

VERIFICATION REPORT FOR THE LUANGWA COMMUNITY FOREST PROJECT



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Summary:

This report describes the verification audit of the Luangwa Community Forests Project (“the project”), a Reduced Emissions from Deforestation and Degradation (REDD) project located in, Eastern and Lusaka Province, Zambia, that was conducted by SCS. The project is designed to avoid deforestation by providing benefits and alternative livelihoods to the agents of deforestation near the project area. The report covers the monitoring period from 1 May 2015 to 31 December 2018. The purpose of the audit was to assess the conformance of the project to the verification criteria. The audit was performed through a combination of document review, interviews with relevant personnel and on-site inspections. A total of 3 findings were raised during the verification. The project complies with all of the verification criteria, and the assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria, therefore the audit team has verified the Project's compliance with the VCS Program requirements as set out in the VCS Rules.

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1 INTRODUCTION

1.1 Objective

In accordance with Section 5.1.1 of the VCS Standard, SCS carried out an ex-post independent assessment of the greenhouse gas (GHG) Emission Reductions or Removals that have occurred as a result of the project during the monitoring period. In accordance with Section 2.1.2 of the VCS Validation & Verification Manual, V3.1, the objectives of the verification engagement were to evaluate the monitoring report and assess the following:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated project description. This includes ensuring conformance with the monitoring plan.
- The extent to which GHG Emission Reductions or Removals reported in the monitoring report are materially accurate.

The other objective of the verification engagement was to assess the non-permanence risk analysis.

1.2 Scope and Criteria

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

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

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

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

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

In addition, the assessment was performed against the requirements of the validated project description.

1.3 Level of Assurance

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

1.4 Summary Description of the Project

The project is located in the Eastern Province of Zambia and is aimed at reducing emissions from unplanned deforestation. The project is designed to provide unique benefits and alternative livelihoods to the agents of deforestation near the project area.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, the monitoring report and non-permanence risk analysis were assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure conformance to all requirements.

The audit team created a sampling plan following a proprietary sampling plan workbook developed by SCS. Per Section 4.4.3 of ISO 14064-3:2006, the audit team identified possible risks of errors, omissions and misrepresentations with respect to the verification criteria. For each identified risk, the audit team assessed the likelihood of a material discrepancy occurring, the likelihood of a material discrepancy not being prevented or detected by the controls of the project, and the likelihood of a material discrepancy not being detected by the audit team. Sampling and data testing activities were planned to address any risk where the likelihood of a material discrepancy not being detected by the audit team was judged to be unacceptably high. The audit team then created a verification plan that took the sampling plan into account.

2.2 Document Review

The project monitoring report (Version 1.2 dated 10 September 2019) (MR) and supporting documentation were carefully reviewed for conformance to the verification criteria.

Particular attention was focused on the MR, given its central role in the description of “the project and its context” (VCS Standard, Section 3.19.1). Through review of the MR, the audit team ensured that:

- The project implementation, as described in the MR, is in conformance with the VCS rules and the requirements of the methodology
- The MR satisfies all applicable documentation requirements of the VCS rules and the methodology

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

Document	File Name	Ref.
Community Management Agreements	Multiple Documents	/1/
Approval Document	2017.07.26_Authority to Carry Out A REDD+Project	/2/

Approval Document	20160808_DNPW REDD Auth	/3/
Support Letter	2014_LoS_MLNREP	/4/
Support Letter	2014_LoS_MOCTA	/5/
Support Letter	2014_LoS_ZAWA	/6/
Support Letter	Annex IV_Letters of Commitment_BCP[smallpdf.com]	/7/
Community SOP's	2018_BCP Grievance SOP _ Mechanism	/8/
Community SOP's	20180309_Grievance Register_LZRPLCFP	/9/
Community SOP's	20180709_Beyond Subsistence Livelihoods Strategy	/10/
Community SOP's	20180808 FPIC SOP_D6	/11/
Community SOP's	BCP_FPIC SOP_D5	/12/
Community SOP's	Social Monitoring SOP V4_Community Engagement Strategy_2013.03	/13/
Community Baseline	2015 IE_CFP BR_31 March 2016	/14/
Gold Level Biodiversity	12436_Lycaon_pictus	/15/
Biodiversity Monitoring	ZCP 2016 Annual Review - web	/16/
Agents and Drivers	20180814_Drivers Study Support Data	/17/
Agents and Drivers	20180319_BCP_CFP_Drivers study_report_final	/18/
Agents and Drivers	Kutsch_etal_Charcoal_Trap_Miombo_EnergyNeeds_CBalance_Management_2011	/19/
Management Capacity	Multiple CV's	/20/
Workers Rights	20160617_BCP_GrievancePolicy	/21/
Workers Rights	20192506_BCP_HR Manual 2019a_V6.0_Final	/22/
FPIC	Multiple Documents	/23/
Reference Area	Zambia 2010 census descriptive tables	/24/
Reference Area	20190222_LCFP_PA_wards_pop_density	/25/
Reference Area	20190309_LCFP_RA_wards_pop_density	/26/

