

**Forest Carbon Partnership Facility - Carbon Fund Project
Partial Validation and Verification Audit Plan
As outlined in ISO 14064-3:2006(E)**

Project Name:	Zambézia Integrated Landscape Management Program (ZILMP)
FCPF #	1268418
Aster Global Project Number:	20064.00
Plan Generation Date:	23 May 2021 Final_v5

ER Program Entity:	FCPF Carbon Fund:
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Overview: The following Validation/Verification Audit Plan was used by the validation/verification team to ensure that the validation/verification was conducted efficiently and effectively. The Validation/Verification Audit Plan is a living document and was revised as necessary, with approval from the Project Proponent, which guided the validation/verification team in their work. The purpose of the Validation/Verification Audit Plan was to outline the risk assessment to determine the nature and extent of verification procedures necessary to ensure that the overall audit risk was reduced to a reasonable level.

A separate Sampling Plan was prepared as an addendum to this Project Validation/Verification Audit Plan and specifically outlined the detailed activities and features required to help the Validation/Verification Body (VVB) reach reasonable assurance for verification of monitoring period reported elements. That document included details for the country visit and/or virtual site visit.

Validation/Verification Team – Roles, Responsibilities and Contact Information:

Name	Role	Email	Phone Number
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Partial Validation and Full Verification Level of Assurance:

The level of assurance used to determine the depth of detail that the validation/verification team places in the Audit Plan (also known as the Validation/Verification and Sampling Plan) to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). Aster Global assessed the ZILMP's implementation of general principles, data collection and processing, sampling/monitoring descriptions, documentation, calculations, etc., to provide *reasonable assurance* to meet the requirements of the FCPF Carbon Fund and to satisfy the professional judgement of the audit team. Based on the validation/verification (audit) findings, a final assessment report and statement (opinion) reasonably assures that the project ER Program representations were materially accurate. The evidence used to achieve a reasonable level of assurance were specified in the audit plan for ZILMP when all supporting documentation and evidence was provided to the validation/verification team when contracts were in place.

Partial Validation and Full Verification Objectives:

The objective of the validation of the ZILMP was to ensure the program was compliant with FCPF Carbon Fund framework and requirement and “an assessment of the likelihood that implementation of the planned GHG project will result in the emissions reductions as stated by the responsible party” following ISO 14064-3. The objective of the verification was to ensure implementation and accurate monitoring of ZILMP in accordance with FCPF Carbon Fund framework and requirements.

As outlined in the Validation and Verification Guidelines (VVG) - (Section 8.2), the general objectives of the partial validation/full verification of ZILMP included the following:

- Review of the ER Monitoring Report and supporting information to confirm the correctness of presented information.
- Identify if the methodological steps and data are publicly available in accordance with applicable criteria;
- Assess whether the start date of the crediting period proposed by the ER Program is in compliance with the definition provided in the FCPF Glossary of terms;

- Assess the extent to which reported ERs /Reference Level have been reported with a transparent and coherent step-by-step process that enables reconstruction and have meet the requirements of applicable criteria;
- Assess the extent to which the reported GHG emissions / Emission Reductions / Reference Level (or the revised Reference Level if technical corrections are applied¹¹) is materially accurate, i.e. free of material misstatements, errors or omissions;
- Identify source(s) of Uncertainty due to both random and systematic errors related with the Reference Level setting and any sources of bias that can impact the estimate of the Total ERs, and determine whether the ER Program has conducted the Uncertainty analysis in compliance applicable criteria;
- Assess the Forest Monitoring System of the ER Program and validate that there are controls for sources of potential errors, omissions, and misstatements in place;
- Identify components of the Forest Monitoring System that require attention and/or adjustment in future monitoring and reporting or identify areas of risk of future noncompliance.

The specific objectives of the full Verification were:

- Assess the extent to which the methodologies and methods used to estimate GHG emissions and removals during the Reporting Period are consistent with the Reference Level and with the Monitoring Plan as described in the ER Monitoring Report
- Assess the extent to which the ER Monitoring Report includes a complete and accurate report, to the extent possible, on the implementation of its strategy to mitigate and/or minimize potential Displacement and on any changes in major drivers in the ER Accounting Area
- Assess the extent to which the ER Monitoring Report contains a complete and accurate report on the mitigation, to the extent possible, of significant risks of Reversals identified in the assessment, and addresses the sustainability of ERs
- Determine whether the ER Program has quantified ERs allocated to the Uncertainty, Reversal, and Pooled Reversal Buffer during the Reporting Period in compliance with the Methodological Framework and other applicable criteria
- Assess the extent to which systems to avoid that ERs generated under the ER Program have not been counted or compensated for more than once have been adequately implemented and confirm that issuance has not occurred in other known registries
- Determine whether the national or centralized REDD+ Programs and Projects Data Management System are implemented and operated in compliance with the Methodological Framework and other applicable criteria.

Validation/Verification Scope and Criteria:

In line with our validation and verification processes which conform to ISO 14064-3:2006, Aster Global applied the general principles of impartiality, ethical conduct, evidence-based approach, fair presentation, documentation, conservativeness, confidentiality, and due professional care.

