian Native Forest (Project 3: Peter Downie) (587)	18-Mar-2011	7-Apr-2011	Verified Carbon Standard
Redd Forests Grouped Project: Protection of Tasmanian Native Forest (641)	13-May-2011	1-Jul-2011	Verified Carbon Standard

Project and Project ID	Date validation report issued	Date project registered	Name of GHG program under which project registered
Protection of a Tasmanian native forest – Project 1 – REDD Forests Pilot (605)	18-Mar-2011	3-May-2011	Verified Carbon Standard
Boden Creek Ecological Preserve Forest Carbon Project (647)	24-Jun-2011	18-Jul-2011	Verified Carbon Standard
Peri-urban bamboo planting around South African townships (Project ID confidential)	8-Aug-2011	8-Dec-2011	Verified Carbon Standard
Tree planting in South African townships (Project ID confidential)	2-Sep-2011	8-Dec-2011	Verified Carbon Standard
Rimba Raya Biodiversity Reserve Project (674)	31-Aug-2011	7-Sep-2011	Verified Carbon Standard
Reforestation Across the Lower Mississippi Valley (774)	20-Apr-2011	14-Feb-2012	Verified Carbon Standard

Note that the above is not necessarily an exhaustive list of all validations performed by SCS.

A VCS-approved expert was not used in the course of this assessment.

8 SIGNATURE

Signed for and on behalf of:

Name of entity: SCS Global Services

Signature: 

Name of signatory: Christie Pollet-Young

Date: 24 January 2014

APPENDIX A: FINDINGS ISSUED DURING THE ASSESSMENT PROCESS

NCR 2012.1 dated 11/29/2012
Standard Reference: Methodology Approval Process V3.3, Section 3.2.1; Methodology Template V3.1; VCS Program Update Catalog (1 February 2012; accessed online at http://v-c-s.org/sites/v-c-s.org/files/VCS%20Program%20Update%20Catalogue%2C%201%20FEB%202012_3.pdf)
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx
Finding: The Methodology Approval Process requires that "Methodologies and methodology revisions shall be prepared using the VCS Methodology Template…" The methodology has been prepared using a version of the Methodology Template that was out of date at the time that the first assessment report was issued. As is documented in the VCS Program Update Catalogue (1 February 2012), the Methodology Template V3.1 was released on 1 February 2012 and was considered to be effective immediately upon release. Therefore, the VCS rules dictate that the Methodology Template V3.1 be used by the methodology.
Client Response: The most current template has been used; for readability of the revised draft, we use track changes where there is a change in wording but no track changes where a whole section has been moved or substantially restructured.
Auditor Response: As indicated, the methodology has been updated to make use of the most current version of the methodology template (Version 3.2), even though the methodology was only required to Version 3.1. The non-conformity has been resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.2 dated 11/29/2012
Standard Reference: VT0001 V3.0, Sections 1.2(b) and 2.2.3; VCS Standard V3.2, Section 4.5.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 6
Finding: Section 6 of the methodology cites the use of the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities (VT0001) for determination of the most plausible baseline scenario. However, the outcome of VT0001 is the demonstration and assessment of assessment of additionality of a project, not the selection of the most plausible baseline scenario. In fact, VT0001 requires that "The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario" (Section 1.2(b)) and "The baseline methodology that would use this tool shall provide for a stepwise approach justifying the selection and determination of the most plausible baseline scenario" (Section 2.2.3). The methodology has not provided for a stepwise approach justifying the selection and determination of the most plausible baseline scenario.
In addition, the VCS Standard requires that "The methodology shall establish criteria and procedures for identifying alternative baseline scenarios and determining the most plausible scenario, taking into account the following: (1) The identified GHG sources, sinks and reservoirs. (2) Existing and alternative project types, activities and technologies providing equivalent type and level of activity of products or services to the project. (3) Data availability, reliability and limitations. (4) Other relevant information concerning present or future conditions, such as legislative, technical, economic, socio-cultural, environmental, geographic, site-specific and temporal assumptions or projections." The methodology has not established criteria and procedures for identifying alternative baseline scenarios and determining the most plausible scenario in accordance with the above requirements.
Client Response: This section has been re-written to provide specific guidance on selection of the most plausible alternative land use as the baseline scenario
Auditor Response: Whereas, the information provided in the updated version of the methodology combined with the references to the VCS Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, the statement "Based on a comparative assessment of each alternative land use listed, the alternative land use that is most plausible in the absence of the SGM project activities shall be selected as the baseline scenario" in the methodology does not constitute "a stepwise approach justifying the selection and determination of the most plausible baseline scenario."
Client Response 2: Section 6 of the methodology has been rewritten in a clear, step-wise format that presents clear guidance on selection of the most plausible alternative land use scenario as the baseline scenario. Specifically, a barrier test is applied to eliminate alternative land uses that are not plausible because they face one or more barriers; if the list of land uses facing no barrier includes current land use where there has been no change in the grazing agent, land use or relevant laws in the last 5 years, then the methodology mandates that this must be chosen as the most plausible land use; if alternative land uses remain, a comparison of the profitability of alternative land uses is used to select the most plausible alternative land use as the baseline scenario.
Auditor Response 2: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the assessment team can confirm that the updated methodology provides for a stepwise approach justifying the selection and determination of the most plausible baseline scenario. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.3 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.4.3
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 6
Finding: The AFOLU Requirements states that "The criteria and procedures for identifying alternative baseline scenarios shall require the project proponent to take into account current and previous management activities". The criteria and procedures for identifying alternative baseline scenarios do not require the project proponent to take into account current and previous management activities.
Client Response: This section has been re-written in full and now explicitly requires that these two alternative land uses are considered
Auditor Response: As indicated in the client response, the methodology has been re-written and now explicitly requires that these two alternative land uses are considered. The audit team considers this NCR resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.4 dated 11/29/2012
Standard Reference: VCS Standard V3.2, Section 4.1.3
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Annex II
Finding: The VCS Standard states that "Methodologies may employ a modular approach in which a framework document provides the structure of the methodology and separate modules and/or tools are used to perform specific methodological tasks. Such methodologies shall use the VCS Methodology Template for the framework document and the VCS Module Template for the modules and tools." The methodology contains two separate tools, entitled "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" and "Tool for estimation of greenhouse gas emissions due to market leakage", which contains their own definitions, applicability condition(s) and procedures. Therefore, it can be said that the methodology employs a "modular approach", as described above. However, the methodology does not use the VCS Module template for the "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" and "Tool for estimation of greenhouse gas emissions due to market leakage".
Client Response: The two potential modules referred to are the module for estimation of market leakage and the module for estimation of leakage due to grazing displacement. Given the similarities between our market leakage estimation method and the already approved VMD0033, we have decided not to propose a separate module, but to refer to VMD0033 in the SGM methodology and include additional guidance on the application of VMD0033 to SGM activities. For the grazing displacement leakage module, we have extracted the contents from the previous draft of the methodology, and rewritten the tool using the required template.
Auditor Response: As indicated in the client response, the contents from the previous draft of the methodology have been extracted and re-written using the VCS Module Template; however, while the VMD0033 is listed as a source in the revised methodology, it is not referred to as claimed in the client response, but rather refers to VMD00XX.
Client Response 2: Erroneous references in Sections 8.3 and 9.4 have been corrected and the title of VMD0033 has been correctly cited.
Auditor Response 2: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the assessment team can confirm that Sections 8.3 and 9.4 of the updated methodology contain correct, full references to the VCS module VMD0033. Therefore, the non-conformity is resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.5 dated 11/29/2012
Standard Reference: Program Definitions V3.2
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 4
Finding: The methodology requires that, as an applicability condition, "Land is degraded and will continue to be degraded or continue to degrade". The meaning of this condition is unclear for the following reasons:
- It is not clear whether the statement "will continue to be degraded or continue to degrade" is with reference to the project scenario, the baseline scenario, or both scenarios.
- The condition refers to endnote i, which states in Section 13 of the methodology that "The latest version of the “Tool for the identification of degraded or degrading lands for consideration in implementing A/R CDM project activities” shall be applied for demonstrating that lands are degraded or degrading. There is some inconsistency between the applicability condition and the requirement of the endnote, as the applicability condition requires that land be degraded at project commencement, whereas the endnote indicates that land need not necessarily be degraded so long as it can be demonstrated to be degrading through the use of the CDM tool.
Client Response: This applicability condition has been rewritten to read: "Land is degraded at the start of the project and degradation will continue in the baseline scenario on the basis that degradation drivers or pressures are still present in the baseline scenario. The procedures outlined in Sections II and III of the CDM “Tool for identification of degraded or degrading lands for consideration in implementing CDM A/R project activities (Version 01)” shall be used to determine both that the land is degraded at the start of the project and that in the baseline scenario the land will continue continue to degrade." With this rewording it is no longer logically possible to identify eligible lands that are not degraded at the start of the project but that are identified as eligible on the basis that they would be degraded or continue to degraded in the baseline scenario.
Auditor Response: The revised methodology includes updated language specifying that the land degradation applies to the baseline scenario. In addition the applicability condition is now in agreement with sections II and III of the CDM tool for identification of degraded or degrading lands for consideration in implementing CDM A/R project activities. The audit team considers this NCR resolved.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.6 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 4
Finding: The methodology requires that, as an applicability condition, "Land is subject to livestock grazing, and/or burning, and/or nitrogen fertilization". It is not clear whether this statement is with reference to the project scenario, the baseline scenario, or both scenarios.
Client Response: The words "in the baseline scenario" have been added.
Auditor Response: As stated in the client response, the phrase "in the baseline scenario” has been added to item c in the applicability section of the revised methodology. The audit team considers this NCR resolved.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.7 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Sections 4 and 13
Finding: The methodology requires that, as an applicability condition, "The project activity does not include land use change." However, the term "land use change" is not defined within the methodology. While the methodology contains two examples of activities that (per the methodology's definition of the term) would not constitute land use change, the methodology lacks specific criteria that will assist the user in clearly identifying land use change activities.
Client Response: The following definition of land use change is given in the definitions section: "Conversion of land from one land use category to another. The land uses recognized under the VCS include grassland, cropland, forest and wetland. In this methodology, land use change is conversion of grassland to cropland or forest or wetland."
Auditor Response: As stated in the client response, a definition of Land Use Change has been added to the revised methodology, sufficiently resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.8 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 4
Finding: The methodology requires that, as an applicability condition, "There is no significant increase of use of fossil fuels, fuel wood from non-renewable sources for cooking and heating as a result of the project activity" and "There is no significant change in manure management systems within the project boundary". However, in the case of both applicability conditions, the methodology lacks a definition for the criterion of significance that can assist the user in assessing whether the condition of interest has been fulfilled.
Client Response: A definition has been added in the definitions section
Auditor Response: As stated in the client response, a definition for the criterion of significance has been added to the revised methodology. The client response adequately resolves this NCR: however the definition provided has led to the issuance of NIR 45.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.9 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.7.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.5
Finding: The AFOLU Requirements states that "Methodologies shall also establish procedures for quantifying the net change in carbon stocks, so that the number of buffer credits withheld in the AFOLU pooled buffer account and market leakage emissions may be quantified for the project." The methodology has not established procedures for quantifying the net change in carbon stocks.
Client Response: A new section 8.4.2 has been added that includes the required procedures for calculation of net change in carbon stocks.
Auditor Response: As stated in the client response a new section has been added to the revised methodology to include procedures for calculating the net change in carbon stocks. The audit team considers this NCR resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.10 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.7.2
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.5
Finding: The AFOLU Requirements states that "The number of GHG credits issued to projects is determined by subtracting out the buffer credits from the net GHG emission reductions or removals (including leakage) associated with the project". The methodology does not contain any procedures to quantify the number of GHG credits issued to projects in accordance with the above.
Client Response: A new section 8.4.2 has been added that includes the required procedures for calculation of VCUs that can be issued for each year of project implementation
Auditor Response: As stated in the client response, the revised methodology includes the required procedures for calculating the number of VCU's that can be issued for each year of project implementation, sufficiently resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.11 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I
Finding: The "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" makes several references to the "latest version of the CDM AR grazing displacement leakage tool". However, the provided references are not sufficient to allow the user to locate the "CDM AR grazing displacement leakage tool" in a reasonable fashion. The tool in question is not labeled by CDM as the "CDM AR grazing displacement leakage tool", and therefore the only information provide that has allowed the assessor to conclusively (but not without an unreasonable level of further effort in a search of the CDM website) identify the tool in question is in a footnote (footnote 4) at the bottom of page 64 that states, simply, "ar-am-tool-15-v1". The lack of clarity with which the tool is referenced does not conform to the quality requirements expected of VCS-approved methodologies.
Client Response: The grazing displacement tool has been rewritten as a module in which the CDM tool referred to has been correctly identified.
Auditor Response: The grazing displacement tool has been re-written as as a module which includes, as a source, the CDM A/R methodological tool Estimation of GHG Emissions Related to Displacement of Grazing Activities in A/R CDM Project Activity (Version 02). This module now complies with the quality requirements expected of VCS approved methodologies.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.12 dated 11/29/2012
Standard Reference: VCS Standard V3.2, Section 4.1.3
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I, Section 1
Finding: The Methodology Approval Process requires that "Where the proposed methodology references tools or modules approved under the VCS or an approved GHG program, the validation/verification body shall determine whether the tool or module is used appropriately within the methodology."
The "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" within the methodology references the "CDM AR grazing displacement leakage tool", which has been identified as the A/R Methodological Tool “Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity” by the assessor (see NCR 2012.11). The tool referenced above will be known within this finding as "Tool".
The Tool makes reference to an "A/R CDM project activity" or "A/R CDM methodology" throughout. It is not clear how the user is intended to interpret this language, given that the project activities to which the methodology applies are not A/R CDM project activities and the methodology is not an A/R CDM methodology.
In Step 1 of the Tool, the user is required to "Estimate the area subject to pre-project agricultural activities that is expected to be afforested/reforested (therefore the activities have to be displaced)..." As the methodology is not applicable to VCS ARR projects, in many cases it can be expected that no area subject to pre-project agricultural activities will be afforested/reforested due to project activities. Therefore, the guidance provided by the methodology is not applicable to many project activities that are within the scope of the methodology. On the basis of the above language in Step 1 of the tool, as well the use of parameter f in Step 5 of the tool, it is clear that the tool is specifically applicable to the quantification of activity-shifting leakage attributable to A/R or ARR projects, and is not necessarily appropriate to projects falling outside these categories.
The Tool provides output as parameter LK(Agric,t*), which is calculated on a cumulative basis (that is, it is inclusive of all leakage from the project start up to year t*). There is no explicit link made between this parameter and any parameter in the methodology. Furthermore, it appears that all of the calculations in the methodology are done on a periodic basis for each year. The identified discrepancy between cumulative and periodic modes of calculation may cause undue confusion on the part of the methodology user.
On the basis of the above, the Tool is not appropriately used within the methodology.