Reference Area	20190708_LCFP_RA_DSM	/27/
Reference Area	20190709_LCFP_AA_DSM	/28/
Reference Area	LCFP CDM Point Interpretation SOP	/29/
Biomass Protocol	20160426_BCP_Biomass_Sampling_SOP_V2	/30/
Biomass Protocol	BCP_Biomass_SpotError_Protocol_Jan_2014	/31/
Leakage Protocol	LZRP_Annex_M_BCP_Biomass_Sampling_LeakageMon_8June_2013	/32/
Leakage Protocol	LZRP_Annex_M_BCP_Biomass_Sampling_LeakageMon_8June_Addendum2013	/33/
Deforestation Model	20190708_CDM_image_interpretation	/34/
Deforestation Model	20190708_R-Model_Input_CDM_Points	/35/
Deforestation Model	LCFP CDM Point Interpretation SOP	/36/
Deforestation Model	LCFP_Annex_cdm_v2.0	/37/
Deforestation Model	logistic model summary_after_recode	/38/
Deforestation Model	Phased_logistic.curve_after_recode	/39/
Deforestation Model	proportion.deforestation_after_recode	/40/
Spatial Analysis	PALSAR_Analysis_Steps	/41/
Spatial Analysis	accuracy_unified_with_HV_post_review	/42/
Spatial Analysis	Multiple Python Files	/43/
Spatial Analysis	accuracy_unified_with_HV_post_review.shp	/44/
Background Documents	20180709_Beyond Subsistence Livelihoods Strategy	/45/
Background Documents	CIFOR2015_OP-141	/46/
Background Documents	CIFOR2013_OP-86	/47/
Background Documents	CIFOR2013_AGumbo1301	/48/
Background Documents	2018_BCP Org Chart Ver 001.2018	/49/
Background	20161031 FY16_Annual Report_CFP	/50/

Documents		
Background Documents	20171031 CFP_FY17 Annual report (1)	/51/
Background Documents	A1_20171016 Annex 1 CFP Quarter 4 Report_CT_D1 (4)	/52/
Background Documents	Annex 3_FY16_CFP ME_FINAL (2)	/53/
Background Documents	FY17_SS1_Cons Fees_D3	/54/
Background Documents	Conservation Outcomes - Advanced Tactical Training Syllabus 2	/55/
Background Documents	Conservation Outcomes - Field Ranger Selection Curriculum	/56/
Background Documents	CONSERVATION OUTCOMES CORPORATE PROFILE 2012	/57/
Background Documents	Conservation Outcomes Selection Recommendations	/58/
Background Documents	Legal Opinion - BioCarbon Partners - Redundancy and Funeral As	/59/
Background Documents	B Corporation - BioCarbon Partners Report 2017	/60/
Background Documents	B Corporation - BioCarbon Partners Report 2017(1)	/61/
Background Documents	B_Corp_Term_Sheet_for_your_DocuSign_Signature	/62/
Background Documents	BCorp_Declaration_General_2017_withBartSignature	/63/
Background Documents	BioCarbonPartners-MetricRequests	/64/
Background Documents	Lindsey et al 2014 Under-performance of African PA networks focus on Zambia	/65/
Background Documents	Lindsey et al GMA report FINAL	/66/
Financial Documents	20190626_CFP Finance_30	/67/
Financial Documents	2017 GL's (multiple documents)	/68/
Financial Documents	2018 GL's (multiple documents)	/69/
Project Description	20190715_LCFP_PD	/70/

2.3 Interviews

The process used in interviewing project personnel was a process wherein the audit team elicited information from project personnel regarding (1) the work products provided to the audit team in support of the MR and NPRR, (2) actions undertaken to ensure conformance with various requirements and (3) implementation status of the project activity.

The following personnel associated with the project proponent and/or implementing partner were interviewed.

Individual	Affiliation	Role	Date(s) Interviewed
Darlington Chipita	BioCarbon Partners (BCP)	Conservation Manager	16-23 August 2018 April 8-13 2019
Elvin Muchimba	BCP	Forest management team leader	16-23 August 2018 April 8-13 2019
Nchimunya Simwendengwe	BCP	Forest management team leader	16-23 August 2018 April 8-13 2019
Theron Morgan-Brown	BCP	Senior Manager, Science & Technology	Throughout Audit
Joke Hoffman	BCP	Chief Operating Officer	Throughout Audit
Hassan Sachedina	BCP	Chief Executive Officer	Throughout Audit
Lucy Pieterse	BCP	Remote Sensing Expert	Throughout Audit
Camos Mukonka	BCP	Community Liaison	April 8-13 2019
Brighton Chama	BCP	Community Liaison	April 8-13 2019
Mundia Akende	BCP	Community Liaison	April 8-13 2019
Kelvin Sakala	BCP	Community Liaison	April 8-13 2019
Ministry of Lands	Republic of Zambia	Government	April 13 2019
Lawrence Msoni	BCP	Forest management team leader	16-23 August 2018 April 8-13 2019
Laison Chiyakamba	BCP	Forest management	16-23 August 2018

		team leader	April 8-13 2019
Felix Mbewe	BCP	Logistics Technician	16-23 August 2018
Peter Mbewe	BCP	Logistics Technician	16-23 August 2018
Rose Mwape	BCP	Junior	16-23 August 2018 April 8-13 2019
Nelson Nyamundela	BCP	Caretaker	16-23 August 2018 April 8-13 2019
Rebecca Nampemba	BCP	C.Scout Radio Operator	16-23 August 2018
Emma Roberts	BCP	Director Operations	16-23 August 2018
Jospeh Simfukwe	BCP	Monitoring and Evaluation Manager	16-23 August 2018
Lackson Theo	BCP	Logistic Supervisor	16-23 August 2018 April 8-13 2019

In addition to the project proponents listed above the audit team also interviewed individuals and officials from all chiefdoms in the project zone. See below for a list of communities included.