The criteria followed the validation and verification guidance documents provided by the Forest Carbon Partnership Facility (FCPC) Carbon Fund. These documents included the following:

- FCPF Methodology Framework, Version 3, April 2020
- Buffer Guidelines, Version 2, April 2020
- Guidelines on the application of the Methodology Framework, Version 1, April 2020
- FCPF Guidelines on Uncertainty Analysis_2020_0
- Process Guidelines, Version 5, April 2020
- FCPF Validation and Verification Guidelines, Version 2.3, March 2021
- ISO 14064-3:2006
- ISO 14065:2013
- ISO 14066:2011
- IAF MD 6:2014
- Forms and templates as published and available by FCPF
- FCPF – Glossary of Terms Version 2, January 2021
- FCPF Training Presentations

The general scope of the **partial** validation¹ and **full** verification included:

- Crediting period of the FCPF program applicable to the ER Program
- The selected Reference Period (validation) and the applicable Reporting Period (verification)
- The ER Program Accounting Area, as defined in the ER Program’s Final ER Program Document (ER-PD)
- The GHG sources and sinks associated with the REDD+ activities accounted for as required by the Methodological Framework
- The carbon pools and greenhouse gases to be accounted for as required by the Methodological Framework
- The REDD Country Participant’s Forest Monitoring System as described in the ER Monitoring Report
- The national or centralized REDD+ Programs and Projects Data Management System.

The scope was further defined by the following elements:

Baseline	Based on the Mozambique Emissions Reductions Program documentation for ZILMP, the deforestation rate within the reference period of 2005-2015 was 17,023 hectares/year.
Activities/Technologies/ Processes	GHG Emissions Reductions program utilizing the FCPF Carbon Fund’s Methodology Framework and associated guidelines and criteria and the Forest Monitoring System of Mozambique.

¹ Criteria 1 – 4 of the Methodological Framework are not applicable for this partial validation.

Sources/Sinks/Reservoirs	Methodological Framework Criterion 3 – REDD+ Activities (sources and sinks) Emissions from deforestation - included Emissions from forest degradation – excluded Enhancement of carbon stocks – excluded Sustainable Management of forests – excluded Conservation of Carbon Stocks - excluded Methodological Framework Criterion 4 – Carbon Pools Aboveground biomass in trees – included Belowground biomass in trees – included Biomass in non-woody vegetation – excluded Dead organic matter – excluded Soil organic carbon - excluded																					
GHG Type	CO ₂																					
Time Period	First Reporting Period (ERPA with Carbon Fund): 01 January 2018 to 31 December 2018 Monitoring Period: 01 January 2018 to 31 December 2018 Reference Period – 2005 to 2015																					
Project/Spatial Boundary	Program Area: ER Program accounting area is approximately 5.3 million hectares with approximately 2.9 million hectares of forest.																					
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Aster Global conducted the partial validation and full verification of the ZILMP in accordance with the Terms of Reference as specified in the Table below. A partial validation was performed at this time as the ZILMP ER Program does not wish to generate CORSIA² eligible emission units.

² eligible Emissions Units” (as defined under CORSIA) are subject to full Validation

Criteria Indicators ³	Topic	Partial Validation	Verification
6	Data availability	X	X
7, 8, 9.1	Identification and address sources of uncertainty	X	X
9.2, 9.3	Estimation of residual uncertainty		X
14.1	Consistency of monitoring estimates with Reference Level		X
17.3, 17.4	Monitoring and reporting of displacement mitigation		X
18.2	Addressing reversals		X
19	Account for reversals		X
22	Calculation of Emission Reductions		X
23	Double counting		X
37	REDD project and program DMS		X

Uncertainty:

As defined by the Validation and Verification Guidelines, uncertainty is the level of statistical uncertainty related to the estimation of emissions reductions to be generated during the Crediting Period of the Emissions Reduction Program. To reduce uncertainty, emissions reductions are deposited into the Uncertainty Buffer. The identification of and how sources of uncertainty are addressed by the ER Program Entity and was part of both the partial validation and full verification, while the estimation of residual uncertainty was assessed during the verification process.

Identification and proposed methods to address sources of uncertainty from criteria 7, 8 and 9 of the Methodological Framework are summarized as follows:

Criteria	Methodological Framework Definition	VVB Evaluation
7	Sources of uncertainty are systematically identified and assessed in Reference Level setting and Measurement, Monitoring and reporting	Evaluation of the ER Programs identification of the sources of uncertainty and assessment of the relative contribution of each source to overall uncertainty through review against Annex 2.1/2.2 of the Validation and Verification Guidelines and Indicators 7.1/7.2 of the Methodological Framework.

³ Carbon Fund Methodological Framework. Forest Carbon Partnership Facility. Version 3, April 2020.

8	The ER Program, to the extent feasible, follows a process of managing and reducing uncertainty of activity data and emission factors used in Reference Level setting and Measurement, Monitoring and reporting	Evaluation of the ER Programs process of managing and reducing uncertainty of activity data and emission factors uncertainty through review against Annex 2.1/2.2 of the Validation and Verification Guidelines and Indicators 7.1/7.2 of the Methodological Framework.
9	Uncertainty of activity data and emission factors used in Reference Level setting and Measurement, Monitoring and reporting is quantified in a consistent way, so that the estimation of emissions, removals and Emission Reductions is comparable among ER Programs	Evaluation of the ER Programs reporting methods for uncertainty through review against Annex 2.1/2.2 of the Validation and Verification Guidelines and Indicators 7.1/7.2 of the Methodological Framework.

Validation/Verification Materiality Level:

Materiality is a concept that errors, omissions, and misrepresentations could affect the GHG reduction assertion and influence the intended users (ISO 14064-3:2006). As defined by FCPF, the quantitative materiality threshold concerning the aggregate of misstatements, errors, or omissions relative to the total reported GHG emissions and removals or emissions is 1%. “Qualitative and quantitative materiality refers to errors, omission and misrepresentation that either individually or in the aggregate form affect the GHG assertion.” The criteria outlined in Section 8.5 of the VVG was followed to determine if a discrepancy is material or not.

Material discrepancies as well as observations and other non-conformities were provided in the Rounds of Findings.