Client Response: The grazing displacement tool has been rewritten as a module. The module is based in part on the CDM tool, but given the limitations of directly applying the CDM tool to SGM project activities, the tool has been rewritten as a module that is no longer restricted by applicability to AR project activities and that can be used to calculate the parameter LE(GD,t) which is the required parameter in the SGM methodology.
Auditor Response: As stated in the client response the grazing displacement tool has been re-written as a module and no longer includes leakage due to A/R or ARR project activities. Additionally, the parameter LK(Agric,t*) is no longer included in the leakage calculations and has been replaced by the parameter LE(GD,t), which is properly addressed in the methodology. Whereas, the creation of the grazing displacement module adequately addresses this NCR, guidance provided by the new module has led to the issuance of NIR 46.

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

NCR 2012.13 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I, Section 2, Step 2.1
Finding: The "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" states that "Calculation of livestock grazing activity by project proponents outside the project boundary in the baseline scenario should be based on historical data". However, the methodology does not provide any procedures and criteria to determine the period across which livestock grazing activity outside the project boundary must be assessed. In addition, the methodology makes reference (in Equation 2 of the Tool referenced above) to "year t in the baseline", but it is not clear what "year t in the baseline" refers to, given that year t is also used to identify years since the project start elsewhere in the methodology.
Client Response: Step 2 of the revised module for grazing displacement leakage emissions now specifies that data on grazing inside and outside the project boundary in the baseline are collected on the basis of 5 years of records, or where these do not exist on the basis of a sample survey of grazing location covering the 1 year prior to initiation of project activities, which is consistent with the requirements for data on baseline activities as outlined in the data parameter tables in the SGM methodology. The module no longer refers to baseline years 't'.
Auditor Response: As stated in the client response, Step 2 of the new module for estimating leakage due to grazing activities no longer refers to "historical data", but rather requires a survey covering the 5 year period used to determine baseline activities or "or management records for this period are unavailable, at a minimum covering the one year prior to commencement of project activities." Additionally, the reference to year t in the baseline has been removed.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.14 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.6.12
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I, Section 2, Step 2
Finding: The AFOLU Requirements states that "Where livestock are displaced to outside the project area, such activity shifting leakage shall be quantified to capture potential reductions in carbon stocks and potential increases in livestock-derived CH4 and N2O emissions from outside the project area." The "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" only quantifies leakage attributable to displacement of livestock owned by "project proponents". As the livestock displaced outside the project area are not necessarily owned by the project proponent(s), the methodology does not ensure that all leakage attributable to the displacement of livestock outside the project area is quantified as required by the AFOLU Requirements.
Client Response: The revised grazing displacement module now accounts for leakage emissions due to displacement of grazing activities by both project participants and non-participants.
Auditor Response: The new module for estimating leakage due to grazing activities now accounts for leakage emissions for both project participants and non-project participants, as stated in the client response.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.15 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I, Section 2, Step 2.3
Finding: Equation 4 of the "Tool for estimation of emissions due to displacement of grazing as part of SGM methodology" requires division by the value taken by parameter NGD(baseline,t) to take place. If said value is 0, the equation will return a divide-by-zero error. The methodology contains no procedures to handle such an eventuality.
Client Response: The tool has been substantially rewritten as a module and no longer has a zero-divide problem
Auditor Response: As stated in the client response the new module for estimating leakage due to grazing activities has been re-written and no longer includes a zero-divide problem.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.16 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.6.3
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I
Finding: The AFOLU Requirements states that "GHG emissions from leakage may be determined either directly from monitoring, or indirectly when leakage is difficult to monitor directly but where scientific knowledge provides credible estimates of likely impacts." It appears that monitoring of activity shifting leakage within the host country should be quite feasible, as it involves the monitoring of activities of one or more specific agents of deforestation. Please provide a compelling justification for why it is not feasible to directly monitor GHG emissions from activity-shifting leakage. If such a justification cannot be provided, it will be necessary to incorporate a procedure for directly monitoring GHG emissions from activity-shifting leakage.
Client Response: The methodology is likely to be used in contexts where grazing agents travel up to hundreds of miles from their homesteads, and in many cases do not stay in the same location for the full duration of each grazing season but move their herds several times in a grazing season, and in many cases do not graze in the same location from year to year. This is often because grazing conditions are highly dependent on rainfall, which varies by location from year to year, and sometimes also because different grazing agents can have overlapping tenure rights. Even though herders may stay within the same country, it would incur unreasonable cost in locating the lands to which all livestock are displaced, therefore the grazing leakage module allows for a category of lands to which livestock are displaced that is 'unidentified lands'. The VCS Standard states "Accuracy should be pursued as far as possible, but the hypothetical nature of baselines, the high cost of monitoring of some types of GHG emissions and removals, and other limitations make accuracy difficult to attain in many cases. In these cases, conservativeness may serve as a moderator to accuracy in order to maintain the credibility of project GHG quantification". The category of 'unidentified lands' can be used in conjunction with conservative estimates of leakage in order to avoid unreasonable financial costs and GHG emissions incurred in monitoring through direct measurement. For a selection of supporting literature, see:
(1) Adriansen H and Nielsen T. 2005. The geography of pastoral mobility: A spatio-temporal analysis of GPS data from Sahelian Senegal. GeoJournal 64(3): 177-188. This reports research in Senegal and shows a map of GPS locations of cattle moving an average of 14 km per day and an annual total of 5000 km in an area of more than 1000 km2.
(2) Schlecht E., Hierneaux P, Kadoure I, et al. 2006. A spatio-temporal analysis of forage availability and grazing and excretion behaviour of herded and free grazing cattle, sheep and goats in Western Niger. Agriculture, Ecosystems and Environment 113: 226–242. This documents daily grazing itineraries covering up to 25 km per day in an area of almost 300 sq km, with specific locations related to biomass availability, which change with seasons and year.
(3) Akasbi Z., Oldeland J., Dengler J and Finckh M. 2012. Social and ecological constraints on decision making by transhumant pastoralists: a case study from the Moroccan Atlas mountains. Journal of Mountain Sciences 9: 307-321. This documents herd mobility over distances of more than 100 km in a mountainous region.
(4) Erdenebaatar. 1999. Mongolia case study: studies on long-distance transhumant grazing systems in Uvs and Khuvsgul aimags of Mongolia. In J. Suttie (ed) Transhumant Grazing Systems in temperate Asia, FAO, Rome. This documents movements of >100 km p.a. in a temperate part of Mongolia.
(5) Kerven C. et al. 2006. Fragmenting Pastoral Mobility: Changing Grazing Patterns in Post-Soviet Kazakhstan. USDA Forest Service Proceedings RMRS-P-39. http://www.fs.fed.us/rm/pubs/rmrs_p039/rmrs_p039_099_110.pdf. This documents herders "whose animals are moved to different pastures from three to ten times a year. Moves between pastures can be quite short, of about 10 km for some flocks. A few other large owners with several thousand head move their animals a total of more than 150 km between winter and summer pastures, with a number of temporary stops between grazing sites".