Chifita, Kabandi, Mwankomesha, Munyenya, Muteneka, Malisau, Ndubula, Kantyatya, Shatunka, Chifeta Village, Kabundi, Musanshika, Mwachombela, Malilakuta, Kasumba, Shikata, Shimaluba, and Chikuse.

Also, community resource board members and/or headmen from all chiefdoms for all day meeting in Mfuwe were interviewed.

2.4 Site Inspections

The audit team performed an on-site inspection of the project area on the dates 16-23 August 2018. The main activities undertaken by the audit team were as follows:

- Interviews with project personnel to gather information regarding the project design;
- Interviews with members of the communities and other stakeholder groups to confirm the appropriate involvement of these groups;
- Interviews with government officials to confirm that the necessary approvals are in place;
- Review of records to ensure the appropriate design of the project; and

- Conduct of a visit to the project area to confirm the accuracy of the claims made in the PD.

Due to a decision to change methodologies by the project proponent a second site visit was performed on 8-13 April 2019. The activities performed are the same as above.

2.5 Resolution of Findings

Any potential or actual discrepancies identified with respect to the validation criteria were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

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

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

Opportunity for Improvement (OFI): An OFI indicated an area that should be monitored or ideally, improved upon. OFI's were considered to be an indication of something that could become a non-conformity if not given proper attention and were sometimes issued in the case that a non-material discrepancy was identified. OFIs were considered to be closed upon issuance.

All findings issued by the audit team during the validation process have been closed. All findings issued during the validation process, and the impetus for their closure, are described in Appendix A of this report. A total of 3 findings were issued.

2.5.1 Forward Action Requests

The audit team performed a detailed assessment of the ownership rights regarding the project and confirmed that the project has agreements in place between BCP and the local communities comprising the project zone. The audit team confirmed that the communities had followed the correct procedures for transferring use rights (described in the Zambia Wildlife Act of 2015) to BCP. Given an error in the order of operations, there are still two communities awaiting official rights to enter in to such agreements. The audit team agrees that the procedures allow for these rights to be in place within 60 days of submission to the director of lands and therefore will automatically be in place beginning of November 9, 2019.

Whereas, the audit team has a reasonable level of assurance that this will occur, this forward action request is intended to ensure that the final two communities (Chitungulu and Sandwe) have voluntarily entered into the agreements at the time of approval.

2.6 Eligibility for Validation Activities

N/A

3 VALIDATION FINDINGS

N/A

3.1 Participation under Other GHG Programs

The audit team concludes that the project is not currently registered under or seeking registration under another GHG program, as few, if any, other GHG programs accept REDD+ projects.

3.2 Methodology Deviations

The audit team reviewed the MR and confirmed that 3 deviations were listed at the time of validation.

The first deviation effects the demonstration of forest age. Specifically, the methodology requires that “The project description must include the following:

PDR.22 A digital (GIS-based) map of the project accounting areas, including aerial or satellite imagery showing that they are comprised of forest or native grassland as of the project start date and 10 years prior to the project start date”

The audit team reviewed the rationale provided in section 2.1 of the MR and agree with the assertion. The audit team has experience working with remote sensing in the miombo region and agrees that cloud free imagery is not always available for the time of year in which all trees are in leaf-out. Furthermore, the audit team understands that both the reference region and project area are comprised of mature forests, so there is no risk that the lands would not meet the forest age requirements. Finally, the audit team agrees that use of the PULSAR imagery is more than likely to provide a more accurate estimate of forest cover and deforestation. The audit team agrees that the deviation is allowable as it conforms to the VCS rules regarding methodology deviations.

The second deviation effects application of allometry for trees that fall outside of the maximum diameter for which the allometry was derived. The audit team reviewed the required analysis provided /30/ and confirmed that the rationale provided in the MR is accurate. Moreover, the audit team agrees that using the more conservative allometry for trees greater than 63 cm and trees greater than 110 cm is more than likely to result in a more conservative estimate of biomass. The audit team agrees that the deviation is allowable as it conforms to the VCS rules regarding methodology deviations.

The final deviation effects the monitoring of leakage in the leakage area. The audit team agrees that addition of the georeferenced step in the data collection is more than likely to result in a more accurate estimate of leakage caused by the project. The audit team agrees that the deviation is allowable as it conforms to the VCS rules regarding methodology deviations.

In summary, the audit team agrees that the deviations to the methodology are appropriate and are conformance with Section 3.5.1 of the VCS Standard. A complete description of the methodology deviations is in section 2.1 of the MR.