Issuing Non-Compliances & Observations:

Aster Global issued a formal list of findings including the list of observed non-compliances and clarifications. The specific requirement was referenced in addition to the objective evidence used to raise the finding and the description of the finding. The following gradation was used to identify the level of non-compliance as sourced from Section 11 of the Validation and Verification Guidelines:

- a) MAJOR Corrective Action Request (MCAR) will be issued where:

- i. the evidence provided to demonstrate conformity is insufficient, unclear or not transparent and may lead to a material error, omission or misstatement, and/or a breakdown in the systems delivery
 - ii. underlying assumptions used to develop the reported estimates¹⁹ are not supported by data
 - iii. material errors, omissions or misstatements have been made in applying assumptions, in data or calculations
 - iv. non-compliance with Verification criteria
 - v. the REDD+ Country Participant has failed to implement or made inadequate progress with the mCARs from the previous verifications
- b) MINOR Corrective Action Requests (mCAR) will be issued where
- i. the evidence provided to demonstrate conformity is insufficient, unclear or not transparent, but does not lead to a material error, omission or misstatement, and/or a breakdown in the systems delivery
 - ii. non-material errors, omissions or misstatements have been made in applying assumptions, in data or calculations
 - iii. non-compliance with Validation criteria
- c) Observations (OBS) will be issued where:
- i. there is no objective evidence to prove that there is a non-conformity, but the VVB observes practices and/or methods that could result in future MCAR and mCAR
 - ii. all mCARs issued at validation shall be suitably closed out by the REDD Country Participant at the beginning of subsequent Crediting Period

The actions taken when errors, omissions, and misrepresentations were found included notifying the client of the issue(s) identified, and request MCAR, mCAR, and Obs to the extent that will satisfy the validator's/verifier's professional judgment. ***The validator/verifier has the option to increase the sample size to test for further errors, omissions, or misrepresentations if there is insufficient information from selected sample to form a validation and verification opinion.*** The result of unresolved errors, omissions, or misrepresentations includes potential project delays, additional review costs, and a potential recommendation of project denial.

Work Plan – Activities and Schedule:

Aster Global's work plan, including meetings, partial validation/full verification activities, milestones, and deliverables was in accordance with the VVG and guidelines provided by FCPC Carbon Fund as well as the TOR. Our team approach allowed us to be responsive to our clients and gives us the ability to plan ahead, which is key to the successful partial validation and full verification of the ZILMP. Based on the TOR and our validation/verification experience, the table below includes the main validation/verification activities' content, duration, milestones, and proposed delivery dates. Our timeline assumes documentation is ready and ER Program Entity staff are available at appropriate intervals and we therefore anticipate the ability to complete the work as outlined.

Please note Aster Global believes that with only 1 round of findings, the 21-week timeline is achievable, however as requested we have included 3 rounds within our budget and timelines. As shown 3 rounds of findings would carry the contracted dates beyond the targeted 18 weeks.

For reference, as stated in the TOR: “This (timeline) will depend on the REDD Country participant’s ability to close findings. The VVB shall budget at least 3 iterations with the REDD Country. Additional required iterations will be handled according with paragraph 54 of the FCPF Process Guidelines.”

Communication Strategy: Following discussions during the Kick-Off Call on 17 September 2020, it was agreed between the VVB and ER Program Entity that email communication is preferred by all parties. Emails were exchanged to arrange future meetings or other decided upon correspondence method.

**** Dates affected by the inclusion of 3 Rounds of Findings**

Val/Ver Activity/Milestone	Content (Explanation)	Proposed Delivery Date
Kick Off Call	Kick-off the partial validation and full verification of Mozambique’s ZILMP program	17 September 2020
Draft audit plan and hold meeting with FMT and Mozambique ER Program representatives	Draft audit plan submitted for review and approval – note that based on ISO 14064 and 14065 the final audit plan must be signed by the ER Program Entity	22 September 2020
VVB Initial Desk Review	Initial desk review to include preliminary review of documentation provided to inform our risk assessment and inputs into the Sampling Plan. If preliminary findings are discovered or documents are missing, Aster Global will notify FMT and ER Program Entity	06 October 2020
Sampling Plan hold meeting with FMT and Mozambique ER Program representatives	Sampling Plan submitted for review and approval – note that based on ISO 14064 and 14065 the final sampling plan must be signed by the ER Program Entity	13 October 2020
Aster Global conducts desktop review	VVB conducts desktop review and generates Findings as they proceed	13 October 2020 – 11 May 2021

Logistics Meeting to discuss virtual logistics	Alternative plans for conducting a virtual site visit	27 October 2020
Aster Global conducts in-country validation and verification review or virtual site visit depending on travel restrictions	Implementation of in-country virtual site visit or hybrid -actions required are dependent upon completion of risk assessment and initial desktop review	November 2020 (exact time TBD with FMT and ER Program representatives)
Calculation walkthrough for Reference Level and Emission Factors Meeting	The validation team met with all members of the MRV Unit to discuss calculations related to the Reference Level which included but was not limited to activity data generation, sampling design, LULC classification, emission factor estimation.	3 November 2020
Remote Sensing/Monitoring, Reporting and Verification Activity Data Meeting	The validation team met with all members of the MRV Unit to discuss aspects of the remote sensing analysis performed to collected activity data, remote sensing analysis as it relates to monitoring.	5 November 2020
Meeting about Emission Factors	The validation team met with all members of the MRV Unit to discuss calculations related to estimating emission factors, sources of Tier 1 emission factors, and sampling design of the National Forest Inventory	5 November 2020
Aster Global Issues Round 1 Findings	After completion of the site visit, the desktop findings and site visit findings will be combined and submitted to ER Program Entity	15 December 2020
Round 1 Findings Meeting	After Mozambique ER Program representatives and FMT have a chance to review the findings, Aster Global will hold a meeting to clarify any questions	21 December 2020
Round 1 Findings Meeting (2)	Follow up meeting to original round 1 findings meeting	29 January 2021
Mozambique ER Program representatives provide responses to	Updated documentation, evidence and Findings responses provided to Aster Global	11 February 2021