Auditor Response: The justification provided in the client response is reasonable based on the support of the scientific literature.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.17 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.6.5
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx
Finding: The AFOLU Requirements states that "Leakage occurring outside the host country (international leakage) does not need to be quantified". However, the methodology does not contain procedures to limit the accounting of leakage to a quantification of that leakage that is occurring within the host country.
Client Response: Step 6 of the rewritten module now explicitly addresses this.
Auditor Response: As stated in the client response, Step 6 of the new module for estimating leakage due to grazing activities now explicitly addresses leakage occurring outside the country.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.18 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.1.4
Finding: In specifying the source for parameter EF(l), the methodology states that "When country-specific data are unavailable, default values can be taken from tables 10.10, 10.11 of the 2006 IPCC Guidelines, or relevant values in any future elaboration of these guidelines, or parts of them, and any IPCC good practice guidance for AFOLU."
The AFOLU Requirements states that "The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions." Volume 4, Chapter 10, Section 10.3.2 of the IPCC 2006 Guidelines for National GHG Inventories ("the 2006 IPCC Guidelines") states the following.
"While the default emission factors shown in Table 10.11 are broadly representative of the emission rates within each of the regions described, emission factors vary within each region. Animal size and milk production are important determinants of emission rates for dairy cows. Relatively smaller dairy cows with low levels of production are found in Asia, Africa, and the Indian subcontinent. Relatively larger dairy cows with high levels of production are found in North America and Western Europe. Animal size and population structure are important determinants of emission rates for other cattle. Relatively smaller other cattle are found in Asia, Africa, and the Indian subcontinent. Also, many of the other cattle in these regions are young. Other cattle in North America, Western Europe and Oceania are larger, and young cattle constitute a smaller portion of the population.
To select emission factors from Tables 10.10 and 10.11, identify the region most applicable to the country being evaluated. Scrutinise the tabulations in Annex 10A.1 to ensure that the underlying animal characteristics such as weight, growth rate and milk production used to develop the emission factors are similar to the conditions in the country. The data collected on the average annual milk production by dairy cows should be used to help select a dairy cow emission factor. If necessary, interpolate between dairy cow emission factors shown in the table using the data collected on average annual milk production per head."
The methodology does not require the confirmatory analysis that is required by the 2006 IPCC Guidelines, but rather allows default factors to be adopted without consideration of their applicability to project-specific circumstances. On this basis, the methodology does not follow the guidance of the 2006 IPCC Guidelines.
Client Response: The parameter table for EF(l) now specifies: "When data from IPCC sources are used, project proponents must refer to the tables in Annex 10A.1 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to ensure that the value selected reflects the underlying animal characteristics appropriate to the selected value"
Auditor Response: The parameter table for parameter EF(l) of the revised methodology now specifies "When data from IPCC sources are used, project proponents must refer to the tables in Annex 10A.1 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to ensure that the value selected reflects the underlying animal characteristics appropriate to the selected value," as stated in the client response.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.19 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: In the parameter table for parameter M(SNi,B), the methodology states that "Mass of synthetic N fertilizer shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer purchase records. For new management entities or where such records are unavailable, mass of synthetic N fertilizer may be based on common practice in the region and meet the conservative estimate of baseline N2O emission." The following aspects of this guidance may create the potential for confusion:
- It is unclear what is meant by the term "new management entity".
- For instances where records are of fertilizer use are not available, the methodology states that the assumed value "may be based on common practice in the region". The use of the term "may" causes it to be unclear whether it is always required that the assumed mass of synthetic fertilizer be based on common practice in the region under these circumstances, or whether other possibilities exist for estimation of mass of synthetic fertilizer.
- It is unclear whether it is always required that the assumed value "meet the conservative estimate of baseline N2O emission", or whether other possibilities exist. It is also unclear what the term "conservative estimate of baseline N2O emission" means and how a value can be determined to meet this criterion.
In addressing the above, it may be helpful to keep in mind that the most conservative approach with respect to N2O emissions in the baseline is to conservatively exclude them, and it may be necessary to adopt such an approach if reliable estimates of baseline nitrogen fertilizer application cannot be obtained.
Client Response: The paragraph has been rewritten as "Mass of synthetic N fertilizer shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer application records or fertilizer purchase records. Where such records are unavailable, a conservative estimate of the mass of synthetic N fertilizer applied per ha shall be provided based on a sample survey conducted in the project area covering N fertilizer application in the one year period prior to the project start date. Where data from sample surveys are used, a conservative estimate shall be made by adding the standard error to the sample mean. The total mass of synthetic N fertilizer applied equals the estimated value of mass of synthetic N fertilizer applied per ha times the total grassland area involved in the project activity."
Auditor Response: The parameter table for parameter M(Sni,b) in the revised methodology has been re-written to state "a conservative estimate shall be made by subtracting the standard error from the sample mean."
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.20 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.1
Finding: In Sections 8.1.1, 8.1.3, 8.1.4, 8.1.5 and 8.1.6 of the methodology, the description of units of at least some parameters is such that the basis on which the parameters are intended to be calculated is unclear. For example, in Section 8.1.1 of the methodology, parameter BE(N2OSN) is described as "Total baseline N2O emissions due to fertilizer use, t CO2e". It is unclear from this description whether this parameter relates to emissions for a single year or for some longer period spanning multiple years. In contrast, the procedures for quantification of project emissions appropriately clarify that the calculation for a given value is to be done on the basis of a single year through the addition of the language "in year t" at the end of each parameter description and the inclusion of the subscript "t" in the symbolization of each parameter.
With some study of the equation in Section 8.5 of the methodology, it appears logical that all baseline values are intended to be calculated on a yearly basis. However, possibility for confusion in interpretation of the methodology does exist due to the issue described above, and such confusion could result in vastly erroneous estimates of quantified GHG emission reductions and removals.
Client Response: All baseline parameters have been expressed in terms of each baseline year using the subscript 'b' to differentiate them from years in the project scenario; additional equations (21b and 52b) have been added for when project proponents need to sum emissions in the baseline and project scenarios across all years in the crediting period.
Auditor Response: As stated in the client response, "All baseline parameters have been expressed in terms of each baseline year using the subscript 'b' to differentiate them from years in the project scenario; additional equations (21b and 52b) have been added for when project proponents need to sum emissions in the baseline and project scenarios across all years in the crediting period."
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.21 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: The methodology does not contain any procedures to guide the user in selecting appropriate values for parameter NC(SNi,B), as is used in Equation 3.
Client Response: The description of recording methods now reads "Recorded by proponents just after synthetic N fertilizer has been applied. The value of NC(Sni,B) can be obtained from the product description stated by the manufacturer on the product label."
Auditor Response: As stated in the client response, a description of recording methods has been added to the parameter table for parameter NC(Sni,B), appropriately directing the user as to the value of N to be applied.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.22 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.1.1(2)
Finding: Under "Baseline indirect N2O emission from synthetic N fertilizer use", the methodology states "Indirect N2O emission from the synthetic N fertilizer use excluding N2O emissions from leaching and runoff in regions where leaching and runoff occurs according to the applicability conditions." This sentence does not make sense, and it is not clear what it means.
Client Response: Applicability condition 'i' states: "The project area is located in a region where annual precipitation is less than or equal to annual potential evaporation. With this condition, following guidance in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 11, indirect N2O emissions from leaching and runoff are are not considered." In Section 8, for each sub-section on indirect N2O emissions, similar wording has been repeated to remind users why the indirect N2O emissions accounted for do not include emissions from leaching and runoff.
Auditor Response: As stated in the client response, applicability condition 'I' states "The project area is located in a regions where annual precipitation is less than or equal to annual potential evaporation. With this condition, the following guidance in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 11, indirect N2O emissions from leaching and runoff are not considered." Whereas the revision to the methodology provides adequate clarification to resolve this finding, the reference to the chapter 11, volume 4 of the IPCC guidelines for National Greenhouse Gas Inventories has led to the issuance of NCR 47.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.23 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Equation 4
Finding: Equation 4 of the methodology refers to parameter F(SNi,b). However, while parameter F(SN,B) is defined in Equation 3 of the methodology, parameter F(SNi,B) is not defined within the methodology.
Client Response: The parameter has been revised in equations (2) and (3)
Auditor Response: The client has revised methodology equations (2) and (3), sufficiently resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.24 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, page 19
Finding: The methodology states that "When country-specific [Nex(i)] data are unavailable, default [Nex(i)] values in table 10.19 of Chapter 11 of 2006 IPCC Guidelines, in any future elaboration of these guidelines, or parts of them, and any IPCC good practice guidance for AFOLU, can be used." There is no Table 10.19 in Chapter 11 of the 2006 IPCC Guidelines.
Client Response: It was a typo. "Chapter 11" should be "Chapter 10" and all references to this have been corrected
Auditor Response: All references to "Chapter 10" have been changed to Chapter 11," sufficiently resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.25 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Sections 8.1.5 and 8.2.5
Finding: The AFOLU Requirements states that "The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions." The procedure for quantification of direct N2O emissions from manure management, in Sections 8.1.5 and 8.2.5 of the methodology, is only reflective of the guidance in Volume 4, Chapter 10, Section 10.5.3 of the IPCC 2006 Guidelines for National GHG Inventories ("the 2006 IPCC Guidelines") to the extent that the assumption that "The manure from pasture and range grazing animals is allowed to lie as is, and is not managed" is true. In this case, the user of the 2006 IPCC Guidelines is referred to Chapter 11, Section 11.2 of those Guidelines, and the methodology accurately reflects the guidance in Chapter 11, Section 11.2. However, the methodology contains no applicability conditions to ensure that the above assumption will be met with all projects, and therefore the guidance provided by the methodology does not conform to the guidance provided by the 2006 IPCC Guidelines in all cases.
Client Response: Applicability condition 'e' has been revised to read "In the baseline scenario, more than 95% of animal dung from grazing animals deposited on grassland is allowed to lie as is, and is not managed, and in the project scenario there is no significant change in manure management systems within the project boundary."
Auditor Response: As stated in the client response, applicability condition 'e' has been revised to limit the methodology to instances where "in the baseline scenario, more than 95% of animal dung from grazing animals deposited on grassland is allowed to lie as is, and is not managed, and in the project scenario there is no significant change in manure management systems." This audit team considers this NCR resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.26 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Equations 15 and 38
Finding: The AFOLU Requirements states that "The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions." The procedure for quantification of direct N2O emissions from manure management, in Equations 15 and 38 of the methodology, reduces the CH4 emissions from manure management by a factor that consists of the proportion of the year in which grazing actually takes place. This reduction is not consistent with Equation 10.22 of Volume 4, Chapter 10, Section 10.4.1 of the IPCC 2006 Guidelines for National GHG Inventories ("the 2006 IPCC Guidelines"), which does not include any such factor.
Client Response: The approach adopted estimates an annual average population. This is consistent with the guidance in the IPCC 2006 Guidelines Vol. 4 Ch. 10 Section 10.2.2, where guidance is given on the basic characterization of livestock populations. Because almost all extensive grazing systems in grasslands across the world identify seasonal pastures, it is likely that users of this methodology may identify only some seasonal pastures as part of the project boundary. In this case, it is necessary to account for the livestock and manure management emissions that occur inside the project as a proportion of total annual livestock and manure management emissions. For example, where the project boundary is the summer pasture, and the project activity involves increasing the duration of grazing in the summer pasture, with annualized livestock and manure equations there would be no change in emissions within the project boundary, but if livestock and manure emissions are accounted for on the basis of proportion of the year in which grazing takes place (i.e., annual average livestock population), then there would be a change in livestock and manure emissions in the project boundary between the baseline and project scenarios. To reflect this, the enteric fermentation equations have also had a parameter reflecting number of grazing days added. The guidance in Section 10.2.2 of the IPCC Guidelines considers applying the proportion of 365 days to the number of animals of each livestock type, whereas our equations apply the proportion of 365 to the resulting emissions without adjusting the number of livestock. The mathematical result is identical, although the specific procedures differ. We consider that our suggested approach is more practical for project developers, and remains consistent with the IPCC guidelines.
Auditor Response: As stated in the client response, section 10.2.2 of the IPCC 2006 Guidelines provides guidance for applying a proportion of 365 days to the number of animals of each livestock type (equation 10.1). Therefore given that applying the proportion of the year to the to the resulting emissions, rather than the number of animal days results in identical mathematical results, this variation in equation 10.22 does not result in a quantitative difference from the IPCC 2006 guidelines.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.27 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.3.10
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Sections 8.1.6 and 8.2.6
Finding: The AFOLU Requirements states that "Where energy-conserving practices reduce emissions of CO2, such as adopting no-till practices to reduce fuel use, the methodology may include these GHG emissions reductions in the project boundary." As stated in Section 5.2, the methodology includes CO2 emissions from "farming machine" in the project boundary. However the methodology does not ensure that inclusion of fossil fuels within the project boundary only occurs where energy-conserving practices reduce emissions of CO2.
Client Response: In the methodology, sustainable management of grassland may include seeding grasses or planting legumes. Under this condition, machines may be used to plough soil, broadcast seed or apply fertilizer. Therefore, fossil fuel consumption under project activity may increase. In sections 8.1.6 and 8.2.6, CO2 emissions from farming machines are considered in order to consider all possible increases in GHG emissions caused by the project activity. Omitting this emissions source might underestimate project emissions.
Auditor Response: As stated in the methodology, sustainable grassland management may include seeding grasses or planting legumes. When machinery is used in this process, it is reasonable that excluding these emissions from the project emission calculations will result in an underestimation of project emissions and thus an overestimation of GHG emission reductions or removals. Additionally, while the VCS AFOLU requirements to not specifically require accounting for these emissions, they also do not prohibit their inclusion; however, the rational provided in the client response is only reasonable if project emissions for this source are greater than baseline emissions for this source. Additionally, the methodology does not provide instructions for the inclusion of these emissions only in cases when emissions are greater in the project scenario than the baseline scenario. In order to resolve this NCR, Please update the methodology to include such instructions or otherwise justify the inclusion of this emission source.
Client Response 2: The following wording is added to the baseline fossil fuels entry in Table 2 and to Section 8.1.6: “If project emissions from this source are larger than baseline emissions, project proponents may choose to account for this source in the baseline or may choose to conservatively ignore baseline emissions from this source.” The following wording is added to the project fossil fuel emissions entry in Table 2 and to Section 8.2.6: “If project emissions from this source are larger than baseline emissions, project proponents must choose to account for this source of project emissions.”
Auditor Response 2: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the audit team can confirm that the updated methodology provides criteria to regarding when the source must be included in the project boundary. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.28 dated 11/29/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.3.5
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 5.2
Finding: Section 5.2 of the methodology indicates that CO2 emissions from lime application are included in the project boundary. The AFOLU Requirements states that "Reductions of N2O and/or CH4 emissions are eligible for crediting if in the baseline scenario the project area would have been subject to livestock grazing, rice cultivation, burning and/or nitrogen fertilization." The AFOLU Requirements does not indicate that reductions of CO2 emissions are eligible for crediting if, in the baseline scenario, the project area would have been subject to lime application. The inclusion of CO2 emissions from lime application in the project boundary is not permitted by the AFOLU Requirements.
Client Response: Lime CO2 emissions have been removed from both baseline and project scenarios
Auditor Response: As stated in the client response, lime CO2 emissions have been removed from both the baseline and project scenarios.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.29 dated 11/29/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 4
Finding: The methodology states, as an applicability condition, that "There is no significant change in manure management systems within the project boundary". However, it is unclear whether this statement is intended to refer to the management in the baseline scenario, the project scenario, or both.
Client Response: this applicability condition has been changed to read "in the baseline scenario, more than 95% of animal dung from grazing animals deposited on grassland is allowed to lie as is and is not managed, and in the project scenario there is no significant change in management systems within the project boundary".
Auditor Response: As stated in the client response, the applicability condition in question has been revised to clarify the applicability to both the project and baseline.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.30 dated 11/29/2012
Standard Reference: Methodology Approval Process V3.3, Section 5.2.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx
Finding: The Methodology Approval Process states that "In order to safeguard against the unnecessary proliferation of methodologies, methodology developers are required to demonstrate that no approved or pending methodology under the VCS Program or an approved GHG program could reasonably be revised to meet the objective of the proposed methodology". Section 5.2.1 of the Methodology Approval Process then sets out a procedure for the demonstration that no approved or pending methodology under the VCS Program or an approved GHG program could reasonably be revised to meet the objective of the proposed methodology.
At the time of issuance of this finding, the following methodologies have been approved for the ALM category:
- VCS methodology VM0017 ("Adoption of Sustainable Agricultural Land Management, v1.0")
- VCS methodology VM0021 ("Soil Carbon Quantification Methodology, v1.0")
Please provide further evidence, in accordance with Section 5.2.1 of the Methodology Approval Process, that VM0017 could not reasonably be revised to meet the objective of the proposed methodology. Upon a brief review, it appears that the applicability conditions of the two methodologies are not inconsistent (in fact, the applicability condition of the methodology with respect to the RothC model appears to be directly sourced from VM0017). While the statements under the header "Relationship to Approved or Pending Methodologies" are noted, it is not clear to the assessor that VM0017 could not reasonably by revised to incorporate activity-based model estimates or direct soil carbon measurements. It is also not clear to the assessor that VM0017 could not reasonably by revised to include additional models. Therefore, additional justification in accordance with Section 5.2.1 of the Methodology Approval Process will be needed.
Please provide evidence, in accordance with Section 5.2.1 of the Methodology Approval Process, that the newly-approved VM0021 could not reasonably be revised to meet the objective of the proposed methodology.
Client Response: A comparison of VM0017 with the SGM methodology shows that the revision of VM0017 to consider SGM activities would require revisions to all of the methodology's sections, and following the Methodology Approval Process document section 5.2.1(f), it is considered that this justifies a new methodology. Specifically, VM0017 does not consider emissions due to enteric fermentation or manure management emissions, and including these emission sources in the baseline and project scenarios would require revisions to all the sections of VM0017.
Auditor Response: As stated in the client response, a revision of VM0017 to consider SGM activities would require revisions to all of the methodology's sections, thus according to section 5.2.1 (2)(f) of the VCS Methodology Approval Process, the client response sufficiently demonstrates the requirement for a new methodology. The SGM methodology; however, often relies upon and often borrows from VM0017. According to the VCS Methodology Approval Process section 5.2.1 (2), "The methodology developer shall state whether, and explain how, the proposed methodology uses, includes, refers to or relies upon all or part of any of the listed methodologies."
Given that the SGM methodology has not met the above requirement of the VCS Methodology Approval Process, please state whether, and explain how, the proposed methodology uses, includes, refers to or relies upon all or part of any of the listed methodologies.

Client Response 2: The initial draft of the SGM methodology was developed on the basis of a pre-approval version of VM0017. This has resulted in some similarities in notation between the two methodologies. However, in the subsequent drafting and validation process, considerable changes were made to many sections, such that large parts of the methodology can no longer be considered to draw on VM0017. Those parts of the methodology currently being validated that draw on VM0017 include:
- Applicability condition a is similar to Applicability condition a in VM0017 except that croplands are excluded;
- Applicability condition b is similar to Applicability condition c in VM0017, but wording has changed due to the requirements of the validators;
- Applicability condition h relies upon and draws directly from Applicability condition f in VM0017.
- The application of a biogeochemical model in Section 8.2.8 Option 1 draws directly from Sections III.1.6, III.1.8 and III.1.9 in VM0017 and includes the same equations in these sections.
- The approach to calculation of uncertainty in estimation of soil carbon stock changes when using Option

1 (biogeochemical model) in 8.2.9 draws directly from Section IV.2.8 in VM0017.
The acknowledgments section explicitly acknowledges that “Some elements of the VM0017 methodology developed by Neil Bird (Joanneum Research) were used”.