3.3 Project Description Deviations

N/A

3.4 Grouped Project

The audit team reviewed section 2.1.20 of the PD and confirmed that it provides a list of eligibility criteria for new project activity instances (PAA's). In reviewing the eligibility criteria, the audit team agree that the criteria are appropriate for ensuring the new PAA's will be managed the same as the initial instances and ensures expansion of the current activities. Finally, the audit team cross checked the eligibility criteria against the relevant requirements of section 3.4.9 of the VCS standard and confirmed conformance. Only initial PAA's were assessed during this monitoring period.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The audit team assessed the implementation of the project activities against section 4.3 of the Project Description. The audit team confirmed that section 2.1 of the monitoring report provided an accurate description of the implementation of the project. For a complete description of the steps taken to assess the project implementation see below:

Item	Verification Findings
Material discrepancies between project implementation and the project description	The audit team performed a series of visits to the communities included in the project and observed the project activities taking place. The audit team held interviews with members of three communities involved in the project and were informed that the project had thus far met all commitments with regard to the project activities. It is important to note that fewer project activities were implemented during this monitoring period and was considered when assessing community engagement.
Implementation status of monitoring plan and completeness of monitoring	The audit team confirmed that all monitoring activities documented in Section 3.3 of monitoring report were correctly carried out accordingly with the requirements and frequency of the monitoring plan described in section 4.2 and 4.3 of the PD, through the following: Reviewed sampling process for the creation of figure 2 of the project monitoring report and confirmed that the sampling remained consistent with the that previously verified by SCS

Item	Verification Findings
	- Observed the set up and re-measurement of three plots across the project area and confirmed that the sampling design was implemented as described in section 3.3.2 of the monitoring report, as well as using best practices in forest mensuration. In addition, the audit team performed spot measurements during the field verification and consistently produced the same results as the project team. - Spent 4 days in the field with the project team, both observing the re-measurement of four plots and confirming the implementation of project activities within communities and confirmed that the organizational structure and operation is as described in section 3.3.5 of the monitoring report - Reviewed the process for data management and storage and confirmed that the description provided in section 3.3.6 of the monitoring report was followed completely and is sufficient for providing quality data management and storage - Interviewed biomass team while on site and confirmed that the personnel were highly skilled and educated as to the processes described in section 3.3.2 of the monitoring report. In addition, the audit team spent over a week in both the office and the field with the team and confirmed that the description provided in the monitoring report was followed completely - Reviewed the allometric equations provided by project personnel and confirmed that the equations were correctly calculated in the project's workbooks. Finally, the audit team re-calculated the plot level biomass for all plots in the inventory and produced consistent results with those reported in the project

Item	Verification Findings
	calculations. • The audit team reviewed the calculation of baseline emissions as prescribed by the methodology. The audit team confirmed the simple addition of the value from the previously validated baseline emissions model was calculated correctly • Re-calculated the uncertainty deduction calculations, as prescribed by the methodology and confirmed that the value provided in the project calculations resulted in an accurate estimate of uncertainty • Reviewed the process for the detection of forest fires across the project area. The audit team confirmed that no fires other than what has been accounted for in the deforestation class occurred during the monitoring period • Traced the raw leakage data for all leakage plots in the Project Area. The audit team confirmed the resulting leakage to be reported accurately. In addition, the audit agrees that the leakage monitoring employed by the Project is very likely to result in a conservative estimate of GHG Emission Reductions or Removals, as often it is likely that degradation will be the result of drivers other than the project • Re-calculated the GHG Emission Reductions or Removals using the required methodological functions for the biomass emissions model. As soil is using the required decay factor, no additional checks were performed for the soil emissions model other than ensuring the calculations had not changed since the initial validation
Existence of material discrepancies between monitoring system and monitoring plan (as described in 4.3 of project description) and applied	• All tasks described in section 3.3 of the monitoring report were in agreement with the monitoring plan as described above.

Item	Verification Findings
methodology	No material discrepancies were found other than those described in Section 3.3 of this report
Whether GHG Emission Reductions or Removals generated by the project have become included in emissions trading program or other mechanism that includes GHG allowance trading	- Audit team confirmed that REDD+ projects are not within scope of Clean Development Mechanism - Audit team confirmed, through personal knowledge of all projects currently approved under California's Air Resources Board Cap-and-Trade Program, that GHG Emission Reductions or Removals generated by project have not become included in that program - Audit team applied professional judgment to determine there is very low risk of GHG Emission Reductions or Removals having been included in any other program
Whether project has received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification	Audit team is unaware of any other environmental crediting program that project would be eligible to participate in
Whether project has participated or been rejected under any other GHG programs since validation or previous verification	The audit team confirmed that the project has not previously been rejected by the VCSA and that a compliance program does not exist in Zambia at this time. Therefore the risk of the project not being in conformance with this requirement is non-existent at this time

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The GHG Emission Reductions or Removals have been quantified correctly in accordance with the project description and the applied methodology.

For all instances in which values were transcribed between datasets (e.g., transcription from the project description to reporting workbooks, or between reporting workbooks), the audit team carefully traced values to ensure the absence of manual transposition errors.