Round 1 Findings and updated documents		
Aster Global Completes Review of Round 1 Responses		5 March 2021
Aster Global Issues Round 2 Findings	Aster Global Issues Round 2 Findings	25 March 2021
Mozambique ER Program representatives provide responses to Round 2 Findings and updated documents	Updated documentation, evidence and Findings responses provided to Aster Global	16 April 2021
Aster Global Issues Round 3 Findings	Aster Global Issues Round 3 Findings	27 April 2021
Mozambique ER Program representatives provide responses to Round 3 Findings and updated documents	Updated documentation, evidence and Findings responses provided to Aster Global	29 April 2021
Aster Global drafts validation and verification report and submits to peer reviewer	Aster Global prepares draft validation and verification plans using FCPF templates (if available and ready to be used)	11 May 2011
** Draft validation and verification reports are updated as needed and provided to the FMT and Mozambique ER Program representatives for review	Aster Global makes updates to reports as needed after the Technical Reviewer is finished and then drafts are submitted to FMT and ER Program representatives	Pending
** Aster Global holds validation and	After all representatives have had a chance to review, Aster Global will hold the closing meeting to review comments/suggestions	Pending

verification closing meeting	about the draft reports and discuss feedback about the overall process.	
** Aster Global issues final validation and verification report and statement (opinion)	Project is complete	Pending

Please note: Aster Global recognizes the desire of the FCPF Carbon Fund and the ER Program Entity to complete the partial validation and full verification in approximately 21 weeks (after a signed contract is received) in an efficient and effective manner, while minimizing the risks. Aster Global believes the timeframe for the project outlined in the Terms of Reference (i.e. 18 weeks) is only achievable if only one (1) Round of Findings are required. Based on the Terms of Reference and the table above, three (3) Rounds of Findings should be included in the timeline. The timeframes are dependent upon the execution of the contract and overall preparedness of the ER Program, accuracy of the documentation provided, and ER Program response time. Throughout the process it is very important for the FMT and Aster Global to maintain clear communication on timelines and expectations.

NOTE: *The ER Program Entity is responsible for ensuring that they are in regular communication with FCPF to receive all FCPF updates and announcements. Per the FCPF Standard (sec 1.1) the project proponent (“reader”) shall ensure they are using the most current version of the documents as required by FCPF.*

NOTE: *It is also important for the ER Program Entity to ensure that they have the appropriate technical support (professional foresters, forest biometricians, remote sensing specialist, etc.) in-house or consultants to develop and support the proposed FCPF project. The ER Program Entity shall also be responsible for complying with all validation/verification requirements, making all necessary arrangements for the VVB and observers (as appropriate) to conduct the validation/verification, interacting with the VVB in a professional and appropriate manner to minimize chances of conflict of interests, providing access to all documentation, processes, property, records and personnel, and to accommodate VVB and process as much as possible (ISO 14065:2013, sec. 7.2).*

NOTE: *Following paragraph 58 of the Validation and Verification Guidelines; all MCARs are to be suitably closed out by the REDD Country Participant prior to issuing a positive Validation/Verification opinion, all mCARs issued at Verification must be suitably closed out by the REDD Country Participant at the time of the next Verification, and all mCARs issued at Validation shall be suitably closed out by the REDD Country Participant at the beginning of subsequent Crediting Period. “Suitable closed” means findings are corrected/addressed to satisfy the required reasonable level of assurance as determined by the VVB team’s professional judgment. Any Observations issued are not required to be corrected/addressed, but based on the verification team’s professional judgment, they*

would add a better level of clarity and quality to the project.

Risk Assessment - Risks of Potential Errors, Omissions, or Misrepresentations and the Process to Identify Risks:

In the audit process, there was a risk that potential errors, omissions, and misrepresentations would be found; therefore, a risk-based approach was used to guide the collection of appropriate and sufficient evidence to support a *reasonable* level of assurance. A risk-based approach meant that the verification team would focus on items that might result in a material misstatement of the reported GHG assertion.

Based upon the information and documentation received from the ER Program Entity to-date, the V/V Team completed our Strategic Analysis and Risk Assessment (SARA). SARA is a risk assessment that includes strategic analysis to make sure the V/V Team have considered:

- Regulatory requirements
- GHG program requirements
- Industry factors
- And other non-technical risks (i.e. health and security issues)

The results of our SARA (risk assessment) are attached (Appendix A) for your review and consideration.

Following the Validation and Verification Guidelines Annex 1, risk types and their ISO definitions are found below, please refer to more comprehensive risk table in Appendix A:

Risk Type	ISO Definition	VVB Evaluation
Inherent	Risk that a GHG assertion may be misstated because of inherent challenges in the subject matter.	See SARA Table in Appendix A.
Control	Risk that a misstatement in the GHG assertion has occurred and has not been detected and corrected by the facility or offset project's internal controls.	See SARA Table in Appendix A.
Detection	Tolerated risk that the verifier applied does not detect a misstatement in the GHG assertion. So a high inherent risk and a high combined risk result in a low tolerated risk by the verifier of not identifying the issue therefore the sample size needs to be large.	See SARA Table in Appendix A.

Risks associated with an ER Program documentation and potential mitigation measures were addressed through direct involvement. Aster Global mitigated risks during the audit process by clearly communicating with our clients what is needed from the ER Program

Entity for the assessment conducted. This entailed constant communication for what documentation was needed, detailed findings, clearly articulating what was lacking, and openly discussing findings with the Facility Management Team as well as ANAB, all while being flexible with the process to allow for proper shifts in process when they became necessary (i.e. field safety concerns, key project personnel not available for interviews, pandemic conditions, etc.).