Auditor Response 2: The Client Response adequately documents the instances in which the methodology uses, includes, refers to or relies upon parts of the VM0017 methodology . Therefore, the information request has been satisfied.
Closing Remarks: The Client’s response adequately addresses the finding. It should be noted that the request for evidence that "VM0021 could not reasonably be revised to meet the objective of the proposed methodology" was withdrawn subsequent to the issuance of the finding, as the assessment team received written guidance from the VCSA (in an email dated 12 April 2013) that "The MAP [Methodology Approval Process] does not require methodology developers to include methodologies that were made available after [the date that is 60 days prior to the date on which the methodology element was submitted to the VCSA] on the list of methodologies referred to in section 5.2.1. The second sentence of section 5.2.1(1) establishes that the minimum requirement is to consider all pending and approved methodologies that are available 60 days before the proposed methodology is submitted to the VCSA for public consultation. Therefore it is optional for the methodology developer to include any methodologies that become available after this date." Because VM0021 was made publically available after the methodology was submitted to the VCSA, it is not required that consideration of VM0021 be made in the analysis required by Section 5.2.1 of the Methodology Approval Process. Therefore, the assessment team issued a follow-up email to the methodology developer, dated 15 April 2013, in which the methodology developer was instructed to "Please consider all references to VCS methodology VM0021 within this finding to be stricken."

NCR 2012.31 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 11
Finding: The AFOLU Requirements states that "The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis." The IPCC Guidelines contains procedures for full uncertainty propagation that includes procedures for incorporating uncertainty regarding emission factors (see, for example, information under the heading "Uncertainty estimates for emission factors and other parameters obtained from published references" in Volume 4, Chapter 3, Section 3.2.1.2). Furthermore, the IPCC Guidelines contains a specific assessment regarding uncertainty for each category of emissions estimation. The IPCC language regarding emission factors often indicates that the emissions factors contain a level of uncertainty that is not insignificant. For example, with respect to methane emissions from enteric fermentation, the Volume 4, Chapter 10, Section 10.3.4 of the IPCC Guidelines states that "Emission factors estimated using the Tier 1 method are unlikely to be known more accurately than +30% and may be uncertain to +50%." In this case, the Tier 1 method is the approach directly recommended by the methodology.
The methodology contains procedures to account for the uncertainty in modeled changes in soil organic carbon. However, the methodology does not contain procedures to account for uncertainty in emission factors.
Client Response: Section 8.2.9 of the methodology now has an additional paragraph before the section specifying procedures for calculation of uncertainty in the soil carbon model, which reads: "The SGM methodology requires that all parameters used to estimate emissions and removals are indisputably conservative. Where indisputably conservative estimates are used that are based on verifiable literature sources or expert judgment, for the purposes of calculating uncertainty, it is not required to estimate a confidence interval for the parameter and uncertainty may be considered to be zero. Guidance on conservativeness of default parameters is given in the CDM EB Guidelines on Conservative Choice and Application of Default Data in Estimation of the Net Anthropogenic GHG Removals by Sinks. Where parameter values are derived from sample surveys undertaken within the project boundary, a conservative estimate is given by adopting a value that is one standard deviation above (or below, as appropriate) the sample mean value."
Auditor Response: The additional guidance provided in the revised methodology with respect to uncertainty adequately resolves this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.32 dated 12/10/2012
Standard Reference: Methodology Approval Process V3.3, Section 3.3.6
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.2.9
Finding: The Methodology Approval Process requires that "At the end of the public comment period, the VCSA shall provide all and any comments received to the developer. The developer shall take due account of such comments, which means it will need to either update the methodology or demonstrate the insignificance of the comment. It shall demonstrate to each of the validation/verification bodies what action it has taken, as set out in Section 3.4.2) [sic]".
As downloaded from the VCS website, a comment was submitted by Robert Seaton of The Earth Partners that states the following:
"Section 8.2.8, Option 1, Subsection “Project Estimate of SOC with Transitions”
This section suggests that as a default proponents [sic] could use the IPCC Tier 1 default of 20 years for the transition period. While this figure has some validity (albeit with a large range of potential error) at the national level, averaged over an enormous number of sites, at the project level it could lead to order of magnitude errors. There are examples in the literature where for specific transitions transition times in excess of 300 years have been estimated. This default option should be withdrawn. If the proponents do not have access to specific time series information on the transition in their area and ecosystem, they should be using option 2."
It appears that no substantive change to the methodology has occurred since the above comment was made. However, it appears that the comment is directly relevant to the methodology. Therefore, please either demonstrate the insignificance of the comment or update the methodology accordingly. It is understand that, as documented within Section 3.14 of the first assessment report submitted by Environmental Services, Inc., "the methodology authors point out that [the procedure in question] is already part of VCS approved methodology VM0017." However, the VCS rule do not contain a framework whereby approval of certain procedures with other methodologies is necessarily precedent-setting, and therefore it will be necessary for the procedure in question to be assessed on its own merits at this time.
Client Response: The public comment has been accepted and the methodology now reads "the value of D may be chosen from published data from local or regional studies or the modeling exercise."
Auditor Response: As stated in the client response, the methodology has been revised to address the public comment regarding transition time.
Closing Remarks: The Client’s response adequately addresses the finding.

NIR 2012.33 dated 12/10/2012
Standard Reference: Methodology Approval Process V3.3, Section 3.3.6
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.2.9
Finding: The Methodology Approval Process requires that "At the end of the public comment period, the VCSA shall provide all and any comments received to the developer. The developer shall take due account of such comments, which means it will need to either update the methodology or demonstrate the insignificance of the comment. It shall demonstrate to each of the validation/verification bodies what action it has taken, as set out in Section 3.4.2) [sic]".
As downloaded from the VCS website, a comment was submitted by Nicole R. Virgilio of The Nature Conservancy that states the following:
"'The SOC density should be estimated using area-weighted average values of model input parameters for each management practice identified. The proponents should demonstrate that the standard deviation of the modeled SOC within each group is less than 10% of the average value.'
--this is an important piece to define what it means to use a “validated” model. Needs to be retained."
The sentence referred to by the commenter ("The proponents should demonstrate that the standard deviation...") is not present within Section 8.2.9 of the version of the methodology that was provided by SCS. Therefore, please demonstrate the insignificance of the comment or update the methodology accordingly.
Client Response: The public comment suggests that the standard deviation of modelled SOC should be less than 10% of the mean. There have been many discussions among scientists, including workshops convened by VCS, on the criteria for model validation at which arbitrary thresholds (e.g. R2>x%, uncertainty<x%) have been discussed. Instead of suggesting an arbitrary threshold value, the applicability conditions of this methodology require that the applicablity of the model and its validation follow the 2006 IPCC Guidelines (Chapter 2) on the selection of process models. The key issue is not whether any given arbitrary threshold allows sufficient accuracy, but whether the approach adopted results in a conservative estimate of CO2 removals. The level of accuracy can be moderated by procedures to ensure conservativeness. Owing to relatively high variability in soil characteristics in grasslands and considering that soil surveys used to parameterize a model will result in a certain degree of variability in model input parameters, it is necessary for the methodology to stipulate procedures to ensure a conservative estimate. Therefore, as a moderator to accuracy, the methodology adopts a conservative approach. Uncertainties of up to 30% in model output parameters are permitted in the methodology, but uncertainties >30% are not permitted. Where uncertainties exceed 15% but are less than 30% a deduction is applied as outlined in the section on Uncertainty in the methodology. We consider that this meets the requirements for conservativeness while also being practical, whereas a requirement for modeled SOC to have a standard deviation of <10% would not be practical in most grassland contexts and this arbitrary thresold by itself would not ensure conservativeness of the estimated removals.
Auditor Response: Whereas, the methodology does not adopt the suggestions of this public comment, the revised methodology provides a deduction requirement that is in conformance with section 4.1.4 and subsequently, section 2.1.4 (conservativeness) of the VCS Standard.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.34 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.7
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.2.9
Finding: The AFOLU Requirements states that "Procedures to measure soil carbon stocks shall be based on established and reliable sampling methods, with sufficient sampling density to determine statistically significant changes at a 95 percent confidence level."
Option 2 of Section 8.2.9 of the methodology requires that "Using [sic] the tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” to calculate the number of sample plots for measurements."
Review of the tool referenced above indicates that the purpose of the tool is to calculate "the minimal number of sample plots that allows the estimate of the mean to be within the error bound E with probability 1-α." While the tool is appropriate for the purpose stated above, it is not appropriate for the purpose of determining the sampling density necessary to determine statistically significant changes at a 95 percent confidence level, as required by the AFOLU Requirements.
Client Response: Reference to the CDM tool has been replaced by the following sentence: "Sampling procedures should be designed such that the statistical significance of soil carbon stock changes between the baseline carbon stock and the carbon stock in time t can be determined with a 95% confidence interval. Guidance on calculation of sampling intensity for detection of statistically significant change may be found in reference manuals such as Zar (1996)."
Auditor Response: As stated in the client response, the methodology has been revised to address the procedures to measure soil carbon stocks. The revised methodology sufficiently resolves this NCR.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.35 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.8
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 8.2.9
Finding: The AFOLU Requirements states that "Procedures to estimate soil carbon stock shall use soil carbon stock change factors that are based on measurements of soil carbon stocks to the full depth of affected soil layers (usually 30 cm), accounting for differences in bulk density as well as organic carbon concentrations." For Option 1 of Section 8.2.9, the methodology does not require that carbon stock change factors used within an analytic model are based on measurements of soil carbon stocks to the full depth of affected soil layers. In addition, Option 1 does not require that differences in bulk density and organic carbon concentrations be accounted for.
Client Response: Wording to require that soil bulk density and organic carbon concentrations are considered has been included in Option 1. Also, wording has been included that requires that "data used to parameterize the selected model must be based on measurements of soil properties (including bulk density and organic carbon concentrations) to the full depth of affected soil layers, or a minimum depth of 30 cm."
Auditor Response: The wording in the methodology with respect to "procedures to estimate soil carbon stock" has been revised and is now in conformance with the VCS AFOLU Requirements.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.36 dated 12/10/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: The methodology uses the term "statistic book" in the following instances in Section 9:
- "Documented planting records may include statistic book", for parameter Area(g,B)
- "Documented fire management records may include statistic book", for parameter A(B)
- "Documented fire management records may include statistic book", for parameter M(B,B)
- "Population of grazing livestock shall be based on livestock statistic book, averaged over the five year period prior to the project start date", for parameter P(l,B)

The term "statistic book" is not defined within the Program Definitions or ISO 14062-2:2006, and neither is it defined in the methodology. In addition, the meaning of the term, as used within the methodology, is not clear.

Client Response: All references to "statistic book" have been changed to "management records".
Auditor Response: The parameter tables in the revised methodology no longer include the term "statistic book." The parameter tables referred to in this finding now provide a clear understanding of the "Justification of the choice of data or description of measurement methods and procedures actually applied," sufficiently resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.37 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.9
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: The AFOLU Requirements states that "Minimum baseline estimates for N2O and CH4 emissions shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer purchase records, manure production estimates and/or livestock data. For new management entities or where such records are unavailable, minimum baseline estimates may be based on a conservative estimate of common practice in the region."
In the parameter table for parameter Area(b,B), the methodology states "Annual area of N-fixing species shall be based on documented planting records averaged over the five year period prior to the project start date. Documented planting records may include statistic book. If such records are unavailable, annual area of N-fixing species may be based on common practice in the region and obtained from the field survey before the project start."
For the case where planting records are not available, the AFOLU Requirements indicates that minimum baseline estimates should be based on a conservative estimate of common practice in the region. The methodology does not clarify that estimates of common practice in the region must be conservative. In addition, the statement within the methodology indicating that "annual area of N-fixing species may be based on common practice in the region and obtained from the field survey before the project start" is not clear, as it appears to be indicated that annual area of N-fixing species should be based on common practice in the region and also estimated from a field survey that is implemented prior to project start, and it is unclear how the annual area of N-fixing species could be derived from both of these sources simultaneously.
Client Response: This has been rewritten as: “The annual area of N-fixing species shall be based on documented planting records averaged over the five year period prior to the project start date. If such records are unavailable, the percentage of the area planted to N-fixing species shall be obtained from sample survey covering a one year period before the project start date. Where sample survey data are used, a conservative estimate of the area of N-fixing species equals the average percentage from the survey data minus the standard error of the percentage area of N-fixing species. The annual area of N-fixing species shall be equal to the conservatively estimated percentage area of N-fixing species times the total grassland area involved in the project activity.” This formulation specifies that common practice is to be characterized on the basis of a sample survey, and specifies a procedure for making a conservative estimate.
Auditor Response: The methodology has been revised to include clear instructions for determining the annual area of N-fixing species in the absence of planting record. Additionally, the instructions require that common practice (surveys) must be conservative.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.38 dated 12/10/2012
Standard Reference: NA
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: In the parameter table for parameter P(l,B), the methodology states that "Population of grazing livestock shall be based on livestock statistic book, averaged over the five year period prior to the project start date. If such data are unavailable, animal population may be based on a survey of current animal population of the households involved in the project and meet the conservative estimate of baseline CH4 and N2O emissions." The following aspects of this guidance may create the potential for confusion:
- For instances where records are of fertilizer use are not available, the methodology states that the assumed value "may be based on a survey of current animal population of the households involved in the project". The use of the term "may" causes it to be unclear whether it is always required that the assumed population of grazing livestock be based on common practice in the region under these circumstances, or whether other possibilities exist for estimation of population of grazing livestock.
- It is unclear whether it is always required that the assumed value "meet the conservative estimate of baseline N2O emission", or whether other possibilities exist. It is also unclear what the term "conservative estimate of baseline N2O emission" means and how a value can be determined to meet this criterion.
Client Response: This has been rewritten as: “Population of grazing livestock shall be based on documented management records, averaged over the five year period prior to the project start date. If such data are unavailable, the animal population shall be based on the average annual population from a sample survey of the animal population grazing in the project boundary in the year prior to the start of the project activities. The design of the sample survey must consider the average annual livestock population, which may not be the same as the population present at the time of the survey."
Auditor Response: The methodology has been revised to clarify how the animal populations are determined in absence of documented management records over the five year period prior to the project start date. It is not clear; however, that the revision includes procedures for ensuring that estimates in the absence of management records are conservative, as is required by section 4.5.9 of the VCS AFOLU Requirements.
Client Response 2: The parameter table for P(l,b) has been rewritten as: “Population of grazing livestock shall be based on documented management records, averaged over the five year period prior to the project start date. If such data are unavailable, a conservative estimate of the animal population must be made on the basis of a sample survey of the animal population grazing in the project boundary in the year prior to the start of the project activities. The design of the sample survey must consider the annual livestock population, which may not be the same as the population present at the time of the survey. A conservative estimate of the baseline livestock population shall be made following the guidance on conservative estimates presented in Section 8.2.9.” Following this NCR, we have adjusted the overall approach to deriving conservative estimates from sample survey data in the methodology. The overall approach is summarized in revisions made to the first paragraph of Section 8.2.9 and the footnote thereto. The requirement to follow the guidance in Section 8.2.9 has been added to the paramter tables for P(l,b) as well as the following parameters: M(SNi,b), Area(g,B), A(B,b), M(B,B), FC(p,j,k,B).
Auditor Response 2: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the assessment team can confirm that the guidance for quantification of parameter P(l,b) contains appropriate provisions to require that the quantification be conservative. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client’s response adequately addresses the finding.