An identification of the data and parameters used to calculate the GHG Emission Reductions or Removals and a description of the steps taken to assess each of them, follows:

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
$C_B^{[m]}$ $C_{B\ BGB}^{[m]}$ $C_P^{[m]}$ $C_P^{[m-1]}$ $C_{P\ 1\ BM}^{[m=0]}$ $C_{P\ b}^{[m]}$	As described in the implementation section of this report, the audit team performed an independent re-measurement of 11 randomly selected biomass plots and one randomly selected leakage plot. In addition, the audit team recalculated the plot level carbon for each aboveground biomass plot in the project area. Moreover, the audit team re-calculated the biomass emissions for both the current and previous monitoring period	The audit team reviewed and re-calculated these parameters using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	The default value for the below ground biomass was applied appropriately as defined by the methodology
$C_{B\ BM}^{[m]}$	Given the issue with the overestimation of aboveground biomass using the original sampling protocol, the audit team used the methods described above to ensure that the carbon stocks at the end of the monitoring period were calculated correctly	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	The default value for the below ground biomass was applied appropriately as defined by the methodology

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
$E_{\Delta GER}^{[i]}$	The audit team re-calculated the GER values based on the updated carbon stock values in order to assess the accuracy of the project calculations	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$E_{\Delta NER}^{[i]}$	The audit team re-calculated the NER values based on the updated carbon stock values in order to assess the accuracy of the project calculations	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$E_B^{[m]}$ $E_B^{[m-1]}$ $E_{B \Delta}^{[m]}$	The audit team re-calculated the cumulative baseline emission values based on the updated carbon stock values in order to assess the accuracy of the project calculations	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$E_{B \Delta BGB}^{[i]}$	The audit team reviewed the calculations for the change in below ground biomass and found that the original methods had not changed since the initial validation and	The audit team reviewed the implementation of the project calculations and cross-checked them against the project description and previous monitoring report and confirmed that the	N/A

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
	subsequent verification	parameters were calculated using the methods and formulae set out in the project description and the methodology	
$E_{BGB}^{[m-1]}$	The audit team recalculated the cumulative baseline emissions from below-ground biomass at the beginning of the current monitoring period	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$E_{BBM}^{[m]}$	The audit team recalculated the cumulative baseline emissions from biomass at the end of the current monitoring period	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$E_{BA}^{[m]}$	The audit team reviewed the cumulative emissions allocated to the buffer account at the end of the current monitoring period	The audit team reviewed and traced the calculation of this parameter and determined that the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
$E_L^{[m]}$ $E_L^{[m-1]}$ $E_{L\Delta}^{[m]}$ $E_{L\Delta S}^{[m]}$ $p_{L\Delta EG}^{[m]}$	The audit team traced the flow of data from the raw field data throughout the process in order to assess the accuracy regarding this parameter	The audit team reviewed and traced the calculation of this parameter and determined that the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$U_B^{[m]}$ $U_P^{[m]}$ $E_U^{[m]}$	The audit team re-calculated the uncertainty in order to assess the accuracy regarding this parameter	The audit team recalculated this parameter and determined that the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$A_{P1}^{[m=0]}$ $A_{P2}^{[m=0]}$	The audit team recalculated the project area using the project provided shapefiles. In addition the audit team performed spot checking activities on site and confirmed the project area for each strata to be accurate.	The audit team recalculated this parameter and determined that the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A

In summary, the audit team reviewed the QA/QC procedures for data management and determined that they were being followed. Overall, the workbooks have been designed in a way that limits user error, as the majority of the calculations are hard wired into VBA code. In addition, data is cell referenced as it is

moved from tab to tab of the workbook, further limiting errors. The audit team has a reasonable level of assurance that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The evidence used to determine the GHG reductions and removals was of sufficient quantity and appropriate quality. An identification of the categories of evidence used to determine the GHG Emission Reductions or Removals, and a description of the steps taken to assess the sufficiency of quantity, and appropriateness of quality, of each category of evidence, follows:

4.4 Non-Permanence Risk Analysis

4.4.1 Introduction and Conclusion

The reported value of the overall risk rating, as determined based on the risk analysis documented in the NPRR, was 11%.

The audit team performed a complete review of the risk analysis against the requirements of the AFOLU Non-Permanent Risk Tool. The audit team concludes that the assignment of risk scores is appropriate and in conformance to the AFOLU Non-Permanence Risk Tool.