Extraordinary Circumstances: During our initial desktop review as we developed our Partial Validation and Full Verification Sampling Plan, Aster Global determined if in-country field visits are required in order to meet reasonable assurance. More information will be provided in the sampling plan; however, Aster Global will enact our Procedures For The Use Of Information And Communication Technology (ICT) For Validations And Verifications During Extraordinary Events Or Circumstances, which are in conformance with ANAB's remote computer assessment guidance, if needed due to the Covid-19 pandemic. After discussion with the ER Program Entity and FCPF the partial validation and full verification was narrowed to exclude any criteria related to Safeguards, as these criteria could not be confirmed without a site visit and an in-country site visit was determined to no be feasible due to the Covid-19 Global Pandemic.

Potential Sources of Errors and Data Gaps:

Primarily (but not exclusively), sources of error resulted from a lack of adherence to FCPF's Methodology Framework and associated program documents and guidance documents. Specifically, the following items at minimum, as seen in the above criteria table pertaining to the FCPF Carbon Fund Methodological Framework were reviewed relative to adherence. These items were checked throughout the review process:

- Criterion 5: Implementation of appropriate IPCC guidance and guidelines, by reviewing documentation and project/country conditions (as applicable)
- Criterion 6: Implementation of key data and methods for the reconstruction of the Reference Level, reported emissions and removals (e.g. data, methods and assumptions), are documented and made publicly
- Criteria 7, 8, 9.1: Implementation of the identification and address sources of uncertainty Please also see Uncertainty section above.
- Criteria 9.2, 9.3: Implementation of the estimation of residual uncertainty by reviewing documentation and project/country conditions (as applicable)
- Criteria 14.1: Implementation of an appropriately robust Forest Monitoring System which provides data and information that are transparent, consistent over time, and are suitable for measuring, reporting and verifying emissions by sources and removals by sinks by reviewing documentation and an appropriate field condition assessment
- Criteria 17.3, 17.4: Implementation of the ER Program design to prevent and minimize potential Displacement.
- Criteria 18.2: Implementation of the ER Program design to prevent and minimize the risk of Reversals and address the long-term sustainability of ER.
- Criteria 19: Implementation of the ER Program to account for reversals from ERS generated during the crediting period by reviewing documentation and an appropriate field condition assessment.

- Criteria 22: Implementation of correct computation of Net ERs through review of calculations and independent data checks to confirm correctness.
- Criteria 23: Implementation of correct allocation of Net ERs to prevent double counting through web-based review, interviews and documentation on a risk level basis.
- Criteria 37: Implementation of the ER Program with regard to an appropriate arrangement of ER title claims based on national needs and circumstances through interviews and documentation on a risk level basis.

Summary of Documents Received from Project Proponent:

File Name	Date Received
FCPF Charter_April 8 2020_amended_clean_1.pdf	September 8, 2020
Mozambique_Revised ERPD_16April2018_CLEAN.pdf	September 8, 2020
OneDrive_1_9-10-2020.zip	September 8, 2020
ZILMP ER Monitoring Report - 2018 v.3.1_final_clean.docx	September 8, 2020
ReadMe - Folder Structure.docx	September 8, 2020
Simple guide_AD_MP.docx	September 8, 2020
ZILMP_AD_Calculations_MR_(2018).xlsx	September 8, 2020
Simple guide_AD_RL.docx	September 8, 2020
ZILMP_AD_Calculations_RL_(2005_2015).xlsx	September 8, 2020
Emission factor procedure v.1.1.docx	September 8, 2020
Emission factor_v.1.1.xlsx	September 8, 2020
Nota das actualizações dos factores de emissão.docx	September 8, 2020
Dates of deforestation events.xlsx	September 8, 2020
Emissions reductions calculations.xlsx	September 8, 2020
Simple guide_EMP.docx	September 8, 2020
ZILMP_Emissions_Calculations_MR_(2018).xlsx	September 8, 2020

Simple guide_ERL.docx	September 8, 2020
ZILMP_Emissions_Calculations_RL_(2005_2015).xlsx	September 8, 2020
GHG emission estimation SOP.DOCX	September 8, 2020
Passo a Passo para o Levantamento e Estimativa de Emissões do AFOLU.pdf	September 8, 2020
SOP0_MapProduction_MRV_03.08.2020.docx	September 8, 2020
SOP1_SampligDesign_MRV_03.08.2020.docx	September 8, 2020
SOP2_response_design_MRV_31.07.20.docx	September 8, 2020
SOP3_data_collection_MRV_31.07.20.docx	September 8, 2020
SOP4_Analysis_MRV_23.06.20 (1).DOCX	September 8, 2020
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Zambezia_2018_Reference_points_post_stratification_28.04.2020.csv	September 8, 2020
ZILMP_2005_2015_collectedData_earthad.csv	September 8, 2020
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20064.00 AG ZILMP Round1Findings WBFinal 20201209_MRV.xlsx	December 21, 2020
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20064.00 AG ZILMP Round1Findings WBFinal 20201209_MRV_final_AM.xlsx	February 2, 2021
ReadMe - Folder Structure.docx	February 11, 2021
BSP FINAL_JAN 2020.pdf	February 11, 2021
Inventario Florestal Nacional.pdf	February 11, 2021
Manual do Inventario Florestal.pdf	February 11, 2021
moz_frel_report_final.v03_03102018.pdf	February 11, 2021
Emission factor procedure v.1.1.docx	February 11, 2021
Emission factor_v.1.1.xlsx	February 11, 2021