NCR 2012.39 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.9
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: The AFOLU Requirements states that "Minimum baseline estimates for N2O and CH4 emissions shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer purchase records, manure production estimates and/or livestock data. For new management entities or where such records are unavailable, minimum baseline estimates may be based on a conservative estimate of common practice in the region."
In the parameter table for parameter G(days,l,B), the methodology states "Grazing days under baseline can be obtained from published literature, expert opinion, or field survey before the project start date."
The data source options mentioned by the methodology do not comply with the AFOLU Requirements, which states that minimum baseline estimates for N2O and CH4 emissions must be based on "documented management records averaged over the five year period prior to the project start date" or, for new management entities or where such records are unavailable, on "a conservative estimate of common practice in the region".
Client Response: This has been rewritten as: "Grazing days in the baseline shall be based on documented management records, averaged over the five year period prior to the project start date. If such data are unavailable, grazing days shall be based on the average annual grazing days from a sample survey of livestock grazing in the project boundary in the year prior to the start of the project activities. The value adopted shall enable a conservative estimate of livestock manure management emissions."
Auditor Response: The methodology has been revised to ensure that the data sources for parameter G(Days,l,B) comply with the VCS AFOLU Requirements, Section 4.5.9.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.40 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.9
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 9
Finding: The AFOLU Requirements states that "Minimum baseline estimates for N2O and CH4 emissions shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer purchase records, manure production estimates and/or livestock data. For new management entities or where such records are unavailable, minimum baseline estimates may be based on a conservative estimate of common practice in the region."
In the parameter table for parameter H(B), the methodology states "Average grazing hours per day during grazing season under baseline can be obtained from published literature, expert opinion, or field survey before the project start date."
The data source options mentioned by the methodology do not comply with the AFOLU Requirements, which states that minimum baseline estimates for N2O and CH4 emissions must be based on "documented management records averaged over the five year period prior to the project start date" or, for new management entities or where such records are unavailable, on "a conservative estimate of common practice in the region".
Client Response: This has been rewritten as "Average grazing hours per day in the baseline shall be based on documented management records, averaged over the five year period prior to the project start date. If such data are unavailable, average grazing hours shall be estimated based on the average grazing hours in each grazing season taken from a sample survey of livestock grazing in the project boundary in the year prior to the start of the project activities. The value adopted shall enable a conservative estimate of livestock manure management emissions"
Auditor Response: The methodology has been revised to ensure that the data sources for parameter H(B) comply with the VCS AFOLU Requirements, Section 4.5.9.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.41 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.9
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx
Finding: The AFOLU Requirements states that "Minimum baseline estimates for N2O and CH4 emissions shall be based on documented management records averaged over the five year period prior to the project start date. Documented management records may include fertilizer purchase records, manure production estimates and/or livestock data. For new management entities or where such records are unavailable, minimum baseline estimates may be based on a conservative estimate of common practice in the region."
Multiple references to "common practice" exist within the methodology, and in many cases such references appear to be made in an effort to comply with the requirement cited above. However, the requirements stated in Section 4 of the AFOLU Requirements are for methodologies, and it is the responsibility of the methodology developer to provide procedures that interpret such requirements in the specific context of the projects applicable to the methodology. By itself, the term "common practice" is not very specific, and no definition of such a term is included within the Program Definitions or ISO 14064-2:2006. The methodology must provide a specific interpretation of Section 4.5.9 of the AFOLU Requirements in the specific context of the projects applicable to the methodology.
Client Response: corresponding changes made to M(SNiB), A(B), M(BB), P(l,B), G(days,l,B), H(B),H(p,t), FC(p,j,k,B),
Auditor Response: The methodology has been revised to include a description of how common practice is derived. The parameters listed in the client response now require sample surveys of the project area to determine common practice, sufficiently closing this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.42 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.5.1; VCS Standard V3.2, Section 2.4.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Sections 4 and 8.1.9
Finding: The AFOLU Requirements states that "Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions."
The methodology requires, as an applicability condition in Section 4, that "Land is degraded and will continue to be degraded or continue to degrade", with a supporting footnote stating that "The latest version of the "Tool for the identification of degraded or degrading lands for consideration in implementing A/R CDM project activities" shall be applied for demonstrating that lands are degraded or degrading". The methodology then states, in Section 8.1.9, that "since the applicability conditions limit the project to lands that are degrading, it can be conservatively assumed that the baseline removals due to changes in SOC are zero."
The Tier 1 and 2 procedures in Volume 4, Chapter 6, Section 6.2.3 of the IPCC Guidelines require that Equation 2.25 be used to quantify carbon stock change in soils for grasslands that remain grasslands. For the Tier 1 approach, the "management factors" set out in Table 6.2 are required to be used as an input to Equation 2.25. The Equation is constructed such that a management factor lower than 1 will result in the quantification of progressively lower carbon stocks, while a management factor greater than 1 will result in the quantification of progressively higher carbon stocks.
The management factors set out for "moderately degraded grassland" all range between 0.95 and 0.97, with accompanying uncertainties ranging from 11% to 40%. Given the uncertainty expressed for each factor, it appears that a 95% confidence interval that we might construct for each factor overlaps with 1 (such that we cannot say, with absolute confidence, that moderately degraded grassland will progressively degrade over any period of time). The management factor set out for "severely degraded" grassland is 0.70, with an accompanying uncertainty of 40%. If we assume that all possible values will be within the uncertainty values set out in Table 6.2, the management factor for any given severely degraded site may be as low as 0.42 or as high as 0.98. Therefore, for areas that are classified as "severely degraded" per the decision tree set out in Figure 6.1 and that appear likely to remain severely degraded throughout the baseline period, the assumption that such areas will not experience any positive soil carbon stock change during the baseline period appears to be generally conservative. However, it is not clear that such an assumption is conservative for areas classified as "moderately degraded" per the decision tree set out in Figure 6.1, for the reason described above. Furthermore, it appears that the procedures set out by the methodology to determine whether the project area is degraded may allow for the inclusion of areas deemed "moderately degraded" by the IPCC Guidelines. Therefore, the methodology does not ensure that the principle of conservativeness (described in Section 2.4.1 of the VCS Standard) is upheld in all cases.
Client Response: The uncertainty ranges associated with the IPCC stock change default factors allows the possibility that moderately degraded land may have a higher carbon stock than non-degraded land. The revised applicability condition (i) requires that the land is degraded AND that in the baseline scenario the land will continue to degrade on the basis that the degradation drivers or pressures are still present. If this applicability condition holds, so that degradation drivers or pressures remain, it is not considered reasonable to assume that baseline carbon stocks would not decline over the 20 year crediting period of an SGM project. Moderately degraded grasslands would not be expected to remain moderately degraded over this period.
Auditor Response: Given the revised wording of applicability condition (b) in section 4 of the methodology, "Land is degraded at the start of the project and degradation will continue to be degraded or continue to degrade in the baseline scenario on the basis that degradation drivers or pressures are still present in the baseline scenario," it is reasonable to assume that moderately degraded grasslands would not be expected to remain moderately degraded. The revised wording of this applicability condition is sufficient to resolve this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.43 dated 12/10/2012
Standard Reference: AFOLU Requirements V3.2, Section 4.6.12
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Section 12, Annex I, Section 2, Step 2
Finding: This finding is a follow-up to NCR 2012.14.
The AFOLU Requirements states that "Where livestock are displaced to outside the project area, such activity shifting leakage shall be quantified to capture potential reductions in carbon stocks and potential increases in livestock-derived CH4 and N2O emissions from outside the project area." The monitoring procedures in Section 10 of the methodology require monitoring of the "Total animal unit months of project proponents grazing outside the project boundary". As the livestock displaced outside the project area are not necessarily owned by the project proponent(s), the monitoring procedures do not ensure that all leakage attributable to the displacement of livestock outside the project area is quantified as required by the AFOLU Requirements.
Client Response: The rewritten grazing displacement leakage tool now accounts explicitly for all livestock, both owned by project participants and non-participants.
Auditor Response: As stated in the client response the new module for estimating leakage due to grazing activities explicitly accounts for all livestock owned by both project participants and non-participants.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.44 dated 12/10/2012
Standard Reference: Methodology Approval Process V3.3, Sections 2.1, 5.2.1 and 7.1.1
Document Reference: SGM Methodology - 2012-06-28_BB_PT.docx, Annex II
Finding: Section 2.1 of the Methodology Approval Process indicates that the assessment of new modules and tools is within the scope of the methodology approval process. Thus, any new tools that are part of the methodology element must be independently assessed, in accordance with the Methodology Approval Process.
Section 7.1.1 of the Methodology Approval Process states that "New modules and tools shall be assessed against the aspects of the assessment scope for new methodologies set out in Section 5.1 that are relevant to the specific module or tool."
Section 5.1.2 of the Methodology Approval Process states that "In order to safeguard against the unnecessary proliferation of methodologies, methodology developers are required to demonstrate that no approved or pending methodology under the VCS Program or an approved GHG program could reasonably be revised to meet the objective of the proposed methodology". Section 5.2.1 of the Methodology Approval Process then sets out a procedure for the demonstration that no approved or pending methodology under the VCS Program or an approved GHG program could reasonably be revised to meet the objective of the proposed methodology.
Review of the "Tool for estimation of greenhouse gas emissions due to market leakage" in Annex II indicates that said tool is very similar to VCS Module VMD0033, Version 1.0, entitled "Estimation of emissions from market leakage". Therefore, please provide evidence that the VCS Module VMD0033 could not reasonably be revised to meet the objective of the proposed "Tool for estimation of greenhouse gas emissions due to market leakage".
Client Response: The revised methodology now makes use of VMD0033, but specifies particular requirements for application of that module within the context of the SGM methodology, thus avoiding creation of another module.
Auditor Response: As stated in the client response, rather than accounting for market leakage within the methodology, market leakage is accounted for using VCS modules Estimation of Emissions from Market Leakage in Sustainable Grassland Management Projects (VMD0033), thus avoiding the creation of a new module and resolving this NCR.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.45 dated 08/02/2013
Standard Reference: VCS AFOLU Requirements v3.2, Section 4.3.3
Document Reference: VCS methodology v3 2 SGM 20_6_2013, pg 7
Finding: The VCS AFOLU Requirements state that "Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed de minimis and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project."
Additionally, the VCS methodology v3 2 SGM states that "Specific carbon pools and GHG sources are significant if the increase in carbon stocks (in carbon pools) or the decrease in GHG emissions (from GHG sources) amounts to more than 5% of the total net emission reductions from project activities."
Given this disagreement between the VCS AFOLU requirements and the methodology, please amend the methodology to ensure agreement with the guidance provided in the VCS AFOLU Requirements.

Client Response: The definition of Significance has been revised to read: "A carbon pool or GHG source is significant if it does not meet the criteria for being deemed de minimis. Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed de minimis and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project. The latest version of the CDM Tool for Testing Significance of GHG Emissions in A/R CDM Project Activities shall be used to determine whether decreases in carbon pools and increases in GHG emissions are de minimis."
Auditor Response: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the assessment team can confirm that the definition of "significance" has been revised to be consistent with Section 4.3.3 of the AFOLU Requirements. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NIR 2012.46 dated 08/02/2013
Standard Reference: VCS Standard V3.2, Section 4.1.4 and 2.4.1
Document Reference: VMD00XX Step 5 (d)
Finding: The VCS Standard requires that "Methodology elements shall be guided by the principles set out in Section 2.4.1....
Additionally, the principle of conservativeness states that "Use conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated."
Step 5 (d) of the FAO VCS grazing displacement module states "If the lands remain unidentified but the project proponent cannot justify that the lands to which livestock will be displaced either necessarily grassland, cropland or forest land, then the area of grassland, cropland and forest land to which livestock is likely to be displaced will be estimated on the basis of the fractions of each type of land use in the total land area in the smallest territorial administrative division encompassing all areas of land included in the SGM project activity for which data on land cover are publicly available."
Given that the different land types to which grazing can be relocated are comprised of different carbon stocking levels, the conservative assumption for estimating the effects of grazing displacement on carbon stocks on unidentified lands would be that all grazing is relocated to forest lands. Unless it can be proven that the land type to which grazing is relocated is not forest land, it is unlikely that method provided in Step 5 (d) of the FAO VCS grazing displacement module uses "conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated."

Client Response: Based on the suggestion that a conservative assumption regarding the displacement of livestock to unidentified lands is that the land is forest land, revisions have been made to the Module for Estimation of Leakage Emissions from Displacement of Grazing Activity due to Implementation of Sustainable Grassland Management Activities as follows: Figure 1 has been revised (without track changes for visual clarity); Step 5 has been revised to require that unidentified lands that are not necessarily grassland or cropland must be forest land; the introductory paragraphs of Step 10, Step 11 and Step 12 have been revised accordingly; and related guidance added in Steps 12a and 12b(iii).
Auditor Response: Through review of the revised methodology document "FAO VCS grazing displacement module 26_8_2013.docx", the assessment team can confirm that module now conservatively requires the assumption that grazing has been displaced to forestland in the event that it cannot be justified that the lands to which grazing has been displaced are either grassland or cropland. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.47 dated 08/02/2013
Standard Reference: VCS AFOLU Requirements v3.2, Section 4.5.1
Document Reference: VCS methodology v3 2 SGM 20_6_2013, pg 9 and 13
Finding: The VCS AFOLU Requirements state that "Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions..."
Applicability condition (i) of the VCS methodology v3.2 SGM states that "The project area is located in a region where annual precipitation is less than or equal to annual potential evaporation. With this condition, the following guidance in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 11, indirect N2O emissions from leaching and runoff is are not considered." Section 11.2.2.2 of the IPCC Guidelines for National Greenhouse Gas Inventories, however, states "For dryland regions, where precipitation is lower than evapotranspiration throughout most of the year and leaching is unlikely to occur, the default FracLEACH is zero."
Given that applicability condition (i) does not include the full IPCC guidance, the methodology is not in conformance with section 4.5.1 of the VCS AFOLU Requirements.