A detailed review of the audit team's conclusions may be found below:

4.4.2 Internal Risk – Project Management

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	As tree planting is not included in project activities as described in the PD, risk score is justified	N/A	Risk rating is appropriate
(b)	As no credits have previously been issued, risk score is justified	N/A	Risk rating is appropriate
(c)	As management team does include individuals with significant experience in all skills necessary to successfully undertake project, risk score is justified	The CV's provided /20/ are professional and of high quality	Risk rating is appropriate
(d)	From site inspections, audit team can confirm that management team maintains a presence in eastern province, which is within a day's drive from project area	N/A	Risk rating is appropriate
(e)	Through interviews with project personnel and institutional memory regarding a previous REDD+ Project mentioned in the NPRR. The audit team can confirm that the claims in the NPRR are accurate	N/A	Risk rating is appropriate

(f)	The audit team reviewed the documents that contain adaptive management plan elements and mitigation activities detailed in the PD	The documentation is high quality as discussed in Sections 2.3.8	Risk rating is appropriate
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4.4.3 Internal Risk – Financial Viability

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	Audit team reviewed the 30 year budget and workplan /67/ and confirmed that project cash flow breakeven point is between 4 and 7 years from the current risk assessment; therefore, the risk score is justified	The documentation provided included audited financial documents and a detailed, user friendly budget workbook that allowed for assessment by the audit team and is therefore of high quality	Risk rating is appropriate
(b)			Risk rating is appropriate
(c)			Risk rating is appropriate
(d)			Risk rating is appropriate
(e)	N/A	N/A	Risk rating is appropriate
(f)			Risk rating is appropriate
(g)			Risk rating is appropriate
(h)	N/A	N/A	Risk rating is appropriate
(i)	N/A	N/A	Risk rating is appropriate

4.4.4 Internal Risk – Opportunity Cost

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	Audit team agrees with the project team's assessment that the most profitable alternative land use activity is expected to be between 20% more and up to 20% less than that associated with project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated; the risk score is appropriate	N/A	Risk rating is appropriate
(b)			Risk rating is appropriate
(c)			Risk rating is appropriate
(d)			Risk rating is appropriate
(e)			Risk rating is appropriate
(f)			Risk rating is appropriate
(g)	N/A	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(h)	Audit team reviewed the community agreements /1/ and the legal documents that govern the agreements and agrees that the project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period	As this is a Zambian legal agreement the audit team considers it high quality	Risk rating is appropriate

4.4.5 Internal Risk – Project Longevity

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
	See Above	Please see above	Risk rating is appropriate

4.4.6 External Risk – Land Tenure and Resource Access/Impacts

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	N/A	N/A	N/A
(b)	While on site, the audit team visited local districts and reviewed the rights of use agreement for the project confirming that the ownership and rights of use are held by different entities	The community agreements /1/ were clearly defined. The audit team considers these documents of high quality	Risk rating is appropriate
(c)	N/A	N/A	N/A
(d)	N/A – While on site, the audit team held interviews with community members near the project area boundaries, as well as the fee owners of the land and were unable to uncover any disputes in the project area	N/A	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(e)	N/A – the project is not a WRC project	N/A	N/A
(f)	As the community agreements are in place, the legally binding commitment to continue the management practices confirmed at validation are still in place	See item (b) above	Risk rating is appropriate
(g)	N/A	N/A	N/A

4.4.7 External Risks – Community Engagement

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	Through community interviews while on-site, the audit team confirmed that the project held extensive community meetings throughout the region and performed many outreach activities, and agreed with the risk score chosen for regarding total number of people consulted and the total local population living within the project boundary who are dependent on the project area for their livelihood.	N/A	N/A
(b)	Through community interviews while on-site, the audit team confirmed that the project held extensive community meetings throughout the region and performed many outreach activities, and agreed with the risk score chosen for regarding total number of people consulted and the total local population living within 20 km of the project boundary who are dependent on the project area for their livelihood.	N/A	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(c)	Through on-site interviews with communities throughout the project area as well as extensive review of the project's adherence to the CCB Indicators (CCB validation occurring concurrent to VCS validation) the audit team confirms that the risk rating is appropriate	The audit team considers certified CCB documentation to be of high quality	Risk rating is appropriate

4.4.8 External Risk – Political Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	-	-	N/A
(b)	-	-	N/A
(c)	The audit team downloaded dataset from World Bank Institute's Worldwide Governance Indicators (for the most recent five years, 2013-2017, as of July 2019) and confirmed the WGI score of -2.43	The dataset used is required by the AFOLU Non-Permanence Risk Tool, and can be considered high quality	Risk rating is appropriate
(d)	-	-	N/A
(e)	-	-	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(f)	The audit team was able to determine that Zambia is taking part in REDD Readiness (http://www.unredd.net/index.php?option=com_national_programme&view=countries&id=49&Itemid=689). In addition, the audit team was provided with evidence /7/ that the project is receiving multi-lateral funding from USAID for implementing REDD readiness	The audit team considers the USAID grant funding and the UN-REDD Programme website to be of high quality	N/A