Emission factor_v.2.xlsx	February 11, 2021
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Emissions reductions calculations.xlsx	February 11, 2021
ZILMP ER Monitoring Report - 2018 v.3.1_clean.docx	February 11, 2021
ZILMP ER Monitoring Report - 2018 v.3.1_with_track_changes.docx	February 11, 2021
ZILMP ER Monitoring Report - 2018 v.4.1.docx	February 11, 2021
GHG emission estimation SOP.DOCX	February 11, 2021
Passo a Passo para o Levantamento e Estimativa de Emissões do AFOLU.pdf	February 11, 2021
SOP0_MapProduction_MRV_03.08.2020.docx	February 11, 2021
SOP1_SampligDesign_MRV_03.08.2020.docx	February 11, 2021
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20064.00 AG ZILMP Round2Findings (1).xlsx	April 16, 2021
ZILMP ER Monitoring Report - 2018 v.5.docx	April 16, 2021
ReadMe - Folder Structure.docx	April 16, 2021
ZILMP_AD_Calculations_MR_(2018).xlsx	April 16, 2021
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2018_Reference Points.xlsx	April 16, 2021
Reference Level_Project Forms.cep	April 16, 2021
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List of all codes.xlsx	April 16, 2021
ZILMP_AD_Calculations_RL_(2005_2015).xlsx	April 16, 2021
BSP FINAL_JAN 2020.pdf	April 16, 2021
Inventario Florestal Nacional.pdf	April 16, 2021
Manual do Inventario Florestal.pdf	April 16, 2021
Mozambique_Revised ERPD_16April2018_CLEAN.pdf	April 16, 2021
moz_frel_report_final.v03_03102018.pdf	April 16, 2021
Relatório_Inventário_Zambezia_atualização_09_02_2021.pdf	April 16, 2021
Relatório_Inventário_Zambezia_atualização_24_08_2020.pdf	April 16, 2021
Bechtold, Patterson - 2005 - The Enhanced Forest Inventory and Analysis Program — National Sampling Design and Estimation Procedures.pdf	April 16, 2021
Kalaba et al. - 2013 - Floristic composition, species diversity and carbon storage in charcoal and agriculture fallows and management im.pdf	April 16, 2021
Lisboa et al. - 2018 - Biomass allometric equation and expansion factor for a mountain moist evergreen forest in Mozambique.pdf	April 16, 2021
Mate, Johansson, Siteo - 2014 - Biomass equations for tropical forest tree species in mozambique.pdf	April 16, 2021
McNicol, Ryan, Williams - 2015 - How resilient are African woodlands to disturbance from shifting cultivation.pdf	April 16, 2021
Mokany, Raison, Prokushkin - 2006 - Critical analysis of root Shoot ratios in terrestrial biomes.pdf	April 16, 2021
Mugasha et al. - 2013 - Allometric models for prediction of above- and belowground biomass of trees in the miombo woodlands of Tanzania.pdf	April 16, 2021
Olofsson et al. - 2014 - Good practices for estimating area and assessing accuracy of land change.pdf	April 16, 2021
Stringer et al. - 2015 - Carbon stocks of mangroves within the Zambezi River Delta, Mozambique.pdf	April 16, 2021
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BSP FINAL_JAN 2020.pdf	April 16, 2021
Inventario Florestal Nacional.pdf	April 16, 2021
Manual do Inventario Florestal.pdf	April 16, 2021
Mozambique_Revised ERPD_16April2018_CLEAN.pdf	April 16, 2021
moz_frel_report_final.v03_03102018.pdf	April 16, 2021
Relatório_Inventário_Zambezia_atualização_09_02_2021.pdf	April 16, 2021
Relatório_Inventário_Zambezia_atualização_24_08_2020.pdf	April 16, 2021
Supplementary - Shortcut.lnk	April 16, 2021

1 - MozBio_ANAC_1.pdf	April 16, 2021
2 - ANAC_MozBio_Nota liquidacao.pdf	April 16, 2021
3 - Adenda.pdf	April 16, 2021
4 - ANAC_MozBio_Recibo.pdf	April 16, 2021
2Relatório final _rev-161019FNDS.pdf	April 16, 2021
AideMemoire_MozFip_Dec4 (002).pdf	April 16, 2021
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CONTRACTO_TARQUINO NIPIODE UAPE.pdf	April 16, 2021
Contrato Dr Walter (1).pdf	April 16, 2021
Management Letter- MozFIP supervision mission Nov 5-15.pdf	April 16, 2021
Plano de Maneio_UAPÉ .pdf	April 16, 2021
Relatorio Final do Curso de Governanca e MCRN - Zambezia.docx.pdf	April 16, 2021
Relatório de Inventário Florestal_UAPÉ.pdf	April 16, 2021
Relatório Final do curso de Fiscalização e Legislação Florestal.pdf	April 16, 2021
SIGNED Project CONTRACT FNDS_Indufor Oy.pdf	April 16, 2021
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MozBIO.pdf	April 16, 2021
MozDGM.pdf	April 16, 2021
MozFIP.pdf	April 16, 2021
Sustenta.pdf	April 16, 2021
Artur Stevens Contract.pdf	April 16, 2021
CONTRACTO HORFPEC.Lda.pdf	April 16, 2021
Contrato e Adenda UICN.pdf	April 16, 2021
Contrato Gapi - Cadeias de valor sustenta.pdf	April 16, 2021
Facturas.rar	April 16, 2021
Planos de Negocio.rar	April 16, 2021
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Manual de Procedimentos_Licenciamento.docx	April 16, 2021
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Emission factor procedure v.2.docx	April 16, 2021
Emission factor_v.1.1.xlsx	April 16, 2021
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Emissions reductions calculations.xlsx	April 16, 2021
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Simple guide_ERL.docx	April 16, 2021

ZILMP_Emissions_Calculations_RL_(2005_2015).xlsx	April 16, 2021
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GHG emission estimation SOP.DOCX	April 16, 2021
Passo a Passo para o Levantamento e Estimativa de Emissões do AFOLU.pdf	April 16, 2021
SOP0_MapProduction_MRV_03.08.2020.docx	April 16, 2021
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master	April 16, 2021
R4.X	April 16, 2021
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workbench-pane.pper	April 16, 2021
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602FE956-contents	April 16, 2021
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82777EEA-contents	April 16, 2021
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source-pane.pper	April 16, 2021
windowlayoutstate.pper	April 16, 2021
workbench-pane.pper	April 16, 2021
rmd-outputs	April 16, 2021
saved_source_markers	April 16, 2021
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source-pane.pper	April 16, 2021
windowlayoutstate.pper	April 16, 2021
workbench-pane.pper	April 16, 2021