Client Response: Applicability condition (i) has been revised to read "i) The project area is located in a region where precipitation is less than evapotranspiration for most of the year and leaching is unlikely to occur. With this condition, following guidance in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 11, indirect N2O emissions from leaching and runoff are considered to be zero and are not accounted for in this methodology." While IPCC gives Fracleach a value of zero, for simplification purposes the methodology omits Fracleach altogether as this is mathematically equivalent to a Fracleach factor of 0.
Auditor Response: Through review of the revised methodology document "VCS methodology v3 2 SGM 26_8_2013.docx", the assessment team can confirm that the applicability condition in question has been revised for full consistency with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. If the applicability condition is met, the exclusion of N2O emissions from leaching and runoff is consistent with the specification of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Therefore, the non-conformity has been resolved.
Closing Remarks: The Client's response adequately addresses the finding.

NCR 2012.48 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.3.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 4

Finding: The VCS Standard requires that "The methodology shall use applicability conditions to specify the project activities to which it applies and shall establish criteria that describe the conditions under which the methodology can (and cannot, if appropriate) be applied." The methodology does not contain appropriate procedures for quantification of carbon stock changes on, and emissions from, organic soils. However, the applicability conditions of the methodology do not preclude the methodology being used for projects located on organic soils.

Client Response: Applicability condition b) has been added which reads "Project activities do not occur on wetlands or peatlands". While this slightly limits the applicability scope of the methodology it avoids the need to further complicate the methodology by including additional accounting procedures.

Auditor Response: The addition of applicability condition (b) to the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", appropriately limits the scope of the methodology to those landscapes for which the methodology's accounting procedures are appropriate. The VCS Program Definitions contains a definition of "wetland" and "peatland", so no such definition is required within the methodology. The additional guidance provided is sufficient to resolve the non-conformity.

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

NCR 2012.49 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.3.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 4

Finding: The VCS Standard requires that "The methodology shall use applicability conditions to specify the project activities to which it applies and shall establish criteria that describe the conditions under which the methodology can (and cannot, if appropriate) be applied." One applicability condition of the methodology states that "There is no significant increase in the use of fossil fuels and fuel wood from non-renewable sources for cooking and heating as a result of the project activity". As the methodology contains no criteria or definition of "significance" in this case, the methodology has not appropriate established criteria that describe the conditions under which the methodology can (and cannot, if appropriate) be applied.

Client Response: The word 'significant' was removed from this applicability condition, to make the criteria for meeting this condition more clear and strict.

Auditor Response: The removal of the term "significant" within the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", is sufficient to clarify that absolutely increase in the use of fossil fuels and fuel wood from non-renewable sources for cooking and heating as a result of the project activity is acceptable. Thus, the methodology appropriately describes the conditions under which it can and cannot be applied, and the non-conformity has been resolved.

Closing Remarks: The Client's response adequately addresses the finding. It should be noted that the Auditor Response to this finding incorrectly states that "The removal of the term "significant"… is sufficient to clarify that absolutely increase in the use of fossil fuels and fuel wood from non-renewable sources for cooking and heating as a result of the project activity is acceptable. The correct statement is that removal of the term "significant" is sufficient to clarify that absolutely no increase in the use of fossil fuels and fuel wood from non-renewable sources for cooking and heating as a result of the project activity is acceptable.

NCR 2012.50 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.5.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Sections 8.1.1 and 8.1.5

Finding: The AFOLU Requirements states that "The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions". Section 11.2.2.1 of the IPCC 2006 Guidelines for National GHG Inventories contains procedures for estimating "N2O emissions from atmospheric deposition of N volatilised from managed soil". These procedures have been adapted by the methodology into Equations 4 and 14 in Sections 8.1.1 and 8.1.5, respectively. However, the methodology introduces these equations by stating that "The N2O emission from atmospheric deposition of N from volatilized NH3 and NOx from fertilized grassland is estimated using Equation 4" and "The indirect N2O emissions from atmospheric deposition of N volatilized of urine and manure N deposited on grassland soils in baseline year b is estimated using Equation 14", respectively. However, this language is not entirely consistent with the language used by the IPCC 2006 Guidelines for National GHG Inventories, which could lead to confusion on the part of the user.

Client Response: The sentence for equation 4 is revised to "The N2O emissions from the atmospheric deposition of N volatilized as NH3 and NOx after fertilizer is applied to grassland soils in baseline year b, is estimated using Equation 4." The sentence for equation 14 was revised to "The indirect N2O emissions from the atmospheric deposition of N volatilized as NH3 and NOx after urine and manure N is deposited on grassland soils in baseline year b, are estimated using Equation 14." Corresponding revisions were made for equation 25 and 37.

Auditor Response: As indicated in the Client Response, the language within the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", has been revised for full consistency with the IPCC 2006 Guidelines for National GHG Inventories. Therefore, the non-conformity has been resolved.

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

NCR 2012.51 dated 10-29-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS

Finding: Parameter EF(4) is defined under Equation 14 as "N2O emission factor for atmospheric deposition of manure N on soils and water surfaces under project activity, [kg N2O-N (kg NH3-N + NOx-N volatilized)-1]." However, the reference to the "project activity" does not make sense, as Equation 14 provides a procedure for estimating baseline (not project) emissions. In addition, the manner in which the parameter is described is not fully consistent within the methodology, as it is described as the "atmospheric deposition of N" under Equation 4 and the "atmospheric deposition of manure N" under Equation 14.

Client Response: This has been revised by removing reference to the "project activity" and the inconsistency in the description of the parameter in the two equations has also been amended.

Auditor Response: As indicated in the Client Response, the reference to the "project activity" has been removed from the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03". In addition, parameter EF(4) has been differentiated into two different parameters, parameter EF(4,SN) and parameter EF(4,MD). Therefore, the second portion of the finding is no longer relevant and will be withdrawn.

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

NCR 2012.52 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.5.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Sections 5, 8.1.7 and 8.2.7

Finding: The AFOLU Requirements states that "Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario". Section 5 of the methodology indicates that the belowground biomass carbon pool is optional. However, Sections 8.1.7 and 8.2.7 do not make any allowance for projects that choose to exclude accounting belowground biomass. Rather, the procedures within Sections 8.1.7 and 8.2.7 appear to require accounting of the belowground biomass pool whether it is excluded or not.

Client Response: In sections 8.1.7 and 8.2.7, the following explanatory text has been added in reference to equations (19) and (42): "Since below ground biomass is an optional carbon pool (Table 1), the term (1 + Rj) may be removed from equation (x) if this carbon pool is not included in the project boundary.

Auditor Response: As indicated in the Client Response, additional guidance has been provided within the updated methodology entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS" to clarify the manner in which the equations may be modified in the case that belowground biomass is not included in the project boundary. Therefore, the non-conformity has been resolved.

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

NCR 2012.53 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.5.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Sections 8.1.9

Finding: The AFOLU Requirements states that "Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario". While the methodology contains a procedure for quantifying total baseline emissions, the framework adds parameter BRWP(b) rather than subtracting it. This leads to an incorrect quantification of GHG emission reductions or removals, as parameter BRWP(b) will have a positive value in the case that carbon stocks grew (i.e., GHG removals occurred) in the baseline scenario. However, under the overall accounting framework of the methodology, Equation 21a should be quantifying baseline GHG emissions, rather than baseline GHG removals. This is also inconsistent with Equation 58, where parameter PRWP(t) is subtracted from, rather than added to, the project GHG emissions.

Client Response: This has been addressed by changing the sign on parameter BRWP(b). Equation 21a) is now consistent with equation 62.

Auditor Response: As indicated in the Client Response, the sign on parameter BRWP(b) in Equation 21a within the updated methodology entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS", and therefore baseline emissions have been correctly quantified by that equation. The non-conformity has been resolved.

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

NCR 2012.54 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.5.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS

Finding: The AFOLU Requirements states that "The IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions".

The methodology defines parameter EF(1) as both "N2O emission factor for synthetic N fertilizer use" and "Emission factor for N2O emissions from N inputs of N-fixing species to grassland soil". Thus, it appears that this parameter will take different values in different cases. While Volume 4, Section 11.2.1.1 of the IPCC 2006 Guidelines for National GHG Inventories does provide for a Tier 1 approach that uses a single value for parameter EF(1), this approach will likely not be sufficient to satisfy the VCS principle of "accuracy" in many cases. The Tier 2 approach set out by the IPCC 2006 Guidelines for National GHG Inventories defines parameter EF(1) as "EF1i = emission factors developed for N2O emissions from synthetic fertiliser and organic N application

under conditions i (kg N2O–N (kg N input)-1); i = 1, …n.", and thus allows for different factors to be used under different conditions. It is anticipated that a Tier 2 approach will be required to meet the VCS principle of "accuracy".

Client Response: We addressed this finding by differentiating between the EF for fertilizer application and for N-fixing plants by using different subscripts for each (EFNfert and EFNfix) in equations (2), (23) and (26). In the source data section of Table 3 for the EF for N fertilizer, the Pp is instructed to use detailed emission factors specific to the project area or country (taking into account specific environmental, climatic and soil management conditions) if available, as recommended for the Tier 2 estimation of direct N2O emissions from managed soils in section 11.2.1 of the IPCC Guidelines for National Greenhouse Gas Inventories. Similar instructions are also given for the EF from N-fixing plants.

Auditor Response: As indicated in the Client Response, the emission factor for nitrogen has been differentiated on the basis of source (fertilizer application vs. N-fixing plants) and the equations in question have been updated to reflect the different parameters EF(Nfert) and EF(Nfix), within the updated methodology entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS". The assessment team agrees that the information provided within the parameter tables is sufficient to require more accurate data sources where they are available, while falling back in the Tier 1 approach of the IPCC in the event that more accurate data sources are not available. The additional guidance is sufficient to resolve the non-conformity.

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

NCR 2012.55 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.5.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 8.2.1

Finding: The AFOLU Requirements states that "Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario". The methodology establishes a procedure to quantify GHG removals in the project scenario in Equation 44. However, the following inconsistencies and discrepancies exist with respect to this equation:

- Parameter P(S,t) is defined as "SOC stock under project activity in year t, tC", while parameter P(S,equil,t) is defined as "SOC stock under project activity in equilibrium year t, tC"; the difference between "year" and "equilibrium year" is unclear (see also NCR 2012.56), although it is implicit that they refer to the same value since they are both symbolized as "t"

- It is unclear whether parameter P(S,equil,t) is intended to change across years; if this is not the case (i.e., if the parameter is intended to reflect the carbon stock at equilibrium), it is unclear what the function of Equation 44 is

- The summation notation of Equation 44 appears to have the potential to lead to strange results (e.g., in the case where the transition period is 30 years, in year 1 the summation will proceed from year (1-30+1) to 1, thus leading to results that are not consistent with standard conventions for summation notation)

- The relationship between this equation and an equation that will calculate the soil carbon stock "under project activity in year t", as is the stated objective of the equation, is fundamentally unclear

Client Response: Option 1 was revised. Please see the revised version.

Auditor Response: As Option 1 was completely revised within the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS", this finding is no longer relevant and will be withdrawn.

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

NCR 2012.56 dated 10-29-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 8.2.1

Finding: The methodology uses the term "equilibrium year" in multiple locations within Section 8.2.1. It is unclear what this term means, and how it is related to the term "year", as also used within that section.

Client Response: Revised. Please see the revised version.

Auditor Response: All instances of the term "equilibrium year" have been removed from the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS". Therefore, the non-conformity has been resolved.

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

NCR 2012.57 dated 10-29-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 8.2.1

Finding: The following discrepancies exist with respect to Equation 46:

- The units of parameter Depth are not stated, thus leading to potential for confusion in the calculation.

- Assuming that the unit of parameter Depth is meters, the equation appears to produce a result in units of (100 metric tonnes per ha). Thus, the units do not cancel out to produce the intended result.

Client Response: The unit of Depth is centimeters. It was added to the equation explanation

Auditor Response: With the understanding that the unit of Depth is centimeters, it has been possible to determine that the units of Equation 46 in the methodology version entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS" do cancel out to units of metric tonnes C per ha. However, the corresponding equation (re-labeled Equation 45) in the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03" has been modified by an addition of 10,000 to the denominator and the removal of parameter F (which was given as 10,000 m2 per ha) from the equation. With this modified equation, the units do not cancel out to the desired result, but rather become g C per (cm2 * 1,000,000). Therefore, the non-conformity remains open.

Client Response 2: The unit of SOC is changed to g C kg-1. Unit conversion coefficient is changed to 0.1.

Auditor Response 2: The indicated changes have been made to the updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30". Subsequent to initial review of that document, the audit team requested, and received via email, a detailed description of how the units of the equation cancel out to produce the desired result from review of this information, it is clear that Equation 45 (formerly Equation 46) is technically correct. Therefore, the non-conformity has been resolved.

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

NCR 2012.58 dated 10-29-2013

Standard Reference: AFOLU Requirements V3.2, Section 4.7.1

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 8.4.2

Finding: The AFOLU Requirements states that "Methodologies shall also establish procedures for quantifying the net change in carbon stocks, so that the number of buffer credits withheld in the AFOLU pooled buffer account and market leakage emissions may be quantified for the project." Equation 62 performs this quantification, but in the wrong order (i.e., baseline removals are subtracted from project removals), such that a negative number will result in the event that the project has resulted in a change in carbon stocks above and beyond what would have occurred under the baseline scenario, thus leading to a negative non-permanence risk deduction.