4.4.9 External Risk – Natural Risks

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
Fire	Given the expertise of the audit team with the forest types comprising the project area, the audit team can confirm that miombo woodlands are highly fire adapted and are susceptible to loss of carbon stocks from natural fire due to human created conditions. The success of the project in reducing slash and burn agricultural activities that result in fire vectors near and within the project boundaries is sufficient for keeping the likelihood and significance of natural fire static. The audit team was provided with a suite of peer reviewed literature confirming that natural fire does not present a risk to the project carbon stocks	As is allowed by the non-permanence risk tool, the audit team considers peer reviewed literature to be high quality	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
Pest and Disease Outbreaks	Given the expertise of the audit team with the forest types comprising the project area, the audit team can confirm that miombo woodlands are highly resistant to pest and disease outbreaks. The audit team visited inventory plots across each district in the project area and confirmed that the species composition is consistent with the forest type listed above and therefore the risk of any changes to the ability of the forest areas to resist pest and disease outbreaks is insignificant	N/A	Risk rating is appropriate
Extreme Weather	The audit team agrees with claims in the PD regarding extreme weather. The audit team is experienced working in the region and agrees that extreme weather does not pose a risk to the carbon stocks in the project area	N/A	Risk rating is appropriate
Geological Risk	The audit team agrees with the claims in the PD. The audit team is experienced working in the region and agrees that geological events do not pose a risk to the carbon stocks in the project area	N/A.	Risk rating is appropriate
Elephants	The audit team reviewed the rationale provided by project personnel and confirmed that it is supported by the peer reviewed literature provided in the project risk report. In addition, whereas the audit team agrees with the rationale of the risks that elephants have on the carbon stocks, conversation with wildlife experts both near the project area and along the opposite banks of the Zambezi River allowed the audit team to confirm that the lack of significant elephant populations in or around the project area at this time supports the risk score	As is allowed by the non-permanence risk tool, the audit team considers peer reviewed literature to be high quality	Risk rating is appropriate

5 SAFEGUARDS

5.1 No Net Harm

The audit team is currently assessing the project for validation under the CCB Standards Third Edition for Gold Level status. In addition, during the site visit, the audit team held interviews with community members potentially affected by the project and were able to confirm that those potentially affected by the project consider the project to be resulting in net positive benefits. Finally, given the success of the project in protecting the project area's forests, biodiversity and climate are also reaping positive benefits as a result of project activities.

5.2 Local Stakeholder Consultation

As stated above and also below in the non-permanence risk section, during the site visit, the audit team held interviews with community members throughout the project zone. Community members confirmed that they are in generally consulted by the project proponent and to date no issues have arisen that have not been addressed by project personnel.

6 VERIFICATION CONCLUSION

The audit team asserts, with no qualifications or limitations that the project complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 3.

In addition, the audit team asserts that the project complies with the validation criteria for projects set out in VCS Version 3 (but this statement is qualified and limited in scope to the specific project and methodology deviations assessed by the audit team, as discussed in Sections 3.2 and 3.3 above).

The audit team has been able to confirm that the project has been implemented in accordance with the project description and subsequently validated variations.

The audit team has been able to confirm, with a reasonable level of assurance, that the quantity of GHG emission reductions or removals set out below has been quantified in accordance with the VCS rules. As documented in Section 4.4 above, the audit team can also confirm that the non-permanence risk score of 11% has been quantified in accordance with the VCS rules. Total VCU's to be issued to the buffer account are as follows:

2015 – 53,407

2016 – 105,819

2017 – 130,978

2018 – 146,783

Monitoring Period: From 1 May 2015 – 31 December 2018

Verified GHG Emission Reductions or Removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2015	570,024	84,506	0	485,518
2016	1,088,751	126,758	0	961,933
2017	1,317,124	126,412	0	1,190,712
2018	1,460,802	126,412	0	1,334,390
Total	4,436,701	464,088	0	3,972,613

APPENDIX A: VERIFICATION FINDINGS

The findings below are a record of issues raised throughout the verification process. All responses from Project Personnel are titled “Client Response” and are a verbatim transcription of their responses.

Project Personnel are titled “Client Response” and are a verbatim transcription of their responses

NCR 1 Dated 19 Oct 2018

Standard Reference: VCS Standard 3.19.1

Document Reference: 20180630_LCFP_MR1 1.6

Finding: The VCS Standard states ""The project description describes the project's GHG emission reduction or removal activities. The project proponent shall use the VCS Project Description Template, VCS Joint Project Description & Monitoring Report Template, VCS & CCB Project Description Template, VCS+SOCIALCARBON Project Description Template or approved GHG program project description template where the project is registered under an approved GHG program, as appropriate, and adhere to all instructional text within the template.""

In addition, the joint project description template states ""PROJECT DESCRIPTION: Instructions for completing this template can be found under each section heading in grey or blue italicized text. The grey text represents guidance for the general, climate, community and biodiversity components of the project description that must follow CCB and VCS Program, rules and requirements. The blue text represents guidance for the carbon component of the project description that must follow VCS project-level requirements and the applied VCS methodology. Green text at the end of section headings is reference to specific sections of CCB Program documents from which the template heading corresponds and must not be removed from the document; unless otherwise noted, the references correspond to sections of the Climate, Community & Biodiversity Standards. References that begin with 'Rules' correspond to sections of the CCB Program Rules.

This template must be completed in accordance with both standards, and the preparer will need to refer to the relevant VCS and CCB Program documents and the methodology in order to complete the template. It is also expected that relevant guidance, as it relates to the project and methodology, is followed. Note that the instructions in this template are intended to serve as a guide and do not necessarily represent an exhaustive list of the information the preparer must provide under each section of the template.

All sections must be completed using Arial 10pt, black, regular (non-italic) font, unless deviations are merited. Where a section is not applicable, same must be stated under the section (the section must not be deleted from the final document).