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E8156BE6-contents	April 16, 2021
4313BF2E	April 16, 2021
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build_options	April 16, 2021
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saved_source_markers	April 16, 2021
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source-pane.pper	April 16, 2021
windowlayoutstate.pper	April 16, 2021
workbench-pane.pper	April 16, 2021
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499AEF92-contents	April 16, 2021
94266B3C	April 16, 2021
94266B3C-contents	April 16, 2021
ACE3F41D	April 16, 2021
INDEX	April 16, 2021
B6906BB9.Rdata	April 16, 2021
patch-chunk-names	April 16, 2021
paths	April 16, 2021
ZILMP_2018_collectedData_earthad_031019.csv	April 16, 2021
ZILMP_2018_poststratified.csv	April 16, 2021
ZILMP_2018_poststratified2.csv	April 16, 2021
emission_factors.csv	April 16, 2021
emission_factors_old.csv	April 16, 2021
strata_lulc_relation.csv	April 16, 2021
zambezia_RF_pb_lulucf_up_final_2018.tif	April 16, 2021
zilmp_lulcc_2018.tif	April 16, 2021
ZILMP_RF_pb_lulucf_up_6_classes_2018.tif	April 16, 2021
Zambezia_2018_Reference_points_2018_27.09.19.csv	April 16, 2021
Zambezia_2018_Reference_points_post_stratification_28.04.2020.csv	April 16, 2021
ZILMP_2005_2015_collectedData_earthad.csv	April 16, 2021
Activity data_FREL_Update_2018.xlsx	April 16, 2021
EF_uncertainty_calculation.xlsx	April 16, 2021
Emissões_2017-2018_Zambézia_EF_provincial_SB.xlsx	April 16, 2021
Zambézia_Resultados_AD_100%(2005_2015)_EF_provincial_08_02_20.xlsx	April 16, 2021
ZILMP_Emissions_2018_08.05.20 (post-stratified).xlsx	April 16, 2021
ZILMP_Emissions_2018_08.05.20 (Updated).xlsx	April 16, 2021
zilmp_2018_deforestation_area.png	April 16, 2021
AD_monitoring_uncertainty.csv	April 16, 2021

AD_reference_uncertainty.csv	April 16, 2021
EF_aboveground.csv	April 16, 2021
EF_belowground.csv	April 16, 2021
emissions_estimate_table.csv	April 16, 2021
emissions_reduction_estimate_table.csv	April 16, 2021
emissions_reference_estimate_table.csv	April 16, 2021
mc_summary_table.csv	April 16, 2021
sensitivity_analysis.csv	April 16, 2021
zilmp_2018_corrected_map_areas.csv	April 16, 2021
zilmp_2018_deforestation_results.csv	April 16, 2021
Monte Carlo v0.2.pdf	April 16, 2021
monte_carlo_v0.html	April 16, 2021
monte_carlo_v0.Rmd	April 16, 2021
monte_carlo_v0_1.html	April 16, 2021
monte_carlo_v0_1.Rmd	April 16, 2021
monte_carlo_v0_2.html	April 16, 2021
monte_carlo_v0_2.Rmd	April 16, 2021
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monte_carlo_v0_4.Rmd	April 16, 2021
monte_carlo_v0_5.html	April 16, 2021
monte_carlo_v0_5.Rmd	April 16, 2021
zilmp_overview.PNG	April 16, 2021
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unnamed-chunk-25-2.png	April 16, 2021
unnamed-chunk-26-1.png	April 16, 2021
server.R	April 16, 2021
ui.R	April 16, 2021
app.R	April 16, 2021
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emissions_estimation_simple.R	April 16, 2021
statified_area_estimation.R	April 16, 2021
area_estimation.R	April 16, 2021
calculate_emissions.R	April 16, 2021
emissions.R	April 16, 2021
raster.R	April 16, 2021
reference.R	April 16, 2021
app.R	April 16, 2021

Analise_QA_QC.xlsx	April 16, 2021
Descricao_QAQC do IFN.docx	April 16, 2021
20064.00 AG ZILMP Round3Findings.xlsx	April 29, 2021
ZILMP ER Monitoring Report - 2018 v.5.1.docx	April 29, 2021
20064.00 AG ZILMP Round3Findings.xlsx	May 5, 2021
ZILMP ER Monitoring Report - 2018 v.5.1.docx	May 5, 2021
ZILMP ER Monitoring Report - 2018 v.5.2.docx	May 18, 2021

Documentation/Evidence that the ER Program Entity May Have to Provide to Reach Level of Assurance, if Applicable:

- The ER MR and all supporting documentation including spreadsheets, spatial information, maps and/or synthesized data (field data collection and data analysis)
- Annex to the MR including information on the Reference Level
- Previous ER MR, Validation and/or Verification Reports, and the Technical Assessment Report prepared by the TAP as part of the FCPF's ER Program approval process, and all supporting documentation (including spreadsheets, spatial information, maps and/or synthesized data)
- Country visits or, as applicable, field visits and teleconferences with the REDD Country Participant or other Stakeholders
- Activity data estimates through Earth Observation data obtained in a centralized Forest Monitoring System with field data (as applicable)

Sampling Plan Methodology and Sampling Technique:

After Aster Global completed the initial desktop review, a detailed Partial Validation and Verification Sampling Plan was prepared and served as an addendum to this Partial Validation and Full Verification Audit Plan.