Client Response: The equation is correct. In equation 61 NPt has a -ve sign, therefore plugging in a -ve value for this variable, obtained from equation 62, will have positive effect on VCUt. Furthermore, since the BRS variable is set to zero in eqn 20 to be conservative (as the applicability condition a requires land to continuously degrade, SOC stocks will decrease under the baseline scenario) BRS is now redundant in eqn 62, so it has been deleted.

Auditor Response: It is correct that, in Equation 61, parameter NP(t) has a negative sign. Proceeding from that premise, a negative result from Equation 62 will, as noted, have a positive effect on VCU(t). This is not correct. As noted in Section 4.7.2 of the AFOLU Requirements, "The number of GHG credits issued to projects is determined by subtracting out the buffer credits from the net GHG emission reductions or removals (including leakage) associated with the project". As written, Equations 61 and 62 have the cumulative effect of adding the buffer credits to the net GHG emission reductions or removals rather than subtracting out the buffer credits from the net GHG emission reductions or removals, as required. As noted in the original text of the finding, this would effectively lead to a negative non-permanence risk deduction. Therefore, the non-conformity has not been resolved. The methodology developer is correct that parameter BRS has been assigned a value of zero, so it was redundant to include it in the calculation. However, removal of parameter BRS from Equation 62 has not resolved the non-conformity.

Client Response 2: We have changed the sign on NPt from negative to positive, so that the cummulative effect of equations 61 and 62 will be to subtract the buffer credits, as required.

Auditor Response 2: Through review of Equation 61 of the updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30", it is clear that the changes made will result in the quantity of buffer credits being subtracted from the total quantiy of VCUs, as required by the VCS rules. Therefore, the non-conformity has been resolved.

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

NIR 2012.59 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.8.5

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 9.1

Finding: The VCS Standard requires that "The methodology shall establish criteria and procedures for monitoring, which shall cover the following:

1) Purpose of monitoring.

2) Monitoring procedures, including estimation, modeling, measurement or calculation approaches.

3) Procedures for managing data quality

4) Monitoring frequency and measurement procedures."

The methodology indicates that the following parameters are "available at validation" and does not provide any instructions for monitoring. While this would appear appropriate for purposes of quantification of baseline emissions, it is not clear why it is appropriate to not monitor this parameter for purposes of quantification of project emissions. Please provide a justification for why these parameters should not be monitored or update the methodology accordingly.

- Parameter W(l)

- Parameter H(p,t)

- Parameter G(AB,j,p,t) (with particular understanding that if the carbon stock increment within the pool is not monitored, reversals will not be detected and the accuracy of the carbon stock estimate cannot be guaranteed)

Client Response: for parameter H(p,t), we now require estimation of average grazing hours per day in the grazing season in each year. Corresponding changes were also made to the monitoring plan in section 9. For GAB,j,p,t the CDM tool for "Estimation of carbons stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" is now referred to for guidance on procedures for sampling, measuring, modelling and monitoring. For Wt, we require that the Pp use values from the mentioned sources that can result in a conservative estimate of N2O reductions from urine and manure deposited on pasture. To enable the Pp to make a conservative estimate of the reductions, we have now specified separate average weight parameters for the baseline and project situations.

Auditor Response: The updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03" in order to determine whether the indicated changes were made. All of the parameters in question continue to be listed as "parameters available at validation" (in Section 9.1) rather than "parameters monitored" (in Section 9.2). No modification has been made to the guidance provided for parameter any of the parameters in question. Addition, no corresponding modification has been made to Section 9.3. As no action has been taken in response to this finding, the non-conformity remains unresolved.

Client Response 2: Unfortunately the modifications made to address this finding were accidentally excluded at the time of the last submission. Please refer to the details outlined in the previous client response - they are now reflected in the current methodology submission. Repeated again here: for parameter H(p,t), we now require estimation of average grazing hours per day in the grazing season in each year. Corresponding changes were also made to the monitoring plan in section 9. For GAB,j,p,t the CDM tool for "Estimation of carbons stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" is now referred to for guidance on procedures for sampling, measuring, modelling and monitoring. For Wt, we require that the Pp use values from the mentioned sources that can result in a conservative estimate of N2O reductions from urine and manure deposited on pasture. To enable the Pp to make a conservative estimate of the reductions, we have now specified separate average weight parameters for the baseline and project situations. Accurate measurement of a representative sample of animal weights for each age-sex class of livestock of each type would be costly. In line with VCS Standard v3.4, we adopt an approach based on conservativeness.

Auditor Response 2: The updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30" has been reviewed to determine whether the indicated changes have been made. It is clear that a description of parameters H(p,t) and (now) G(AB,p,j,s,t) (formerly G(AB,p,j,t)) is now contained within Section 9.2 of the methodology. In addition, former parameter W(l) has been split into W(l,b) and W(l,p), with W(l,p) referring to "Average weight of livestock l under project activity". Adequate guidance for monitoring of the above parameters has been added. However, W(l,p) remains in Section 9.1 of the methodology, and no guidance has been added regarding the monitoring of the value for that parameter. The specific request of the finding was for the methodology developer to provide "justification for why these parameters should not be monitored or update the methodology accordingly". This request has not been satisfied with respect to parameter W(l,p). Therefore, the finding remains open.

Client Response 3: Changes have been made to the 'justification of the choice of data or description of measurement methods and procedures..' for parameters W(l,b) and W(l,p) in Table 3. In the description for W(l,p) it is stated that "…the project proponent must justify why the values selected for these parameters results in emission reductions that are sufficiently conservative to satisfy the VCS principle of Conservativeness, described in the most recent version of the VCS Standard." Slight additional changes to the wording of this section of the table for both W(l,b) and W(l,p) have been made to be more consistent with the descriptions for the corresponding parameter in the grazing module.

The justification for why the W(l,b) and W(l,p) parameters should not be monitored is as follows: In the livestock systems most likely to use this methodology, regular weighing of a representative sample of animals in a herd is not common practice. Accurate measurement of a representative sample of animal weights for each age-sex class of livestock of each type would be costly. In line with VCS Standard v3.4, we adopt an approach based on conservativeness. It is therefore required that the values for W(l,b) and W(l,p) should derived from the literature or expert judgment, and that project proponents must justify the conservativeness of the values chosen.

Auditor Response 3: The parameter tables for W(l,b) and W(l,p) within the updated methodology, entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2014-01-13", have been modified as described in the Client Response section. The justification provided for not monitoring these parameters is consistent with the guidance in Section 2.4.1 which indicates that "Accuracy should be pursued as far as

possible, but the hypothetical nature of baselines, the high cost of monitoring of some types of GHG emissions and removals, and other limitations make accuracy difficult to attain in many cases. In these cases, conservativeness may serve as a moderator to accuracy in order to maintain the credibility of project GHG quantification." It is agreed that the additional language within the parameter table for W(l,p) is adequate to ensure that a conservative value is selected for this parameter. Therefore, the information request has been satisfied.

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

NCR 2012.60 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.8.5

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Sections 9.1 and 9.2

Finding: The VCS Standard requires that "The methodology shall establish criteria and procedures for monitoring, which shall cover the following… Procedures for managing data quality".

The monitoring criteria and procedures do not establish adequate procedures for managing data quality with respect to the following parameters:

- Parameter N(content,p,g)

- Parameter M(B,p,t)

- Parameter SOC(s,i,t) ("qualified laboratory" is not sufficiently prescriptive and is open to interpretation)

- Parameter BD(s,i,t) ("qualified laboratory" is not sufficiently prescriptive and is open to interpretation; best practices for sample collection and analysis are not provided)

- Parameter FC(s,i,t) ("qualified laboratory" is not sufficiently prescriptive and is open to interpretation; best practices for sample collection and analysis are not provided)

Client Response: Guidance on best practices for measurement and laboratory selection is now provided for each parameter in question.

Auditor Response: As indicated, Section 9.2 of the updated methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", contains appropriate procedures for managing data quality in monitoring each of the parameters in question. Therefore, the non-conformity has been resolved.

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

NCR 2012.61 dated 10-29-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS, Section 9.2.3

Finding: The methodology states the following:

"For the estimate of annual emissions and removals from woody perennials, the area of trees and shrubs of each stratum must be recorded annually during the crediting period... Estimate project removals due to changes in SOC using validated model, project areas in grassland with different management practice must be recorded." The above language is confusing, as the first sentence refers only to woody perennials whereas the second sentence refers to soil organic carbon.

Client Response: This was a formatting error which had accidentally related the second sentece as a sub point of the first. This has been addressed by removing the bullet point from the second of these sentences and by a slight re-wording of the sentence to improve its clarity.

Auditor Response: As indicated, the formatting error has been corrected in the revised methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", and therefore it is now clear that two separate requirements are being referred to. Therefore, the non-conformity has been resolved.

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

NCR 2012.62 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.8.4

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS, Equations 13 and 48

Finding: The VCS Standard requires that "Metric tonnes shall be used as the unit of measure and the quantity of each type of GHG shall be converted to tonnes of CO2e." The units of parameter F(MG,SD) are not appropriately defined below Equations 13 and 48. In addition, the methodology appears to lack guidance for quantifying the parameter. Given, the lack of units, it is not clear that Equations 13 and 48 are correct.

Client Response: Following IPCC 2006 Vol 4, F(MG,SD) is dimensionless - this is now noted in the units row of the parameter table. Since F(MG,SD) is a dimensionless numerical factor it enables quantification in metric tonnes of CO2 equivalent. Terminology has been brought in line with IPCC 2006 and F(MG,SD) is now referred to as "relative stock change factor", and an explanation has been added in the comments row of the parameter table to clarify that "Relative stock change factors as applied in Volume 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories represent the carbon stock in the altered condition (e.g. after onset of severe degradation) as a proportion of the reference carbon stock."

Auditor Response: As indicated, the clarification of the units of F(MG,SD) within Equations 13 and 48 in the revised methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", help the user to understand how these equations are intended to work. However, it appears that the outputs of these equations are in units of metric tonnes CO2e per year, rather than simply "t CO2e", as stated below the equations. Therefore, the non-conformities regarding these equations have not been fully resolved.

Client Response 2: Below both equations it has been clarified that the equation results in quantification of the parameter in units of tCO2e per year. Leakage per year estimated through equations 13 and 48 is then summed together with leakage from other sources in equations 15 (tCO2e per year) and 49 (tCO2e per year), which are then summed together with leakage per year from other categories of land in equation 77 (tCO2e per year), and further summed across all years in equation 78 to give an estimate of total leakage (tCO2e).

Auditor Response 2: As indicated in the Client Response, the language below Equations 13 and 48 of the updated grazing displacement module, entitled "FAO VCS grazing displacement module 2013-12-30", was modified to correctly indicate that the output was tCO2e per year. Therefore, the non-conformity has been resolved. In addition, it should be noted that the initial Auditor Response in this finding referred to the incorrect methodology element, as it should have referred to the grazing displacement module.

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

NCR 2012.63 dated 10-29-2013

Standard Reference: NA

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS, Step 8b(iii)

Finding: The methodology states that "Where full clearance of forest is planned or likely, the equilibrium biomass stock of deforested forest land after deforestation (〖FB〗_(FID_EQ,k)) is 0. Where partial clearance of forest is determined as the likely outcome of relocation of grazing activities, 〖FB〗_(FID_EQ) shall be determined on the basis of measurements conducted on similar land plots or region-specific studies of biomass carbon stocks remaining at least 5 years after the introduction of grazing activities." However, the methodology lacks appropriate criteria for determining whether full or partial clearance is determined as the likely outcome of relocation of grazing activities.

Client Response: The determination of the most likely outcome for forest biomass stocks in the forest land to which livestock will be displaced is necessarily context-specific. Additional guidance on procedures for the selection of the most likely outcome has been given in the first paragraph of section 8b(iii). Since the same also applies to unidentified forest lands, the additional guidance has also been added to Section 12b(iii)

Auditor Response: Step 8b(iii) of the revised methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", contains additional guidance regarding the determination of whether full or partial forest clearance is the most likely outcome. Therefore, the non-conformity has been resolved.

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

NCR 2012.64 dated 10-29-2013

Standard Reference: NA

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS, Step 8b(iii)

Finding: The methodology does not contain any procedures for quantification of parameter FB(FID,EQ,K).

Client Response: Equation 25a has been added to specify procedures for calculation of FB(FID,EQ,k).The parameters in that equation have been added to the parameter tables

Auditor Response: As indicated, Equation 25a of the revised methodology, entitled "VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03", contains a procedure for calculation of FB(FID,EQ,k). Therefore, the non-conformity has been resolved.

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

NCR 2012.65 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.8.1

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS, Table 2

Finding: The VCS Standard requires that "The methodology shall describe the data and parameters to be reported, including sources of data and units of measurement." Table 2 does not contain any of the emission factors for changes in biomass in the reference areas.

Client Response: Table 2 presents indicators that must be monitored for ex-post estimation of leakage emissions due to grazing displacement outside the project boundary to unidentified (grass-, crop-, forest-) lands. Because these lands are unidentified, as indicated by condition (d) stated in Step 4 of the tool, there may be situations in which identification of unidentified lands and biomass measurements in unidentified lands are either logistically not feasible or not feasible at reasonable cost. In these situations, the methodology requires the use of conservative assumptions in determination of biomass loss and the resulting CO2 emissions (see Steps 10-12). Therefore, when lands to which grazing is displaced remain unidentified after implementation and monitoring begin, the parameters that are monitored give an estimate of the population of livestock and duration of displacement, which enable a conservative estimate of leakage emissions using emission factors determined through procedures set out in Steps 10-12. Following the procedures set out in the module for determination of unidentified lands, it is not possible to undertake direct monitoring on these unidentified lands. Table 2 therefore does not include monitoring of emission factors. However, project proponents are required to justify the conservativeness of the values they adopt.

Auditor Response: The information provided constitutes sufficient justification for the decision to not monitor the emission factors for changes in biomass in the reference areas. As discussed in response to NIR 2012.67, monitoring is not always required where conservative decisions have been made in the quantification of GHG emission reductions and removals. Therefore, the finding may be closed.