All instructions, including this introductory text, must be deleted from the final document.""

Section 1.6 of the template states ""Indicate the project crediting period, specifying the day, month and year for the start and end dates and the total number of years.""

The project monitoring report does not include the total number of years in this section and therefore is not in conformance with the standard.

Project Personnel Response: This finding was addressed outside the cover of this workbook.

Auditor Response: The updates to the MR are sufficient for resolving this issue.

NIR 2 Dated 19 Oct 2018**Standard Reference:** VCS Standard 3.19.1**Document Reference:** 20180630_LCFP_MR1 1.10

Finding: The VCS Standard states ""The project description describes the project's GHG emission reduction or removal activities. The project proponent shall use the VCS Project Description Template, VCS Joint Project Description & Monitoring Report Template, VCS & CCB Project Description Template, VCS+SOCIALCARBON Project Description Template or approved GHG program project description template where the project is registered under an approved GHG program, as appropriate, and adhere to all instructional text within the template.""

In addition, the joint project description template states ""PROJECT DESCRIPTION: Instructions for completing this template can be found under each section heading in grey or blue italicized text. The grey text represents guidance for the general, climate, community and biodiversity components of the project description that must follow CCB and VCS Program, rules and requirements. The blue text represents guidance for the carbon component of the project description that must follow VCS project-level requirements and the applied VCS methodology. Green text at the end of section headings is reference to specific sections of CCB Program documents from which the template heading corresponds and must not be removed from the document; unless otherwise noted, the references correspond to sections of the Climate, Community & Biodiversity Standards. References that begin with 'Rules' correspond to sections of the CCB Program Rules.

This template must be completed in accordance with both standards, and the preparer will need to refer to the relevant VCS and CCB Program documents and the methodology in order to complete the template. It is also expected that relevant guidance, as it relates to the project and methodology, is followed. Note that the instructions in this template are intended to serve as a guide and do not necessarily represent an exhaustive list of the information the preparer must provide under each section of the template.

All sections must be completed using Arial 10pt, black, regular (non-italic) font, unless deviations are merited. Where a section is not applicable, same must be stated under the section (the section must not be deleted from the final document).

All instructions, including this introductory text, must be deleted from the final document.""

Section 1.10 of the template states ""Describe how the project contributes to achieving any nationally stated sustainable development priorities, including any provisions for monitoring and reporting same.""

In review of the project monitoring report, it is unclear where information is describing monitoring and reporting of sustainable development priorities.

Project Personnel Response: This finding was addressed outside the cover of this workbook.

Auditor Response: The updates to the MR are sufficient for resolving this issue.

NCR 3 Dated 19 Oct 2018**Standard Reference:** VCS Standard 3.19.1**Document Reference:** 20180630_LCFP_MR1 4.4

Finding: The VCS Standard states ""The project description describes the project's GHG emission reduction or removal activities. The project proponent shall use the VCS Project Description Template, VCS Joint Project Description & Monitoring Report Template, VCS & CCB Project Description Template, VCS+SOCIALCARBON Project Description Template or approved GHG program project description template where the project is registered under an approved GHG program, as appropriate, and adhere to all instructional text within the template.""

In addition, the joint project description template states ""PROJECT DESCRIPTION: Instructions for completing this template can be found under each section heading in grey or blue italicized text. The grey text represents guidance for the general, climate, community and biodiversity components of the project description that must follow CCB and VCS Program, rules and requirements. The blue text represents guidance for the carbon component of the project description that must follow VCS project-level requirements and the applied VCS methodology. Green text at the end of section headings is reference to specific sections of CCB Program documents from which the template heading corresponds and must not be removed from the document; unless otherwise noted, the references correspond to sections of the Climate, Community & Biodiversity Standards. References that begin with 'Rules' correspond to sections of the CCB Program Rules.

This template must be completed in accordance with both standards, and the preparer will need to refer to the relevant VCS and CCB Program documents and the methodology in order to complete the template. It is also expected that relevant guidance, as it relates to the project and methodology, is followed. Note that the instructions in this template are intended to serve as a guide and do not necessarily represent an exhaustive list of the information the preparer must provide under each section of the template.

All sections must be completed using Arial 10pt, black, regular (non-italic) font, unless deviations are merited. Where a section is not applicable, same must be stated under the section (the section must not be deleted from the final document).

All instructions, including this introductory text, must be deleted from the final document.""

Section 4.4 of the template states ""Quantify the net GHG emission reductions and removals, summarizing the key results using the table below. Specify breakdown of GHG emission reductions and removals by vintages where the intent is to issue each vintage separately in the VCS registry system.

For AFOLU projects, include quantification of the net change in carbon stocks. Also, state the non-permanence risk rating (as determined in the AFOLU non-permanence risk report) and calculate the total number of buffer credits that need to be deposited into the AFOLU pooled buffer account.

Attach the non-permanence risk report as either an appendix or a separate document.""

Given that the monitoring report does not include quantification of net carbon stocks, the project is not in conformance with the standard.

Project Personnel Response: This finding was addressed outside the cover of this workbook.

Auditor Response: The updates to the MR are sufficient for resolving this issue.