Handling of records: Aster Global will keep all documents and records in a secure retrievable manner for at least two years after the end of the project monitoring period. Records can be destroyed at any time by agreement signed between the ER Program Entity, Aster Global, and the Forest Carbon Partnership Facility (FCPF) Carbon Fund. Aster Global shall maintain and manage records of its partial validation and full verification activities including:

- Application information and partial validation and full verification scope
- Justification for how partial validation and verification time is determined
- Confirmation of the completion of partial validation and verification activities, including findings (MCAR, mCAR, and OBS)
- Verification statement
- Records of complaints and appeals, and any subsequent correction or corrective actions

Aster Global shall maintain all partial validation and verification records securely and confidentially, including during their transport, transmission or transfer. Aster Global shall

retain partial validation and verification records in accordance with any legal, contractual, FCPF requirements, per ISO 14065:2013, Sec. 7.5. Records may be reviewed on-site or off-site by Aster Global and its observers, as approved by the ER Program Entity.

Client Statements Regarding Verification and GHG Assertions: It is the policy of Aster Global, that the following statement be used by the ER Program Entity when the partial validation and verification status of the ER Program is described:

The Zambézia Integrated Landscape Management Program (ZILMP) located in Republic of Mozambique has been (is being) validated (partial) and verified by Aster Global to the appropriate standards as defined by the Forest Carbon Partnership Facility (FCPF) Carbon Fund guidance documents. For a complete record of the attestation associated with this project's partial validation and verification, please contact Aster Global at 330-294-1242 and reference project number 20064.00.

The statement may be used for a period of one (1) year after the completion of the ER Program validation (partial) and verification; however, after the validation (partial) and verification is completed it is better to use the issued report and verification statement. Deviations from the statement provided above will be granted on a case-by-case basis, primarily when in conflict with formatting requirements or space limitations. These deviations will be reviewed by Aster Global and substitute language agreed upon in writing.

Approval and Signature Section:

Prepared By: Shawn McMahon
Title: Lead Validator/Verifier
Office: 330-294-1242 ext. 103

Project Manager: Janice P. McMahon
Title: President / Project Manager

Client Reviewer: _____ **Date:** _____
Title: _____

EJ/SM/JPM/20066_Mozambique ERP Partial val and verif_AuditPlan_FinalV5.doc
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Appendix A

Strategic Analysis Issue	Possible Attributes	Inherent Risk	Control Risk	Combined Risk Level and Reasoning	ER Program Entity awareness of the issue	Planned Verification Response to Risk Rating
ER Program Entity's experience with project development and technical expertise.	Consistency	Low	Low	Low – the ER Program Entity has a team with many years' experience in all aspects of the project.	ER Program Entities are aware of the partial validation/ full verification process.	The verifiers will interview ER Program Entity team members throughout the verification process.
	Completeness	Low	Low			
	Accuracy	Low	Low			
	Relevance	Low	Low			
	Transparency	Low	Low			
	Conservativeness	Low	Low			
On-Site safety and local in-country travel risks.	Relevance	Medium	High	Medium-Safety SOPs must be in place, well-documented and adaptable.	ER Program Entities are aware of the local safety risks.	The verifiers will thoroughly review and assess safety procedures for a site visit.
	Completeness	Medium	High			
	Accuracy	Medium	High			
	Consistency	Medium	High			
	Transparency	Medium	High			
	Conservativeness	Medium	High			
ER Program Entity's QA/QC Procedures (i.e., Accounting error in data management system). The national or centralized REDD+ Programs and Projects Data Management System.	Relevance	High	High	High - QA/QC procedures must be implemented and confirmed by verifiers.	ER Program Entities internal QA/QC procedures – details TBD.	The verifiers will review and ensure that the established QA/QC procedures were implemented, and results documented correctly.
	Completeness	High	High			
	Accuracy	High	High			
	Consistency	High	High			
	Transparency	High	High			
	Conservativeness	High	High			
The ER Program Accounting Area as defined in the ER Program's	Relevance	High	High	High-Accounting Area definition and procedures	ER Program Entity is aware of the partial validation/f	The verifiers will review and ensure that the established Accounting Area is fully
	Completeness	High	High			
	Accuracy	High	High			
	Consistency	High	High			
	Transparency	High	High			
	Conservativeness	High	High			

Final ER Program Document (ER-PD).				must be fully implemented and confirmed verifiers.	ull verification process and risks to materiality from issues related to the Accounting Area.	implemented, and results documented correctly.
GHG type (CO₂, N₂O, and CH₄) and magnitude	Relevance	Low	Low	Low – the approved methodology utilized dictates the allowable GHGs.	ER Program Entity is aware of the partial validation/full verification process.	The verifier will review calculations for conservativeness and accuracy.
	Completeness	Low	Low			
	Accuracy	Low	Low			
	Consistency	Low	Low			
	Transparency	Low	Low			
	Conservativeness	Low	Low			
Measurement and the REDD Country Participant's Forest Monitoring System as described in the ER Monitoring Report are followed by ER Program Entity	Relevance	High	High	High – incorrect monitoring procedures or implementation could lead to an overestimate of climate benefits.	ER Program Entity is aware of the partial validation/full verification process.	The verifiers will thoroughly review and assess the implementation of the partially validated monitoring approach and confirm results during the field visit and with interviews.
	Completeness	High	High			
	Accuracy	High	High			
	Consistency	High	High			
	Transparency	High	High			
	Conservativeness	High	High			
Ensure inventory and overall calculations are free of omissions.	Relevance	High	High	High – if calculations were not conducted correctly, incorrect data would be used in the calculations.	ER Program Entity is aware of the partial validation/full verification process.	The verifiers will review all data, calculations, and assumptions during the full verification.
	Completeness	High	High			
	Accuracy	High	High			
	Consistency	High	High			
	Transparency	High	High			
	Conservativeness	High	High			