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

NCR 2012.66 dated 10-29-2013

Standard Reference: NA

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS

Finding: The following parameters are defined as pertaining to the parcel level ("parcel k") within the "Parameters" section, but are sometimes quantified at a different level than the parcel level. The methodology must be consistent regarding subscripts and guidance for quantification of these parameters at levels different from the parcel level.

- Parameter P(GID,l,k,t)

- Parameter Days(GID,l,k,t)

- Parameter H(GID,l,k,t)

Client Response: In Step 7a, it is necessary to specify that livestock populations are measured at the plot level in order to determine whether plots are likely to become degraded or not by overgrazing. In other steps, overgrazing is not the main impact or plot level measurement is not possible (e.g. in the case of unidentified grasslands). In these cases, livestock populations parameters do not have a plot subscript (k). For additional clarity, P(GID,l,t) and P(GID,l,k,t) are separately explained in the parameter tables. The same has been applied to Days(GID,l,k,t) and Days(GID,l,t). For hours of grazing, H(l,t) replaces H(l,k,t) in the equations and parameter table.

Auditor Response: From review of the updated methodology entitled "FAO VCS grazing displacement module 2013-12-06", the assessment team can confirm that separate parameters P(GID,l,t) and Days(GID,l,t) have been added and that parameter H(GID,l,t) has replaced parameter H(GID,l,k,t). Therefore, the non-conformity has been resolved.

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

NIR 2012.67 dated 10-29-2013

Standard Reference: VCS Standard V3.2, Section 4.8.5

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS

Finding: The VCS Standard requires that "The methodology shall establish criteria and procedures for monitoring, which shall cover the following:

1) Purpose of monitoring.

2) Monitoring procedures, including estimation, modeling, measurement or calculation approaches.

3) Procedures for managing data quality

4) Monitoring frequency and measurement procedures."

The module indicates that parameter W(l) is "available at validation" and does not provide any instructions for monitoring. It is not clear why it is appropriate to not monitor this parameter for purposes of monitoring project emissions. Please provide a justification for why this parameter should not be monitored or update the module accordingly.

Client Response: In the livestock systems most likely to use this methodology, regular weighing of a representative sample of animals in a herd is not common practice. Accurate measurement of a representative sample of animal weights for each age-sex class of livestock of each type would be costly. In line with VCS Standard v3.4, we adopt an approach based on conservativeness. It is therefore required that the value of W(l) should derived from the literature or expert judgment, and that project proponents must justify the conservativeness of the value chosen. Corresponding changes have been made in the parameter table for W(l)

Auditor Response: The requirement to ensure conservative values is consistent with Section 2.4.1 of the VCS Standard, which states that "Accuracy should be pursued as far as possible, but... the high cost of monitoring of some types of GHG emissions and removals, and other limitations make accuracy difficult to attain in many cases. In these cases, conservativeness may serve as a moderator to accuracy in order to maintain the credibility of project and program GHG quantification." Given the additional information provided, and the changes to the updated leakage module entitled "FAO VCS grazing displacement module 2013-12-06", the assessment team agrees that it is appropriate not to monitor parameter W(l).

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

NCR 2012.68 dated 10-29-2013

Standard Reference: NA

Document Reference: FAO VCS grazing displacement module 26_8_2013 +VCS

Finding: The leakage module contains specification for monitoring the following parameters. However, it is not clear how the parameters are to be monitored in the case that the project proponent does not have access to the area to which livestock are displaced.

- Parameter M(B,k,t)

- B(PCID,k)

Client Response: B(PCID,k) is aboveground biomass of identified perennial cropland to which livestock are displaced; where the land plots to which grazing will be displaced are identified, the project proponent has access and is able to measure B(PCID,k); where they are identified but the project proponent does not have access, the parameter table allows that the value of B(PCID,k) is taken from "published studies in similar perennial croplands in the project region" or from IPCC default values "with justification for why the value chosen is conservative". With these provisions, project proponents will be able to provide a conservative value for B(PCID,k) even if they lack access to some individual plots of identified perennial cropland. For M(B,k,t), which is now distinguished into M(BFID), M(BPID), M(BPUI) and M(BFUI) similar options are made available, i.e. the Pp must measure where feasible, and where measurement is not possible, values may be derived from inventories, peer reviewed literature or IPCC default values conservatively adjusted and with justification for why the values chosen are conservative

Auditor Response: From review of the updated methodology entitled "FAO VCS grazing displacement module 2013-12-06", the assessment team can confirm that sufficient additional guidance has been provided in order to inform measurement approaches in the event that the project proponent does not have access to the land to which grazing is displaced. The assessment team also agrees that the guidance previously provided for parameter B(PCID,K) is sufficient to inform measurement approaches in the event that the project proponent does not have access to the land to which grazing is displaced. Therefore, the finding may be closed.

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

NCR 2012.69 dated 12-17-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03, Sections 8.2.8 and 9.1

Finding: The parameter SOC(mg, baseline), as used in Options 1 and 2 of Section 8.2.8 of the methodology, is further described in Section 9.1 of the methodology. The parameter is defined as "Baseline SOC stock, tC ha-1", 9 Total carbon stock within project boundary under baseline scenario at the start of project activity, t C" and "SOC stocks at the start of the project, tC ha-1" in Option 1 (Section 8.2.8), Option 2 (Section 8.2.8) and Section 9.1, respectively. Neither the definition of the parameter nor the units of the parameter are provided consistently throughout the methodology. In addition, the subscript for SOC(mg,baseline) implies that this parameter should vary by management practice, but no guidance is provided regarding how values for this parameter that are specific to a given management practice should be obtained.

Client Response: In option 1 and 2 of section 8.2.8, parameter SOC(mg, baseline) is changed to SOC(s, baseline). The definition of "SOC(s, baseline)" is "Baseline SOC stock in the top 30 cm of soil layer (or greater depth if required) in stratum s". In option 1, Equation 43 and 44 were revised, in option 2, Equation 47 and 48 were revised according to the revision of SOC(mg, baseline). The unit "tC ha-1" is now used consisently in sections 8.2.8 and 9.1.

Auditor Response: Through review of the updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30", it is clear that parameter SOC(s,baseline), which replaced parameter SOC(mg,baseline), is defined consistently throughout the methodology. Therefore, the non-conformity has been resolved.

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

NCR 2012.70 dated 12-17-2013

Standard Reference: AFOLU Requirements V3.2, Sections 4.5.7 and 4.5.8

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03, Section 8.2.8

Finding: Section 4.5.7 of the AFOLU Requirements states that "Procedures to measure soil carbon stocks shall be based on established and reliable sampling methods, with sufficient sampling density to determine statistically significant changes at a 95 percent confidence level. Uncertainty related to sampling shall be addressed as set out in the VCS Standard. Section 4.5.8 states that "Procedures to estimate soil carbon stock shall use soil carbon stock change factors that are based on measurements of soil carbon stocks to the full depth of affected soil layers (usually 30 cm), accounting for differences in bulk density as well as organic carbon concentrations."

Option 2 of Section 8.2.8 of the methodology complies with the above requirements. However, Option 1 does not contain any procedures to comply with the above requirements. Option 1 of Section 8.2.8 requires the use of parameter SOC(mg, baseline). As noted in NCR 2012.69, the definition of this parameter is unclear. However, it is understood to refer to the soil organic carbon stock at the beginning activity, a value which must be measured. The methodology does not contain any guidance for quantifying this parameter that is consistent with the above requirements.

Client Response: Following section 4.5.4 of the AFOLU requirements, which sets out the requirements for using activity-based methods to determine baseline soil carbon stocks, new procedures are added table 3 for SOC(s,Baseline) which specify the approach that must be followed for determining the value of SOC(s,Baseline), when using Option 1 to estimate project removals due to changes in SOC. Since an activity-based approach is used to estimate removals due to changes in SOC under this option, it is appropriate that a congruous activity-based approach is also used to estimate the baseline SOC stocks. For the case where Option 2 is used, proponents are required to use a measurement approach following the procedures for the sampling and measurement of soil properties, including bulk density and organic carbon concentrations, that are outlined in Option 2 in section 8.2.8, which meet the section 4.5.8 AFOLU Requirements for measuring SOC stocks

Auditor Response: Through review of the updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30", it is clear that additional guidance has been added to Section 9.1 for measurement of parameter SOC(s,Baseline). It is agreed that, when using Option 1, is appropriate for baseline carbon stocks to be estimated using a similar methodology as that used for quantification of project carbon stocks. It is also agreed that the approach prescribed by the methodology for this estimation will lead to conservative quantification of baseline carbon stocks in the event that all applicability conditions (including those related to degraded and/or degrading land) are complied with. The guidance provided for direct measurement of soil carbon stocks when Option 2 is used is generally appropriate. Therefore, the non-conformity has been resolved.

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

NCR 2012.71 dated 12-17-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03, Equation 44

Finding: The output of Equation 44 is stated to be in units of "t CO2e". However, as written, the equation produces a value in units of t C.

Client Response: a conversion factor ((44/12) has now been added to equation 44

Auditor Response: Through review of Equation 44 of the updated methodology entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30", it is clear that the updated equation produces a value in units of t CO2e. Therefore, the non-conformity has been resolved.

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

NCR 2012.72 dated 12-17-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03

Finding: The following equations do not appropriately sum over all livestock types l to determine the total leakage emissions in each year t: 5, 16, 28, 40, 53, 65

Client Response: Summation over all livestock types has been added to each of these equations.

Auditor Response: This finding was mistakenly issued regarding the methodology (VCS methodology v3.2 SGM 26_8_2013 VCS-2013-12-03), when it should have been issued against the grazing displacement module (FAO VCS grazing displacement module 2013-12-06). Through review of the updated grazing displacement module entitled "FAO VCS grazing displacement module 2013-12-30", it is clear that all equations have been modified so that summation appropriately takes place over livestock types. Therefore, the non-conformity has been resolved.

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

NCR 2012.73 dated 12-17-2013

Standard Reference: NA

Document Reference: VCS methodology v3.2 SGM 26_8_2013 +VCS-2013-12-03, Equation 75

Finding: The parameter D(FUI_fire) is used in Equation 75, but is not defined below that equation.

Client Response: The former version gave a definition for D(FUI). This has now been corrected to D(FUI_fire), so the parameter is now correctly referenced in relation to its definition below the equation

Auditor Response: As indicated in the client response, updated grazing displacement module entitled "FAO VCS grazing displacement module 2013-12-30" now contains a definition for parameter D(FUI_fire). Therefore, the non-conformity has been resolved.

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

NIR 2012.74 dated 01-06-2014

Standard Reference: AFOLU Requirements V3.2, Section 4.5.8

Document Reference: VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30, Section 8.2.8

Finding: The AFOLU Requirements states that "Procedures to estimate soil carbon stock shall use soil carbon stock change factors that are based on measurements of soil carbon stocks to the full depth of affected soil layers (usually 30 cm), accounting for differences in bulk density as well as organic carbon concentrations." Within Section 8.2.8 of the methodology, it was previously stated that "data used to parameterize the selected model must be based on measurements of soil properties (including bulk density and organic carbon concentrations) to the full depth of affected soil layers, or a minimum depth of 30 cm where the full depth of affected soil layers is not known in advance" (for Option 1) and "Soil properties (including bulk density and organic carbon concentration) should be measured to the full depth of affected soil layers, or a minimum depth of 30 cm where the full depth of affected soil layers is not known in advance" (for Option 2). This language has been replaced with statements that "data used to parameterize the selected model must be based on measurements of soil properties including bulk density and organic carbon concentrations to the depth of 30 cm or greater depth if required" (for Option 1) and "Soil properties (including bulk density and organic carbon concentration) should be measured to the depth of 30 cm or greater depth if required" (for Option 2). It is significant that all reference to "the full depth of affected soil layers" has been removed. Please explain the rationale for the modifications described above and provide a justification for why the methodology continues to conform to Section 4.5.8 of the AFOLU Requirements.

Client Response: These changes were made because of difficulties foreseen in determining the depth of the affected soil layers when measuring soil carbon stocks. However, the validator is correct that the changes do not strictly conform to AFOLU requirements. Therefore, we have undone these changes that were made to previous submitted version of the methodology.

Auditor Response: As is indicated within the Client Response section, the language in question within the updated methodology, entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2014-01-13", has been reverted to the language within the previous version of the methodology. Therefore, the information request is no longer relevant and will be withdrawn.

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

NCR 2012.75 dated 01-06-2014

Standard Reference: NA

Document Reference: VCS methodology v3 2 SGM 26_8_2013 +VCS-2013-12-30, Section 8.2.8

Finding: The methodology defines the output of Equation 47 as "Total carbon stock under project activity in year t". While this was an accurate description under previous versions of the methodology, it is no longer accurate, given that Equation 47 now calculates the difference between carbon stock under project activity and carbon stock under the baseline scenario.

Client Response: The description for equation 47 has been changed to accurately describe the changed function of this equation.

Auditor Response: The descriptive language surrounding Equation 47 within the updated methodology, entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2014-01-13", accurately describes the output of Equation 47. Therefore, the non-conformity has been resolved.

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

NCR 2012.76 dated 01-13-2014

Standard Reference: NA

Document Reference: VCS methodology v3 2 SGM 26_8_2013 +VCS-2014-01-13, Section 9.1

Finding: Under "Source of Data", the parameter table for W(l,p) states "Peer reviewed scientific literature or IPCC Guidelines", and thus indicates that data may be sourced from the IPCC Guidelines. Under "Justification of the choice of data or description of measurement methods and procedures actually applied", the parameter table contains no mention of the IPCC Guidelines, stating "Data from the peer reviewed scientific literature or expert judgment that are specific for the project region". Given this discrepancy, it is likely to be unclear to the methodology user whether data may be sourced from the IPCC Guidelines or not.

Client Response: the inconsistency has now been addressed.

Auditor Response: The parameter table for parameter W(l,p) within the updated methodology, entitled "VCS methodology v3 2 SGM 26_8_2013 +VCS-2014-01-14", has been revised to replace the phrase "IPCC Guidelines", under the heading, "Source of data", with the phrase "expert judgment". Thus, guidance regarding appropriate sources of data is now consistent throughout the parameter table, and the non-conformity has been resolved.

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